

# EMR CCD TO HIE: OMG!!!

An Example of Interfacing Centricity EMR  
with a Health Information Exchange

**Presented by:**

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# About MIMA

MIMA: Independent 125-provider multi-specialty group practice in Melbourne, FL

- 132,000 active patients
- 840 employees
- 200 servers
- 1400 workstations
- 60 applications



# Objectives

This presentation will cover the implementation of an EMR CCD interface to connect with an HIE:

**Learn the key terms and acronyms associated with an HIE implementation**



**Discuss the benefits of participating in a Health Information Exchange**



**Explain the details of the implementation**



**Conclusions and future development plans**

# Key Terms

- **HIE – Health Information Exchange**
  - According to Wikipedia:
    - Is the mobilization of healthcare information electronically across organizations within a region, community or hospital system.
  - In our case, sharing patient data with our local hospital

# Key Terms

- **HIE – Health Information Exchange (cont.)**
  - Why should you participate in an HIE?
    - Improved patient care
      - Patient data can be found when the patient is in the hospital
      - Easier for physicians to find patient information at the hospital

# Key Terms

- **CCD – Continuity of Care Document**
  - Document containing problems, allergies, medications, and immunizations for a specific patient
- **MPI – Master Patient Index**
  - Database used to accurately link records of patients from multiple unique systems

# Additional Terms

- **HL7– Standard healthcare message format**
- **ADT – Admissions, Discharges, and Transfers**
  - HL7 message containing patient demographics updates
- **XML – Standard CCD message format**
- **XDR / XDS – Common format/protocol for HIE CCD transmission**
- **SAML - Security Assertion Markup Language**
  - Used to pass authentication data between parties

# Infrastructure

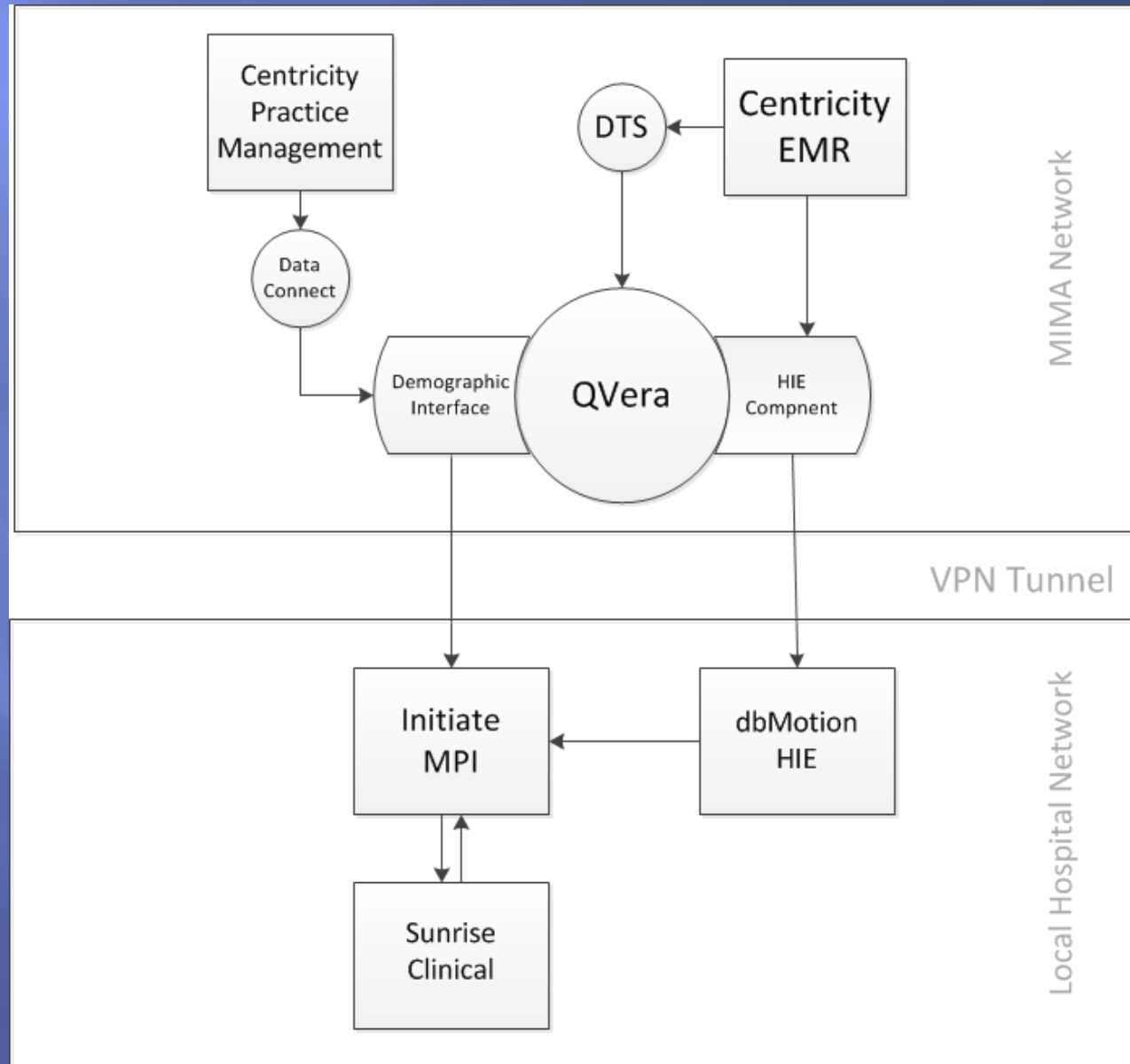
- ▣ Centricity EMR & DTS
- ▣ Centricity Group Management
- ▣ QVera Interface Engine with HIE Module
- ▣ dbMotion HIE
- ▣ Initiate MPI
- ▣ Sunrise Clinical Manager EHR



