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New Mexico Health Information Collaborative (NMHIC) The NM Statewide Health Information Exchange (HIE) Network



Thomas East, PhD, CEO/CIO
Dale Alverson, MD, CMIO
Robert Abrams, CFO

Legislative Health and Human Services Committee Update
July 28, 2016



UNM

DEPARTMENT of EMERGENCY MEDICINE

David Glass, MD, EMT-P
Resident Physician
Department of Emergency Medicine
University of New Mexico Hospital
USAF Reserve Pararescue Team Leader

**NM Health Information Exchange is a powerful tool
that is improving the quality and safety of care every
day in New Mexico**

"Our team had a patient with severe vaginal bleeding arrive in OB Triage. She had received all of her prenatal care at another hospital. Getting access to her records made all the difference.

The following day, our team was called down to the EDRU (ED resuscitation unit) for a 37 week pregnant patient in a MVC (Motor Vehicle Collision) and I was able to get consent, log in, and gain access to much needed prenatal care information because we needed to admit her immediately to our institution.

The OB service had no idea this portal existed and have been impressed with the speed and efficiency that I've been able to gather medical information. In fact, they have asked me to contact my EM point-of-contact about how they can gain access."

4/16/2016

**>1500 Users, 3000 patient documents/summaries accessed per month
1 Billion messages for 1.7 Million patients >3 years of data**



What is a Health Information Exchange?

- Technology and services to make sure health information is available when and where it is needed.
- “Interoperability”- the ability of systems to exchange and use electronic health information from other systems without special effort on the part of the user.



Why use a Health Information Exchange?

- 18 different doctors in your lifetime
- >65 years old- 28 different doctors
- Your health is dependent on equivalent of 200 pieces of paper in almost 19 different locations.

Average values for the US from the Practice Fusion survey conducted via omnibus survey April 17-18, 2010. The GfK OmniWeb survey is a weekly national web survey of US households. Interviews were conducted from among a nationally representative sample of 1,035 adults age 18 or older

