HIE Support for the Shift to New Payment Models

Part 1

Sherri Corey, Sr. Clinical Account Manager
2004 Community Vision

- Facilitate Achievement of Optimal Health Status
  - Implement and support population management tools
    - Support evidence based medicine
  - Improve patient safety
  - Access to patient medical data – when and where it's needed

- Improve Effectiveness / Economic Efficiency
  - Reduce Practice Variation
  - Eliminate unnecessary redundancy
  - Support changing reimbursement

- Increase Patient and Provider Satisfaction
Vision drives creation of health information exchange (HIE) for western Colorado

- Quality Health Network (QHN) was established as a not-for-profit community partnership in 2004.
- Created to improve the quality of care through health information technology (HIT) adoption and secure electronic exchange of health information.
- Now connects 90+ percent of the area’s providers and healthcare facilities.
- Collects/distributes healthcare data to ensure patient’s information is available when and where needed for care.

www.qualityhealthnetwork.org
Diversity of people and places

QHN - 40,000 Square Miles of Connectivity
QHN Connects:

- >94% of all medical providers
- >85% of the healthcare organizations
QHN Operations

- Serve 310 Organizations (estimate >85%)
  - 1,113 area providers
  - 3,554 HIE users
  - Receives ambulatory data (progress note, etc.) from 145 organizations

- 16 Western Colorado Hospitals (89%)
  - VA & Mind Springs** query

- 730,000+ patients in MPI with clinical results

- 14 Million+ results delivered to physicians in 2016

- 63 Practices/Organizations receive Alerts through QHN.
  - QHN Alerts to our service area in 1st quarter of 2017: 16,207

- Image Exchange with 60% of hospitals in service area (complete and in progress)
Data includes connected and in implementation organizations/providers

<table>
<thead>
<tr>
<th>QHN Vitals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3,554 HIE Users</strong></td>
</tr>
<tr>
<td><strong>89% of Hospital’s Connected</strong></td>
</tr>
<tr>
<td><strong>94% of Licensed Providers Connected (1,113)</strong></td>
</tr>
<tr>
<td><strong>736,000 Unique Patients in HIE</strong></td>
</tr>
<tr>
<td><strong>185,000+ queries to QHN Patient Summary per month</strong></td>
</tr>
</tbody>
</table>
How Does HIE Work?

Patient Longitudinal Record

- Admits
- Discharges
- History
- Encounters
- Notes
- Results
- Problems
- Medications
- Specialist
- ED
- Urgent Care
- Hospice
- Pharmacy
- Vision Care
- Home Health
- Extended Care
- Therapy & DME
- Orders
- Primary Care
- Acute Hospital Care
- Behavioral Health
- Lab
QHN (Patient Summary) - an electronic collection of all the health information generated by patient encounters, in any care delivery setting. Often called the *longitudinal patient record*.

Includes data from all disparate data sources connected to QHN:
- 16 hospitals in western Colorado
- 120+ ambulatory sources: practices/clinics, behavioral health, long-term care, home health and hospice providers
- 5 laboratories
- Other HIEs: Utah (UHIN) and Arizona (AzHeC)
- Demographic Information
- Patient Documents (Advance Care Planning documents)
- Behavioral Health providers
- Image Exchange
### Laboratories (16)

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<td>PMEDCN</td>
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<td>MMHOSP</td>
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<tr>
<td>02/26/2016</td>
<td>CBC WITH D...</td>
<td>SMHRMC</td>
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<tr>
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<td>BASIC MET...</td>
<td>GVHOSP</td>
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<td>COMHSP</td>
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<tr>
<td>02/23/2015</td>
<td>MRI BRAIN ...</td>
<td>SMHRMC</td>
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### Ambulatory Encounters (10)

- **Date**: 12/07/2015  
  - **Admission Type**: GJENDO  
  - **Source**: Delta County Memorial Hospital  
  - **Ordering Provider**: Baron, Robert

### Vitals (1)

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<td>WEIGHT</td>
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**Patient Demographics**

Qwerty, Jacque  Female  07/09/1982 (34 yrs) (Community ID: 2000000022202)