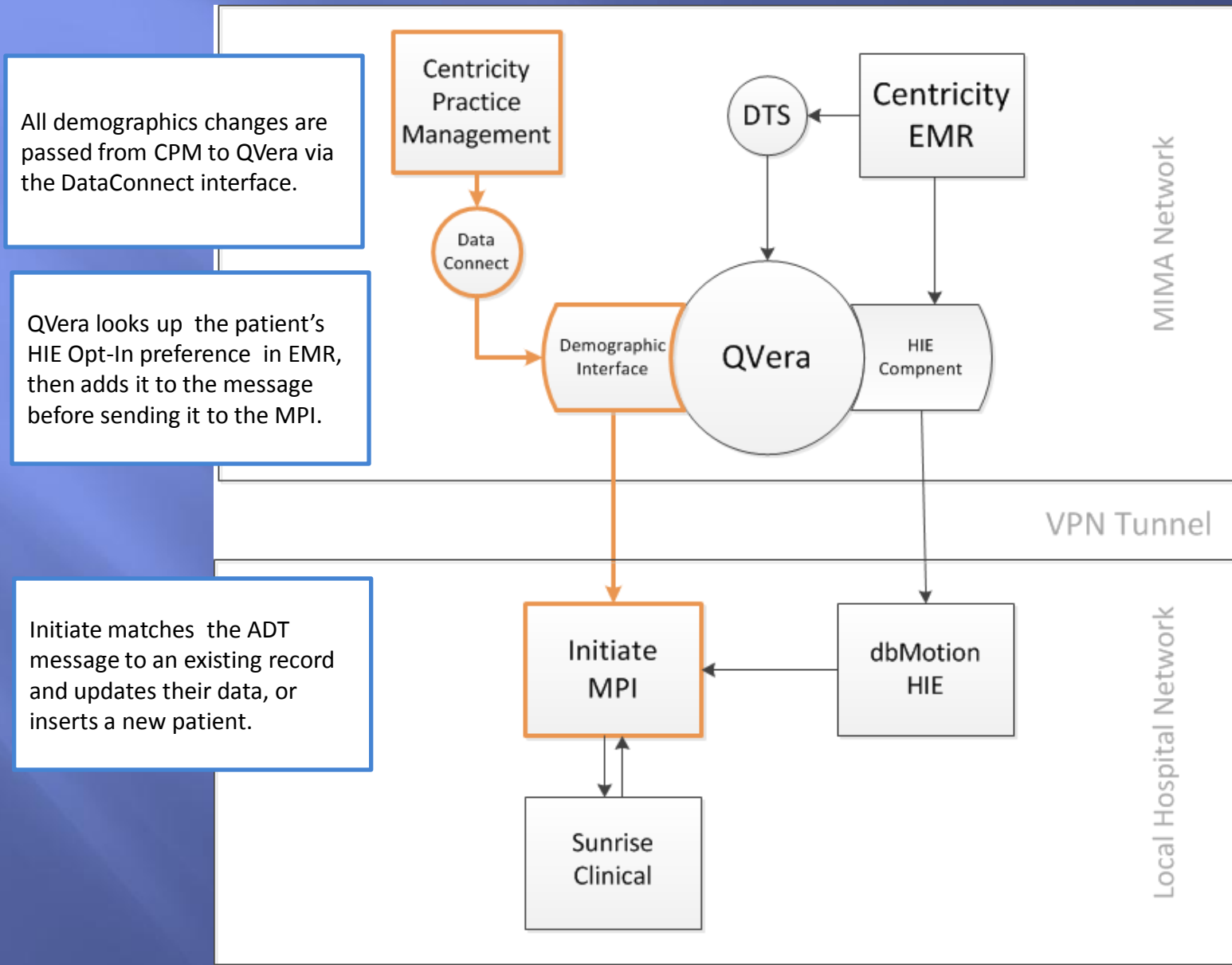
# Design Decisions

- ▣ When to send the CCD's?
  - To avoid negatively impacting EMR performance, we set the export to begin after our last office closed
  - However, after testing, we realized the performance hit was minimal, and we switched to real-time
  