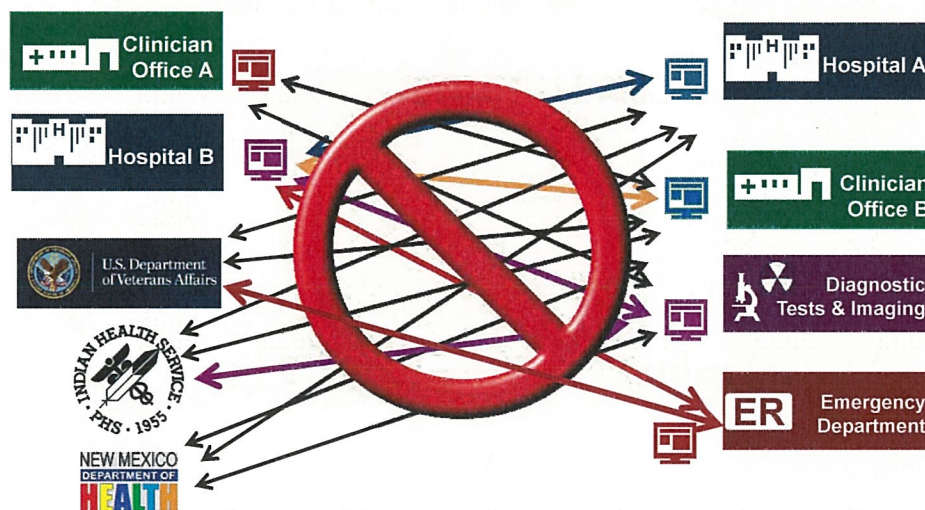


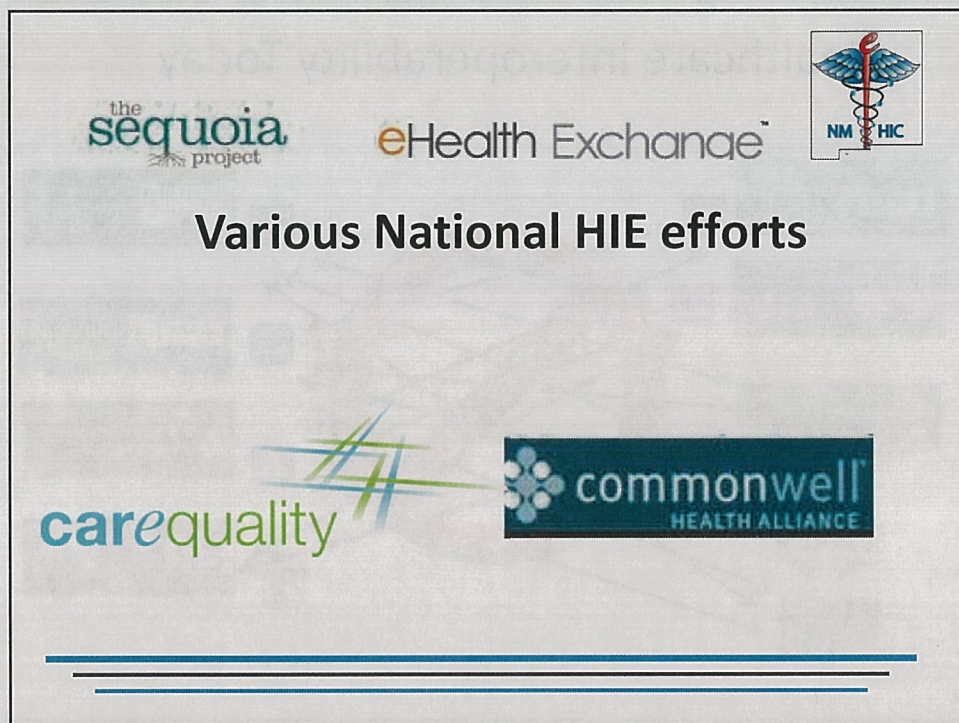
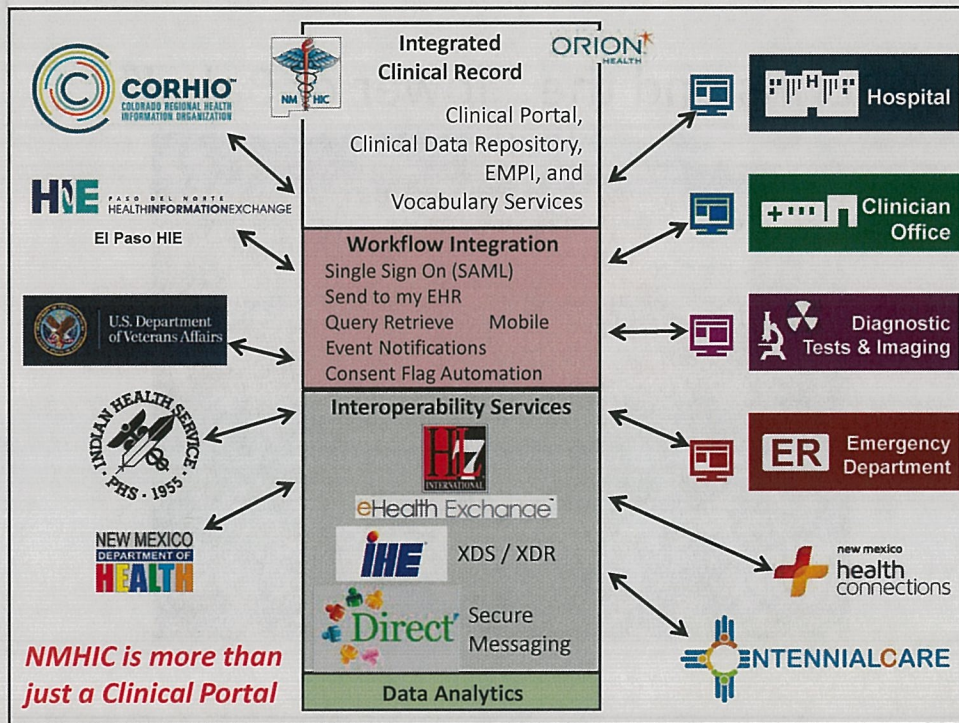