**Address**
411 THIS PLACE, GRAND JUNCTION, CO 81502

**Demographic**
- **Name**: JACQUE QWERTY
- **Date of Birth**: 07/09/1982
- **Gender**: Female

**Contact**
- **Phone**: (555) 566-5566
- **Alt. Phone**: 
- **Fax**: 
- **Email**: 

**Support Persons**
- **Birth Place**: 
- **Marital Status**: 
- **Citizenship**: 
- **Religion**: 
- **Care Management Status**: Active 
- **Driver’s License**: 
- **Race**:  
- **Ethnicity**:  
- **Deceased**:  
- **Time of Death**: 
- **Mother's Maiden Name**:  
- **Languages**: No Languages
**Patient Documents**

---

**Qwerty, Jacque**

*Female*  
*07/09/1982 (34 yrs)*  
*411 THIS PLACE, GRAND JUNCTION, CO 81502*  
*Community ID: 200000022202*

### Documents

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<tr>
<td>CareTeamNote11242016</td>
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**Back to List**
Or if a provider . . .
Imagine a world
without fee for
service payments
Shift to Value-based Payment

- Medical Access and CHIPS Reauthorization Act (MACRA)
  - MIPS: 90% of doctors in America affected!
  - APMs: Alternative Payment Models (10%)
    - Comprehensive Primary Care projects (CPC+)
    - Etc....

- Many Initiatives, Programs, and Measures (too many?)
  - Clinically Integrated Networks (CINS) – Commercial, Medicare, Medicaid
  - Accountable Care Organizations (ACOs) – Commercial, Medicare, Medicaid
  - Meaningful Use of Electronic Health Records (CMS – MU)
  - Healthcare Effectiveness Data and Information Set (HEDIS)
  - Electronic Clinical Quality Measures (eCQM’s)
    - NCQA et al
What is Value-based Payment?

2017 MIPS COMPONENTS FINAL

- **Quality Reporting**: 60%
- **Advancing Care Information (interoperability)**: 25%
- **Clinical Practice Improvement Activities**: 15%
QHN HIE Support for New Payment Models

- Behavioral Health Integration
- Image Exchange
- HIE-to-HIE data exchange
- Alert notifications (ADTs)
- Subscription
- Direct Secure Messaging
- Integration of social determinates of health and tools for community care coordination
Behavioral Health Integration

Electronic exchange of behavioral health reports and discharge summaries:

- Direct delivery to providers EHRs
- Addition to the Patient Summary record in QHN
Initiated with Mind Springs Health
- Largest mental health provider in service area
- 13 outpatient locations
- One inpatient facility (32 beds)
- Served 22,811 in 2016: 1,096 inpatient; 20,937 outpatient; 778 patients in MSH Transitions program

Other key stakeholders: primary care providers
Integration of additional Behavioral Health providers in progress
Behavioral Health information is displayed in the Patient Summary Documentation section.
Final Transcription from
Mind Springs Health

Patient Demographics
Name: Em, Auntie
Age: 99 years
Address: 
Date of Birth: 
Gender: Female
MRN or ID: 12345
Phone Number: [MNDSPR]

Provider Information
Ordering: Svetecz, Frank
Copies to: Oz, Wizard

Visit Information
Patient Class: Outpatient
Visit Number: 1234567
Patient Location: Mind Springs Health
Admitted Date: 04- Apr-2016
Reason for Visit: 
Discharge Date: 

Result Information
Test: Office Visit
Priority: ROUTINE
Observation Date, Reported Date: 

Prohibition on Redisclosure

This information has been disclosed to you from records protected by Federal confidentiality rules (42 C.F.R. Part 2). The Federal rules prohibit you from making any further disclosure of this information unless further disclosure is expressly permitted by the written consent of the person to whom it pertains or as otherwise permitted by 42 CFR Part 2. A general authorization for the release of medical or other information is NOT sufficient for this purpose. The Federal rules restrict any use of the information to criminally investigate or prosecute any alcohol or drug abuse patient.

MIND SPRINGS HEALTH

PSYCHIATRY CLINIC VISIT MEDICATION MANAGEMENT

Assessment
Patient is currently restabilized, experiencing only mild to moderate anxiety and depression, and making progress in regards to having more normal interactions and behaviors.