- ▣ How do you handle patient opt-in / opt-out?
  - CPM does not store that data. How can we add it to the ADT feed?
  - What should be the default value for existing patients?

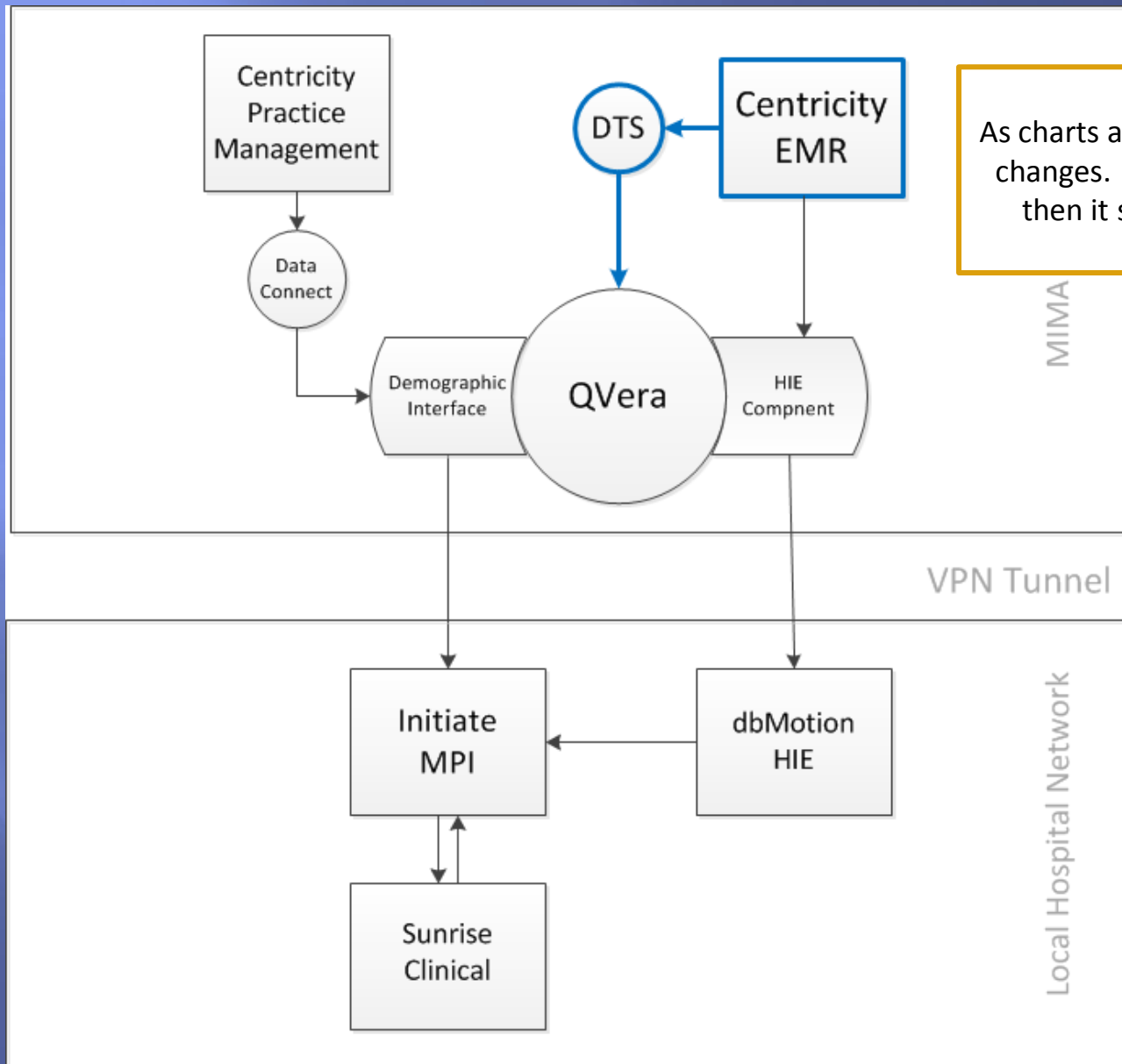