EHRs and the “Tower of Babel”



Healthcare Interoperability Today







HIEs are working together to negotiate contracts and improve data sharing



Strategic
Health
Information
Exchange
Collaborative

Trade Organization (37 HIEs)

NMHIC is a member of the Mid States Consortium
of Health Information Exchanges (19 HIEs)

HUG HIE Users Group

the
sequoia
project

eHealth Exchange™

All 50 states



Four federal agencies
(DoD, VA, HHS including
CMS, and SSA)



40% of U.S. hospitals



13,000 medical groups



3,400 dialysis centers



8,300 pharmacies

Immunizations and clinic visits



Supporting more than
100 million patients

- Passed our testing, went live 2/10/16
- Starting planning with SSA, VA, HIEs in surrounding states



Network of Networks Supports HIE Connectivity and connection to national eHealth Exchange

AMA

minute clinic

Walgreens

NEXTGEN HEALTHCARE

ORION HEALTH

Epic

Greenway Health

THSA

athenahealth

OBIX

Transcend Insights

HIETexas

medfusion

MEDVIRGINIA

NYEC

HIELIX

eClinicalWorks

Hyland

Medicity

NaviNet

Santa Cruz Health Information Exchange

Cerner

OPTUM

surescripts

Dignity Health

COORDINATED C. OKLAHOMA

ICAO

mirrth

MRO

sandlot solutions

SAN DIEGO HEALTH CONNECT

icw

ZOLL

KAISER PERMANENTE

Intermountain Healthcare

matrixcare

Netsmart

lifeIMAGE

CommonWell Health Alliance Members

Interoperability for the Common Good

<p>70%+ of acute EHR</p> <p>24%+ of ambulatory EHR</p> <p>Market leaders in lab, long-term care, retail pharmacy and more</p>	<p>Founding Members</p> <ul style="list-style-type: none"> Allscripts athenahealth Cerner C-P-S-I Greenway Health McKESSON sunquest 	<p>Contributor Members</p> <ul style="list-style-type: none"> aprima brighttree CareCloud CVS CAREMARK kareo MacPractice MEDHOST MEDITECH MERGE 	<p>General Members</p> <ul style="list-style-type: none"> CitiusTech INFLUENCE HEALTH MTBC OBIX OmniSYS PeriGen PointClickCare wellcentive
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Source: SK&A, a Cegedim Company and KLAS

*EHR Vendor Market Share by Physician Size" SH&A, January 2015.

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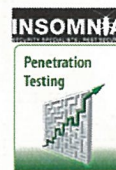
Initial Service Provider

No use case for connecting to HIEs or National eHealthExchange



Privacy and Security

- Information within the NMHIC HIE is subject to Federal and State Privacy and Security Regulations which includes HIPAA, HITECH and other regulations.
- Information is encrypted at rest and in transit.
- Access is limited to authorized users only.
- Insomnia Security has done penetration testing on our NMHIC Orion environment
- British Telecom America has done an external HIPAA audit
- Security meets industry standards such as SSAE16 (auditing), ISO 27001 and EHNAC



More than half of hospitals hit with ransomware in last 12 months

New research by Healthcare IT News and HIMSS Analytics found considerable uncertainty, questionable business continuity plans, and the need for more effective end-user education rampant in the industry.

By [Tom Sullivan](#) April 07, 2016 07:52 AM

Healthcare IT News

Things to remember about ransomware:

- *Very few attacks were successful*
- Starts with malicious e-mail releasing virus
- Encrypts the data on servers and makes it unusable
- Typically does not remove or copy data
- Solutions:
 - Pay ransom for encryption key
 - Have a strong disaster recovery plan
- Prevention:
 - Train staff to never open suspicious e-mail
 - Improve e-mail scanning and border defenses and disaster plan

Orion Health HIE has a strong security and disaster recovery plan

- Geographically separated redundant highly secure systems that are not connected to an organizations e-mail server.
- If one system were to go down it would automatically fail over to the redundant system and they would rebuild the first one and probably not pay ransom.