Plan
Seroquel 300 mg b.s., Rexulti 2 mg one q day, fluphenazine 5 mg one b.i.d., prazosin 2 mg one h.s., propranolol 20 mg one t.i.d., oxcarbazepine 300 mg q.a.m. and 300 mg two q.p.m., lihium 300 mg one b.i.d., Mirtexone 50 mg one b.i.d., Xanax 0.5 mg ons q.a.m. at 7:30 a.m. and p.r.n. administration of Xanax 0.5 mg at the discretion of case manager, Jen Bronke or Jacob Carpenter, to be administered by nurse, Samantha Danza, at the outpatient Mind Springs Clinic. Patient to continue with individual therapy and return in three weeks.

Vitals
Time Taken: 4/4/2016 10:10:00 AM B/P:120/82 HR:92 Wt:237.00 BMI:40.68

Examination
Patient is euthymic, cooperative, pleasant, with frequent smiling, emotionally stable, functional, and remained so for the entire session. There was no sign of any disorganized thinking, behavior, or mood states, nor was patient exhibiting any involuntary/abnormal motor or muscle activity. Session after her description of visiting Crisis was relatively light and patient was able to smile spontaneously several times during the session. Discussion focused on how laughter and humor could soothe patient from some of the stress issues she was experiencing. Patient was asked to bring in some humorous encounters or jokes at next session.

Data
Records reviewed of her Crisis intervention on 04/03/2016.
Image Exchange

Immediate electronic access to diagnostic quality images from any connected location:

• Direct delivery to providers EHRs (IERD)
• Addition to the imaging reports in QHN Results and Patient Summary
QHN Image Exchange provides community-wide access to full diagnostic quality medical images.

From within a QHN results report simply click on “View Image” button to access images using advanced viewing technology with a full suite of diagnostic quality image viewing tools.

**Facilities Currently Live on Image Exchange:**
- St. Mary’s Hospital & Regional Medical Center
- Aspen Valley Hospital
- Colorado Canyons Hospital & Medical Center (Fruita)
- Grand River Health (Rifle)
- Montrose Memorial Hospital (Montrose)

**Facilities in Image Exchange Queue:**
- Valley View Hospital (includes Pioneers Hospital)
- Community Hospital
- Delta County Memorial Hospital
Benefits to Providers

- Minimizes the delays in patient treatment
- Reduces the need for duplicative exams
- Limits the unnecessary radiation exposure for patients
- Diagnostic quality viewer from any location
- Decreases the risk of medical errors
- Eliminates the need for hand-carried images
- Providers in different locations may compare current and past diagnostic tests
Diagnostic Quality Viewer

- Full diagnostic quality viewer
  - High performance: fast user experience even over slower connections
  - Full suite of image viewing tools similar to the PACs system
  - Works on any browser, in any environment with no local application to install
## Image-Enabled Results Report

### Summary
- **Name:** [Redacted]
- **Gender:** Female
- **DOB:** 2/27/1993
- **Address:** [Redacted], LIVERPOOL, NY 13086

### Results (16)

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<td>CBC</td>
<td>LACNY</td>
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<td>MRA NECK w/o contrast</td>
<td>CROUSE</td>
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<tr>
<td>05/17/2013</td>
<td>MRA HEAD w/o contrast</td>
<td>CROUSE</td>
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<tr>
<td>05/17/2013</td>
<td>MRI BRAIN w/o contrast</td>
<td>CROUSE</td>
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<td>HCG, QUAL. SERUM</td>
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<td>TROPONIN I</td>
<td>LACNY</td>
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<td>07/16/2012</td>
<td>ULTRASOUND TRANSGAVINAL</td>
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### Vitals (0)
- No Vitals to display

### Allergies (0)
- No Allergies to display

### Medications (0)
- No Medications to display

### Encounters (4)

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### Social History (0)
- No Social History to display

### Problems (0)
- No Problems to display

### Procedures (0)
- No Procedures to display

### Immunizations (0)
- No Immunizations to display
Real-Time Image Collaboration

- Immediate consultations with any QHN participant
- One-click to initiate a collaboration session
- Full access to real-time image manipulation for all collaborators
HIE TO HIE Data Exchange
Patient Centered Data Home™

Access to information from other HIEs:

• Alert sent from HIE were care event occurred
• Immediately access to patient information is available for viewing or download to provider’s EHR
• Information becomes part of the Patient Summary record in QHN
QHN Clinical Data Reach by Zip

Map based on Longitude (generated) and Latitude (generated). Color shows details about Postal Code (Zip for US). Size shows sum of Count of All Unique Patients in eMPI with Clinical Data.
HIE-to-HIE data exchange enables providers to initiate a simple query to access real-time information across state and regional lines.