# System Configuration



# ADT Feed



# CCD Creation



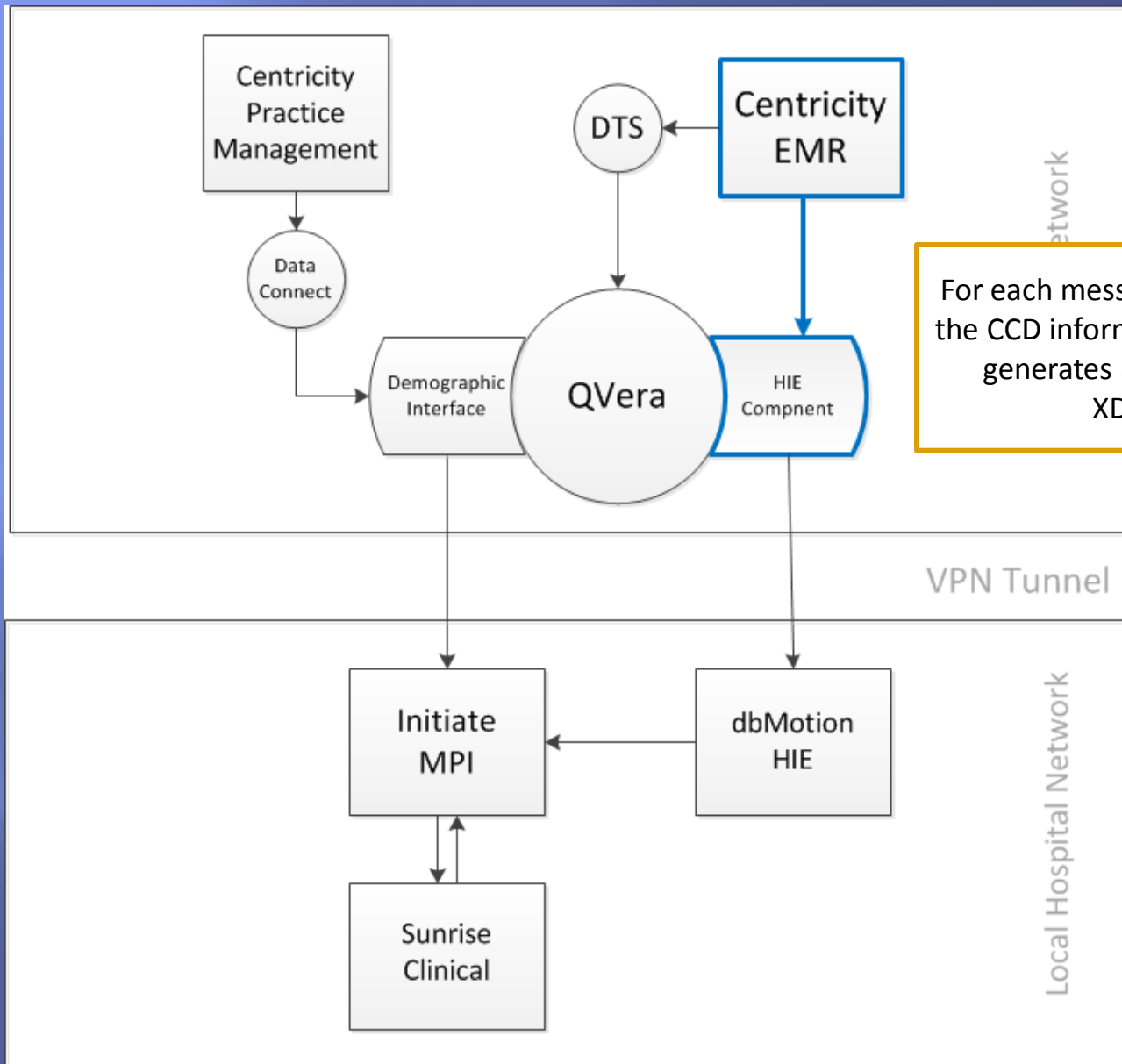
As charts are changed, the DTS scans for changes. If a chart has been changed, then it sends a message to QVera.