Patient Consent



New Mexico is an Opt-Out State:
Data can flow into the HIE without patient consent.

However, patients control which organizations can access the record.



→ Break the Seal ←

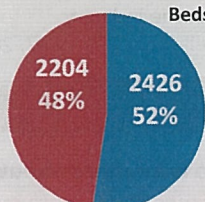


NMHIC – Status

- **HIE – Orion System Live since 5/2015**
- Data from Jan. 1, 2013, forward
- >1B Messages in clinical data repository
- Over 1.7 Million patients--All of Centennial Care
- 100M Messages inbound each month
- Public health reporting
 - 58K ED admission reports/mo.
 - 18K Elec Lab Reports/mo.
- Direct secure messaging now available
- eHealth Exchange gateway (Sequoia Project) went live 2/10/2016

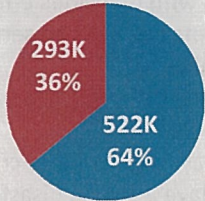
■ Data Providers
■ Not Providing Data

52% NM Hospital Beds Providing Data




Category	Count	Percentage
Data Providers	2426	52%
Not Providing Data	2204	48%

64% NM ED Admissions in NMHIC 2014 Data



Category	Count	Percentage
Data Providers	522K	64%
Not Providing Data	293K	36%



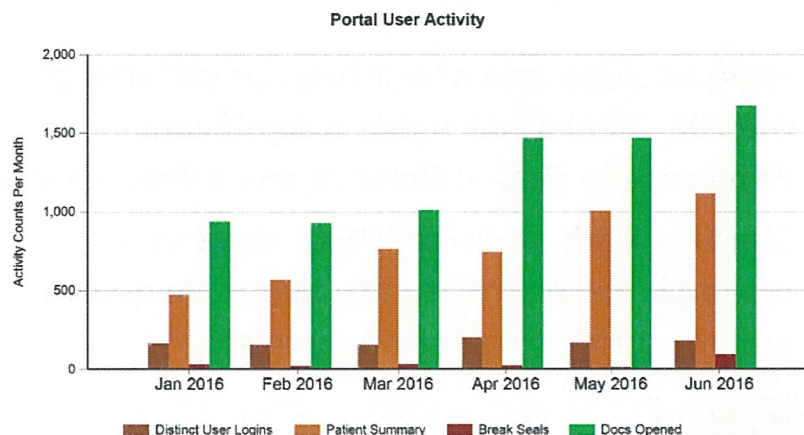


NMHIC HIE Participants

- 27 Hospitals
- 14 Provider groups
- NM Medicaid
- Commercial payer organizations
- 3 Laboratories
- 1 Statewide diagnostic imaging organization
- 1 Pharmacy
- Public health
- NM Primary Care Association representing FQHCs

NMHIC welcomes additional stakeholders including: home health, hospice, skilled nursing facilities, behavioral health, professional healthcare associations and ancillary service providers.

NMHIC HIE Use is Climbing Rapidly





ED and Inpatient Reports Securely Delivered Daily



BlueCross BlueShield
of New Mexico

Starting soon, Medicaid and Medicare??



- Have become one of our heavier utilizers of the HIE... feel it has made a significant difference in their efficiency and effectiveness.
- Starting work on using HIE to support a research project related to overdose deaths and reporting to a national registry





A FREE, online course for healthcare professionals

- Population health management
- Value-based care purchasing
- Patient-centered care
- Health care data analytics
- Care coordination & interoperability of health IT systems

Multiple 5 week sessions from 8/26/2016-5/1/2017
Register now for one of six class date options!
<http://go.uth.edu/HICATTRegister>

NMHIC – HIE Testimonial

“I had a complicated patient today who had lots of labs done elsewhere, I was able to look at them all and make a hypothetical diagnosis on that basis, which I could not have done at all without this interface. THANKS!!!!!!”