Based on triggering episode alerts, providers are notified a care event has occurred outside the QHN service area and confirms the availability and the specific location of the clinical data.

**HIE-to-HIE Data Exchange Live:**
- Utah Health Information Network – UHIN
- Arizona Health-e Connection - AzHeC

**HIEs in the Development queue:**
- CORHIO
- Nebraska
- Idaho
- San Diego Health Connect
- Santa Cruz HIE
1. When patient has care event in HIE 2, the patient’s home is determined to be in HIE1’s geography. An ADT message, with patient MPI#, is immediately pushed to HIE 1.

2. HIE 1 receives the ADT, incorporates patient into its eMPI and, depending on its policies, may immediately request further data, or may wait to request data later.

3. HIE 2 responds when queried with complete data on the correct patient. Response time is optimal and HIE 1 now has a complete record.

4. At any point, HIE 1 can notify providers via ADT alerting or calculate eCQM’s or any other advanced HIE use case applications.
Arizona: population 6.6M – HIE AzHeC
- MPI: 5.9M
- 21 hospitals and health systems
- 2 reference labs and imaging centers

Utah: population 3M – HIE UHIN
- MPI: 5.7M
- All 4 major hospital systems and most clinics/labs
- 80% of all providers

Western Colorado: population .5M – HIE QHN
- MPI: .6M with clinical data
- 12 Hospitals, all reference labs and imaging centers
- 94% of all providers
Benefits to Providers

- Allows providers to access and download records from out-of-area care events
- Provides real-time clinical data to providers treating patients from out of the area
- Creates a more comprehensive patient record in the provider’s EHR and QHN Patient Summary
- Providers “subscribed” to the patient receive a real-time care event Alert
Document(s) from other HIE sources are under the **External Document Search** tab.
Documents from other HIEs are displayed.
Send Documents to an EHR or other Providers

Laboratories

<table>
<thead>
<tr>
<th>Download Report</th>
<th>Share</th>
<th>Send to Me</th>
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Qwerty, Jacque 7/9/1982 Female

Flag: General, Low, High | Abnormal: ! Critical: @ Severe: #

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Encounter

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BASIC METABOLIC PANEL

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<td>LAB DIRECTORS: A. D. LONG, M.D. * H. S. MOONEY, M.D. * RACHEL LACOUNT, M.D. * TARA MARSHALL, M.D.</td>
<td>LAB ADDRESS: St. Marys Hospital Regional Medical Center, Grand Junction, Co 81501</td>
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Observations

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Alert Notifications (ADT)

Alerts provide real-time electronic notifications when patients are admitted to, discharged from, or transferred within a hospital or other care settings:

- Alerts immediately notify providers of a care event
- This allows them to put in motion follow-up actions to help patients stay healthy and avoid readmissions
Benefits to Providers

- Timely notification of care events allows care teams to initiate proactive patient follow-up and communication among the patient’s providers
- Improves tracking of high-risk patients with complex care requirements
- Improves transitional care management and ability to comply with the TCM billing codes
A patient goes to the hospital and has an ED registration or Hospital admission or discharge.
The hospital admissions team completes a patient registration / discharge.

This triggers an Admission, Discharge, Transfer (ADT) message to QHN.

Note: It is important that the primary care provider (PCP) is noted at registration or that a patient is “subscribed” in the QHN system to a patient panel or organization.
QHN receives the ADT and matches to the patient.

If the patient is attributed to a provider, healthcare organization (subscribed), or account, an alert is created using…
Provider(s) / organization receives preferred electronic Alert type from QHN and implements the appropriate follow-up care.
Why Are Alerts Important?