MIMA

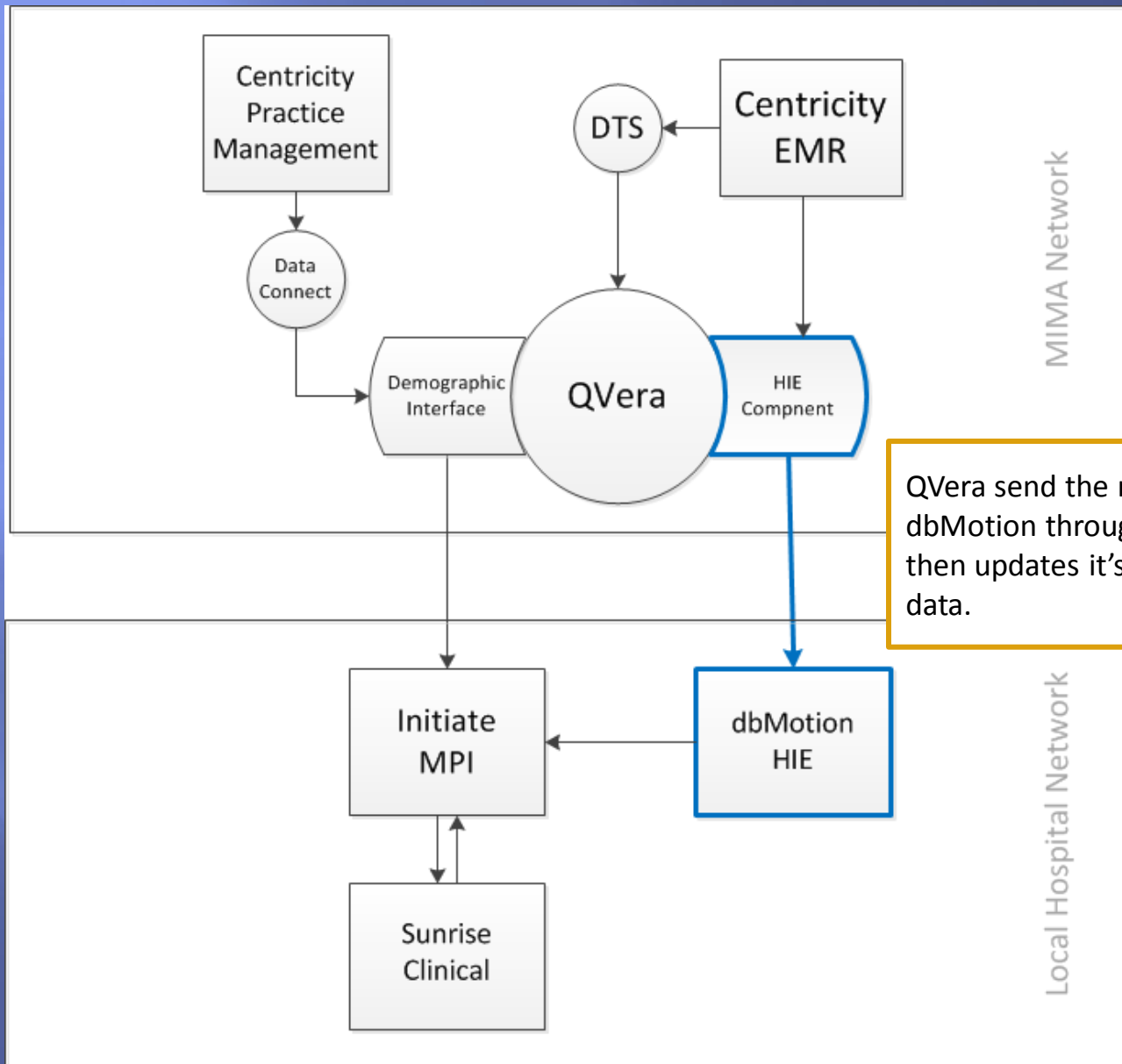
VPN Tunnel

Local Hospital Network

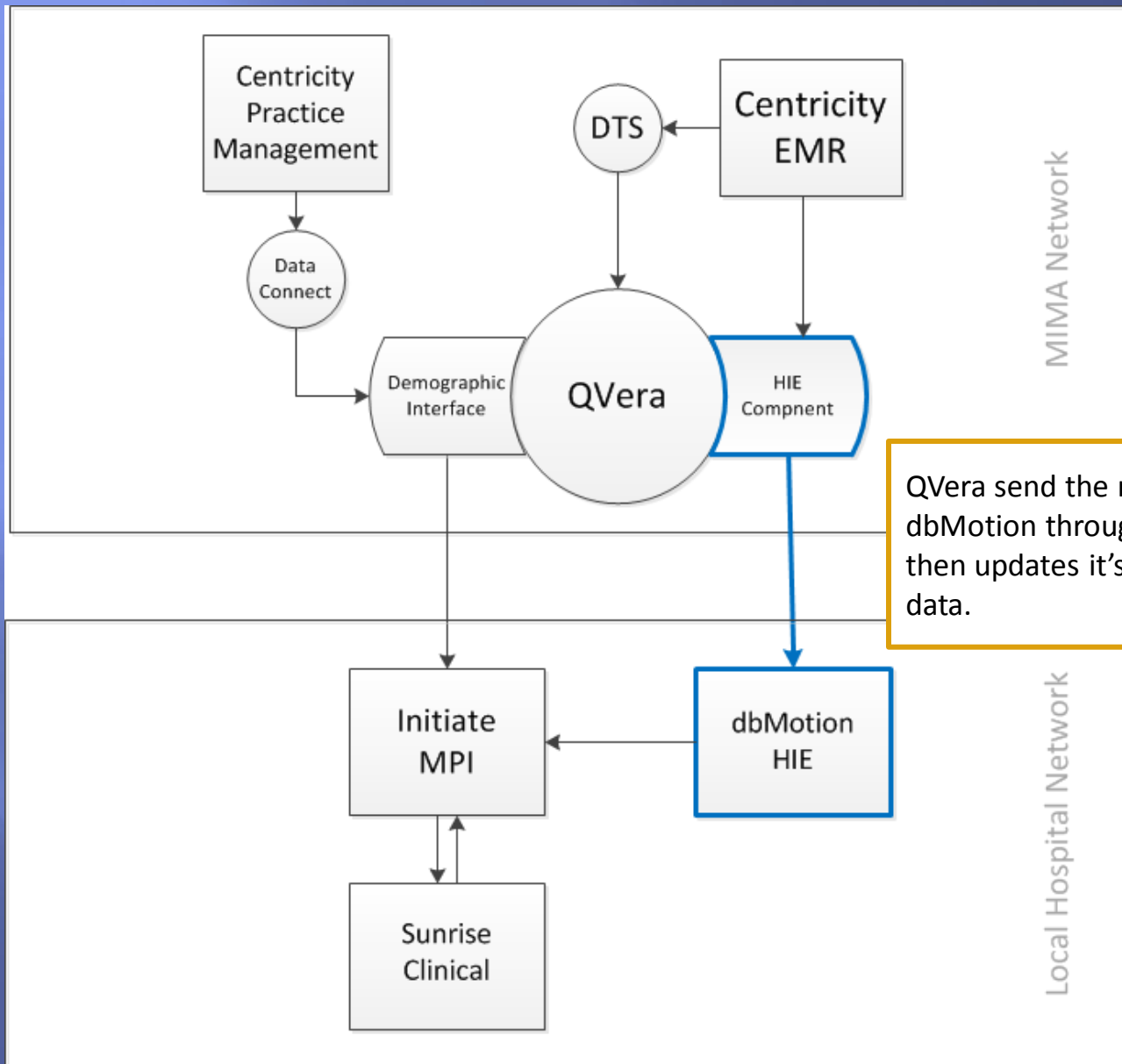