7/10/2015 5pm (first day being live)

“Thank you, I am using this for about 30% of my patients and it is a huge time saver!!!” *7/16/2015... less than one week being live*



Dr. Sally L. Harris
 Albuquerque's Best Docs 2006 - 2015
 Best Doctors in America 2009- 2014

“If I had known how useful this was I would have signed up a year ago. It makes my life so much easier to be able to track labs more effectively than my patients can with their portal interfaces. Your interfaces is fast, easy to use, and seems to know nearly everyone I see. I love that I can access labs and tests from UNM and Pres and ABQ in one place. This is an incredible tool. Thank you for providing it!”
 8/4/15



NMHIC – Participation Fees



\$125/bed/yr



No recurring fee to send data. One time fee for interfaces



\$150/provider/yr



\$0.20/member/month

NMHIC Current Financial Status – OK

As of today:

- NMHIC has cash in the bank, a revenue stream that funds its day to day operations and is working with its software vendor on extended payment terms to allow time to built out the rest of the state interoperability and develop additional revenue sources.
- NMHIC has a plan for the next two years to expand interoperability throughout New Mexico; but could use help.



NMHIC Sustainability

Projections show sustainability is dependent on full participation by:

- Large hospitals and health systems
- Regional hospitals/hubs
- Large provider groups
- Centennial Care Managed Care Orgs
- Other payers (commercial, Medicare, etc)

Alternate Revenue Sources



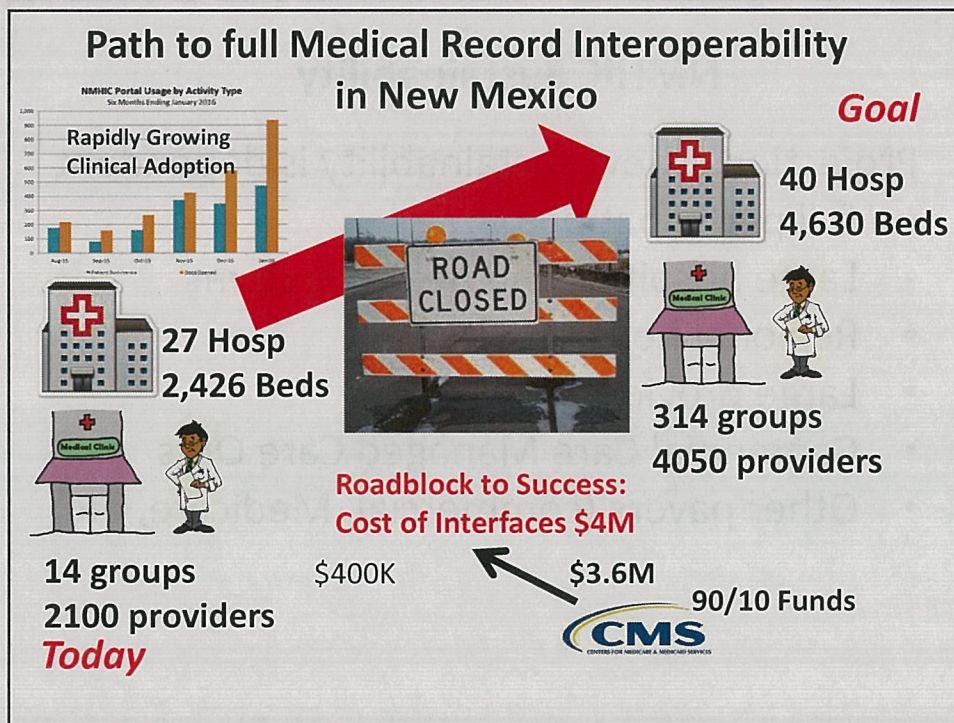
The Healthcare Connect Fund (fund) provides support for high-capacity broadband connectivity to eligible health care providers (HCPs) 65 percent discount from the fund on all eligible expenses.