Patients move from one healthcare setting to another as their healthcare requires. However, often essential parties in their care are unaware the transition has occurred.
## Emergency Admit ADT from
### St Mary's Hospital and Regional Medical Center

### Patient Demographics
- **Name:** MOUSE, MICKEY
- **Address:** 600 CARTOON CORNER CLIFTON, CO 81520
- **Age:** 41 year(s)
- **Date of Birth:** 01-Jan-1975
- **Gender:** Male
- **MRN or ID:** V123456789 (SMH)
- **Phone Number:** (970)999-1234 (970)999-5678

### Provider Information
- **Primary Care:** Reicks, Gregory C.

### Visit Information
- **Patient Class:** Emergency
- **Patient Location:** MER: ED23: ED23
- **Reason for Visit:**
- **Visit Number:** 12345678
- **Admitted Date:** 13-Jan-2016
- **Discharge Date:**

### Contacts
- **Name:** MOUSE, MINNIE
- **Address:** 600 CARTOON CORNER CLIFTON, CO 81520
- **Relationship:** Spouse
- **Phone Number:** (970)999-5678

### Guarantors
- **Name:** MOUSE, MICKEY
- **Address:** 600 CARTOON CORNER CLIFTON, CO 81520
- **Relationship:** SLF
- **Phone Number:** (970)999-1234
- **Employer:**
- **Phone Number:**

### Diagnosis
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### Observations
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Subscription

A data routing service where information is sent to providers based on the provider with whom the patient is associated:

• Allows results, Alerts, etc., to be sent to providers even when they are not listed as the ordering, referring, consulting or admitting provider
• Allows providers to manage a sub-set of patients
• Allows providers to filter data
How Subscription Works

Results/alerts are typically triggered based on the designated primary care provider (PCP).

However, they may also be triggered based on the subscription of a patient panel from a provider or healthcare organization.

When patients are registered/admitted at a healthcare facility frequently the PCP is not recorded or recorded incorrectly.

Subscription allows the organization/provider to receive results/alerts based on the patient panel to which the patient is attributed.
Benefits to Providers

- Allows providers to have access to all patient data even when they are not listed on orders or admit
- Directs Alerts, of care events that occur outside of the area (from other HIEs), to providers
- Allow providers to select a sub-set of their patient population to manage closely
QHN Direct Secure Messaging

Secure provider to provider HIPAA compliant communication

• Allows for secure provider-to-provider information exchange.

• Providers and care team members can securely send patient information directly to other healthcare professionals.

• Information is encrypted and securely sent via the Internet using the QHN HISP (Health Information Services Provider).
Why Use Direct Messaging?

- Secure provider to provider communication plays an important role in care coordination and the improvement of healthcare outcomes.
- Direct messages are HIPAA compliant.
- Many providers in our region are QHN Direct participants:
  - 134 Organizations
  - 1,046 individual providers
QHN Direct

Provider Directory  QHN Direct  QHN Results

Qwerty, Jacque  Female  07/09/1982 (34 yrs)  (Community ID: 200000022202)  PCP
411 THIS PLACE, GRAND JUNCTION, CO 81502

Laboratories (17)

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Imaging (4)

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Documentation (473)

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Emergency Encounters (3)

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Direct for Data Transmission

- ADT alerts may be sent to recipient’s QHN Direct mailbox
- Organizations CCDs (Continuity of Care Document) may be sent via Direct for inclusion into EHRs
- Clinical results may be sent to recipient’s QHN Direct mailbox
How are These Tools Used?

- **To enhance care coordination**
  Critical information is provided for proactive, timely patient follow-up and communication among the patient’s providers.

- **To improve tracking of high-risk patients**
  Improve treatment for patients who are medically frail, have chronic conditions, utilize the system inappropriately, at risk for readmission.

- **To improve population health**
  Care coordinators or health plans may track a panel of patients requiring close monitoring due to complex care requirements.

- **To support new care delivery models**
  ACOs, PCMHs, CPCi+ and other models are tying financial success to care coordination - tracking patient encounters can be critical.
What’s Next?
It’s been established that 70-80% of determinants of health outcomes can be attributed to socio-economic, environment influence and behavioral health challenges.

source: www.health.state.mn.us
Community Resource Network (CRN)

Care Coordination Pilot Project - 2015

Fully Integrated Information Exchange

Social + Behavioral + Medical

Longitudinal Record

Community Resource Network (CRN)

Health Information Exchange (HIE)

Connect/Communicate

Person ID System

Legal/Consent
Questions