# CCD Creation



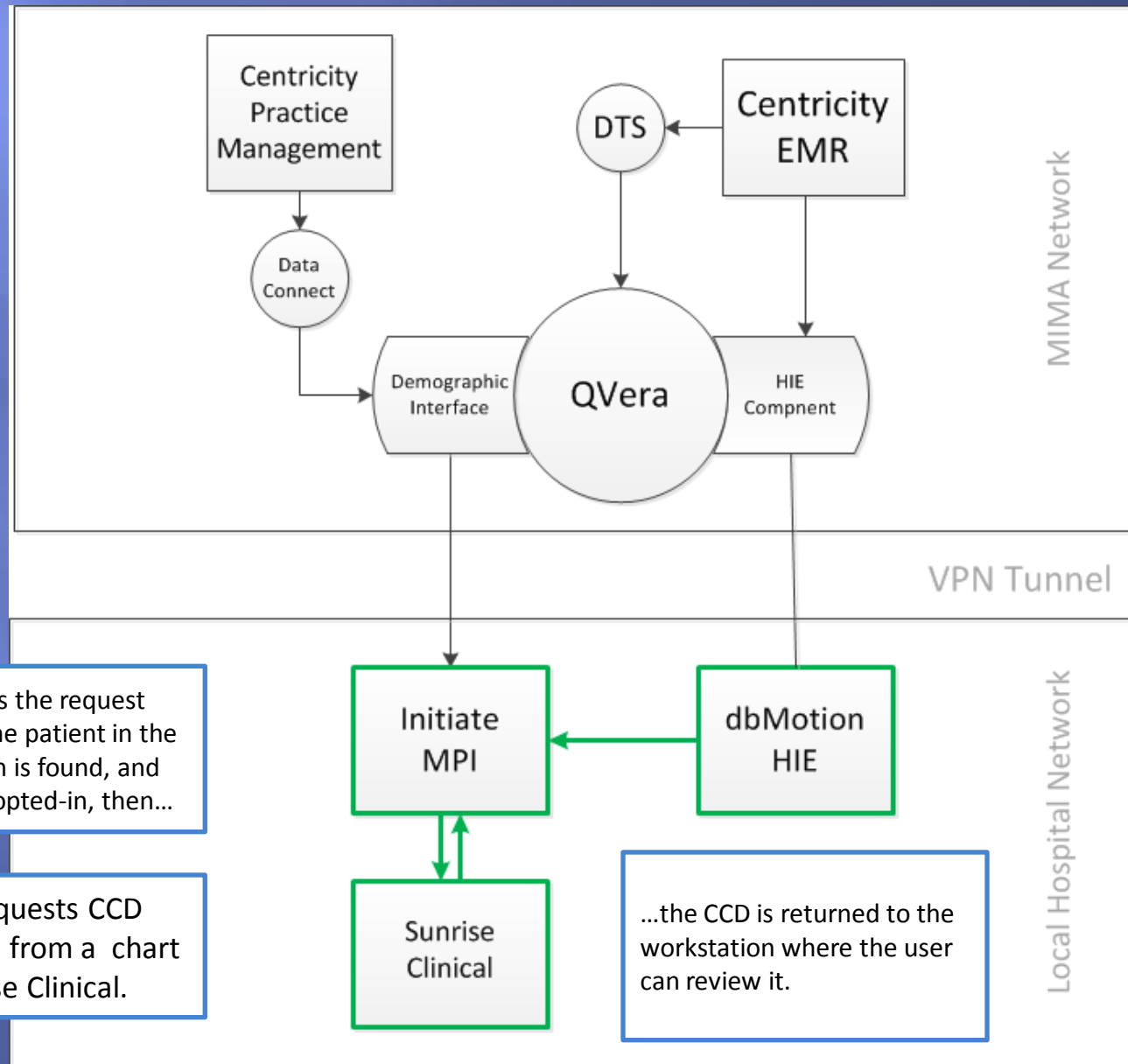
# CCD Creation



# CCD Creation



# Request for Data



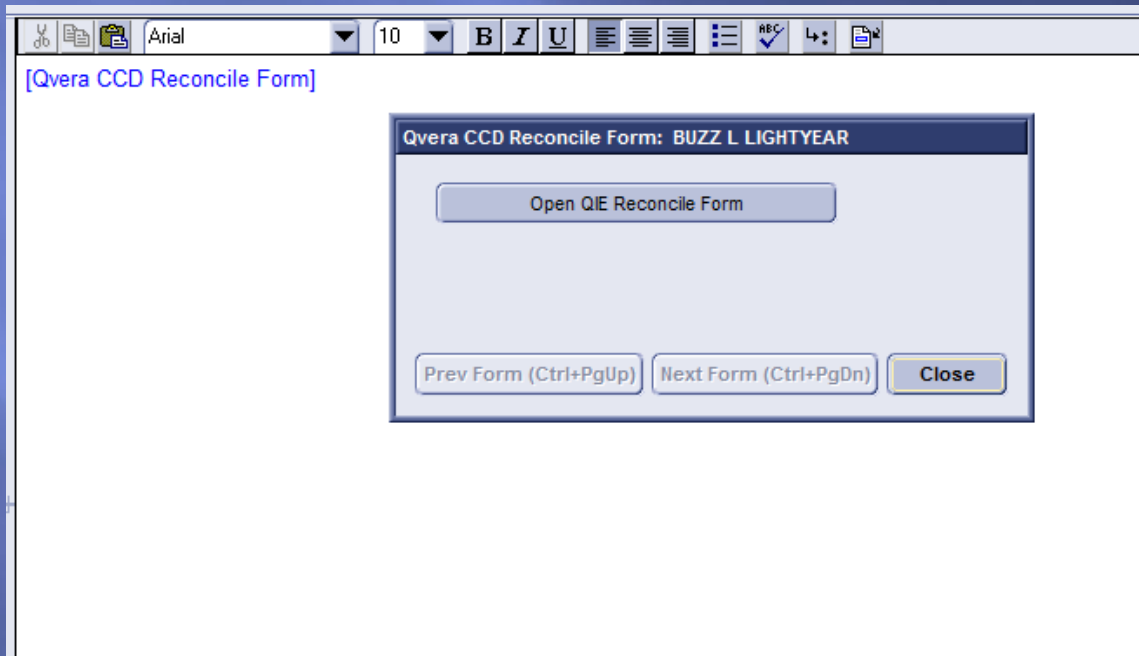


# Other Uses

- Link two EMR implementations together
- Including linking two chart rooms
- Integrate into EMR with a chart update