Envera Health Overview

envera

Envera's Patient Authorized Data (PAD) solutions enable the sourcing of electronic health data – with an initial use case for life insurance underwriting







Full Medical Record Interoperability in New Mexico

Value for NM

↑ Quality

↑ Safety

↓ Cost

References for Analysis:

The Business Case for Interoperability and Health Information Exchange HIMSS 8/2014

Gartner Study done for Arkansas extrapolated for New Mexico- Appendix D

<http://www.himss.org/ResourceLibrary/genResourceDetailPDF.aspx?ItemNumber=32781>

Similar results seen with financial analysis done by UNM Health Economist and a third party actuarial analysis for the NM Department of Health for the State Innovation Model project. Both showed a quick and significant return on investment.

Full value is only seen with full participation



Recommended Legislation

The New Mexico Health Information Exchange Interoperability, Standards, and Authorization Act

- Mandatory participation of healthcare providers, manage care organizations and self insured employer groups in a state wide interoperability solution (Similar to Minnesota legislation)
- Data set should meet Office of National Coordinator (ONC) standards for a “common clinical data set” (45 CFR 170.102)



Questions? Contact us:



Call: (505) 938-9909



Email: info@nmhic.org

Visit: www.nmhc.org

Participating Organizations

Hospitals / Health System

- **Christus St. Vincent Regional Medical Center**
- Gerald Champion RMC
- Gila Regional Medical Center
- **Holy Cross Hospital**
- Los Alamos Medical Center
- **Lovelace Health System**
- Memorial Medical Center
- Nor-Lea General Hospital
- **Presbyterian Health System**
- San Juan Regional Medical Center - *In testing now*

- Sierra Vista Hospital
- Union County Hospital
- **UNM Health System**

Diagnostic Service Centers

- Laboratory Corp. of America
- Quest Diagnostics- *In testing now*
- **TriCore Reference Labs**
- X-Ray Associates of New Mexico - *In development now*

Payers

- New Mexico Health Connections
- BCBS NM
- Molina
- United Healthcare

Data Provider Only
Portal User Only

Data Provider and user of HIE portal
Contract signed, in queue for implementation



Participating Organizations Provider Groups and Public Health

- **ABQ Health Partners**
- First Nations Community HealthSource
- Hematology Oncology Associates
- Heather Brislen, MD
- InnovAge
- Jeffrey D. Miller, MD
- Monica Luna, DOM
- New Mexico Department of Health
- NM Oncology Hematology Consultants (NM Cancer Center)
- 200 Christus St. Vincent Community Providers
- NM Orthopaedics
- NM Primary Care Association (Represents FQHCs)
- Rio Abajo Family Practice
- Sandia Neurology PC
- Surgical Oncology & Gastroenterology Associates
- Taos Clinic for Children and Youth
- Vida Pharmacy

*Data Provider Only
Portal User Only
implementation*

*Data Provider and user of HIE portal
Contract signed, in queue for*

Core HIE data

- Demographics
- Allergies
- Medications
- Immunizations
- Insurance
- Procedures
- Problem List
- Encounters (Visits) & Diagnoses
- Lab Data
- Radiology Data
- Clinical Notes

Note: Data available varies by organization

Data Providers & Elements

NMHC HIE Portal data elements	ABQ Health Partners	Christus St. Vincent (Santa Fe)	Lovelace Health System ¹	Presbyterian Healthcare Services ²	Holy Cross Hospital (Taos)	TriCore Reference Laboratories	UNM Hospitals ³	Payers ⁴
	Provider Grp	1 Hospital	6 Hospitals	8 Hospitals Pres Med Grp	1 Hospital	Statewide	2 Hospitals	5 Payers
• Patient Summary								
o Patient Demographics	X	X	X	X	X		X	X
o Allergy List	X	X	X		X			
o Encounter History		X	X	X	X		X	
o Diagnoses		X	X	X	X		X	
o Medication History (Orders)	X							
o Insurance Information	X	X	X	X	X		X	
o Immunizations	X							
o Procedures					X			
o Problems (<i>Apr 2014 forward</i>)	X							
• Document Tree								
o Laboratory Results		X	X	X	X	X	X	
o Pathology Reports		X	X	X	X	X	X	
o Radiology Reports	X	X	X					
o Patient Notes	X		X					

The NMHC HIE Portal includes clinical data from January 2013 to present (unless noted otherwise).
San Juan Regional Medical Center, Quest Diagnostics, X-Ray Associates - in development now.