# EMR Integration

- Add the CCD Reconcile Form to the Update



# EMR Integration

- Allows the user to reconcile data including:
  - Demographics

## Qvera - CCD Reconciliation Form

### Eastside Internal Medicine

Author: Harry S. Winston MD

Phone: (503) 665-1010

From: 2003-11-29

Date: 2012-08-07 10:16 AM

Email: hwinston@eastsideclin.com

To: 2012-08-07

### Don C. Bassett

DOB: 1951-01-01 (62 years old)

MRN: 80-TEST001

Address: 209 E Gordon Ave

Gender: Male

Phone: (801) 335-5101

Layton, UT 84041

Reconcile

# EMR Integration

## Problems

<input checked="" type="checkbox"/>	CCD Document	<input type="checkbox"/>	Centricity EMR
<b>New (2)</b>			
<input checked="" type="checkbox"/>	desc: <b>ANGINA PECTORIS</b> code: ICD-413.9 type: Diagnosis source: Harry Winston MD - Eastside Internal Medicine onset: 2011-10-21 end:	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	desc: <b>CONGESTIVE HEART FAILURE</b> code: ICD-428.0 type: Diagnosis source: Harry Winston MD - Eastside Internal Medicine onset: 2003-11-29 end:	<input type="checkbox"/>	
<b>Changed (1)</b>			
<input checked="" type="checkbox"/>	desc: <b>ABRASION, ARM</b> code: ICD-919.0 type: <b>Diagnosis</b> source: Kenneth Star MD - Southside Clinic onset: 2012-08-02 end: 2012-08-26	<input type="checkbox"/>	desc: <b>ABRASION, LEFT ARM</b> code: ICD-919.0 type: <b>Symptom</b> source: Kenneth Star MD - Southside Clinic onset: 2012-08-02 end: 2012-08-27
<b>EMR Only (1)</b>			
			desc: EDEMA code: ICD-782.3 type: Diagnosis source: onset: 2012-05-15 end:
<b>Identical (2)</b>			
	desc: PHLEBITIS, LOWER EXTREMITY code: ICD-451.2 type: Diagnosis source: Harry Winston MD - Eastside Internal Medicine onset: 2012-02-03 end:		desc: PHLEBITIS, LOWER EXTREMITY code: ICD-451.2 type: Diagnosis source: Harry Winston MD - Eastside Internal Medicine onset: 2012-02-03 end:
	desc: OTHER VOICE AND RESONANCE DISORDERS code: ICD-784.49 type: Symptom source: Harry Winston MD - Eastside Internal Medicine onset: 2012-02-03 end: 2012-05-06		desc: OTHER VOICE AND RESONANCE DISORDERS code: ICD-784.49 type: Symptom source: Harry Winston MD - Eastside Internal Medicine onset: 2012-02-03 end: 2012-05-06

Shows the new, changed, EMR only, and identical data. The user can choose which data to reconcile.

# EMR Integration

## Medications



CCD Document



Centricity EMR

### New (1)



name: **ADVAIR DISKUS 100-50 MCG/DOSE MISC**  
generic: ADVAIR DISKUS  
sig: 1 tab po qd  
start: 2011-10-22 stop: 2012-02-01



The form highlights the data that is different in the CCD and the EMR.

### Changed (1)



name: **AF-ASPIRIN CHILDRENS**  
generic: AF-ASPIRIN CHILDRENS  
sig: **Take as needed for moderate pain**  
start: 2012-05-21 stop:



name: **AF-ASPIRIN CHILDRENS**  
generic: AF-ASPIRIN CHILDRENS  
sig: **Take as needed for extreme pain**  
start: 2012-05-21 stop:

### EMR Only (2)

name: ZARAXOLYN TAB 5MG  
generic: ZAROXOLYN  
sig: 1 po bid  
start: 2012-07-24 stop:

name: TENORETIC 50  
generic: TENORETIC 50  
sig: 1 tab o qd  
start: 2011-10-21 stop: 2011-12-21

### Identical (1)

name: AMOXICILLIN  
generic: AMOXICILLIN  
sig:  
start: 2012-03-06 stop: 2012-04-05

name: AMOXICILLIN  
generic: AMOXICILLIN  
sig:  
start: 2012-03-06 stop: 2012-04-05

# Future Plans

- ❑ Receive CCD's back from the HIE with the Local Hospital
- ❑ Consider other HIE options
  - ❑ Other local hospitals
  - ❑ State of FL

# Conclusion

- ✓ Joining an HIE is extremely beneficial to your patients.
- ✓ With all of the components involved, it can be overwhelming.
- ✓ Planning is essential!
- ✓ Map out your data workflow to simplify the process
- ✓ Consider reconciling CCD's back to your EMR for greater benefit

Questions?