7.22.16

Document Summary

Patient View

Showing All Mark All As Read
Group By Category Sort By Date

Patient Summary

- Clinical Notes (122 / 123)
 - Clinic Note (63 / 63)
 - Consultation (2 / 2)
 - Discharge Summary (4 / 4)
 - History & Physical (3 / 3)
 - Operative Report (6 / 6)
 - Other (10 / 10)
 - Procedure Note (13 / 13)
 - Progress Note (13 / 13)
- Dynamic Documents (1)
 - Patient Snapshot
- Laboratory (241 / 287)
 - Blood Bank (2 / 2)
 - Chemistry (169 / 195)
 - Hematology (24 / 38)
 - Immunology (9 / 9)
 - Laboratory (1 / 2)
 - Microbiology (12 / 13)
 - Surgical Pathology (2 / 2)
 - Toxicology (19 / 19)
 - Urinalysis (3 / 7)
- Radiology (29 / 31)
 - CAT Scan (2 / 2)
 - CT Scan (4 / 4)
 - Intervention (4 / 4)
 - MRI (3 / 4)
 - Radiology (7 / 7)
 - Radiology Ultrasound (2 / 2)
 - Ultrasound (2 / 2)
 - X-Ray (5 / 5)

▼ Laboratory (241 / 287)

▼ Blood Bank (2 / 2)

2014 Type and Screen (2 / 2) MARK ERASMUS

▼ Chemistry (169 / 195)

2015 Lipase (2 / 2) BRANDON WARRICK

2015 * Hepatic Function Pnl (3 / 3) BRANDON WARRICK

2015 * Basic Metabolic Pnl (5 / 5) BRANDON WARRICK

2015 * Lipid Panel (1) ALISON MARHSALL

2015 * Hemoglobin A1C (1 / 1) ALISON MARHSALL

2015 *-POC GLUCOSE (56 / 70) Lisa Noya

2015 PHOSPHORUS (14 / 14) Lisa Noya

2015 MAGNESIUM (17 / 17) Lisa Noya

2015 * COMPREHENSIVE METABOLIC PANEL (16 / 16) JODI M.

2015 POTASSIUM (7 / 7) Lisa Noya

2015 OSMOLALITY, URINE (1 / 1) Laura Marsh

2015 * OSMOLALITY, SERUM (1 / 1) Laura Marsh

2015 * BASIC METABOLIC PANEL (6 / 6) Laura Marsh

2015 * LACTATE (LACTIC ACID) (1 / 1) Lisa Noya

2015 AMMONIA, PLASMA (1) JODI MASTERS

2015 sTSH (JRD GENERATION) (1 / 1) JODI MASTERS

2015 CREATINE KINASE (CK, CPK) (1 / 1) JODI MASTERS

2015 * LIPID PANEL (1 / 1) JODI MASTERS

2015 * HEMOGLOBIN A1C (3) JODI MASTERS

2015 TROPONIN I (3 / 3) Marci Gambarato

2015 LIPASE (4 / 4) Marci Gambarato

2014 Lithium (1 / 1) ED Provider

2014 * Comp Metabolic Panel (3 / 3) Ajoy Kumar

2014 Fasting (2 / 2) Ajoy Kumar

2014 Troponin I (1 / 1) ANDREW EDWARDS

2014 * Basic Metabolic Pnl (1 / 1) ANDREW EDWARDS

2014 * Glucose POC (1) MARK ERASMUS

2014 Ur Microalbumin (1 / 1) Ajoy Kumar

2014 * Hemoglobin A1C (1 / 1) Ajoy Kumar

2013 VITAMIN B12 (1 / 1) Choosak Burr

2013 FOLATE, SERUM (1 / 1) Choosak Burr

2013 FERRITIN (1 / 1) Choosak Burr

Portal-Data from 1/1/2013 to present (3.5 years)

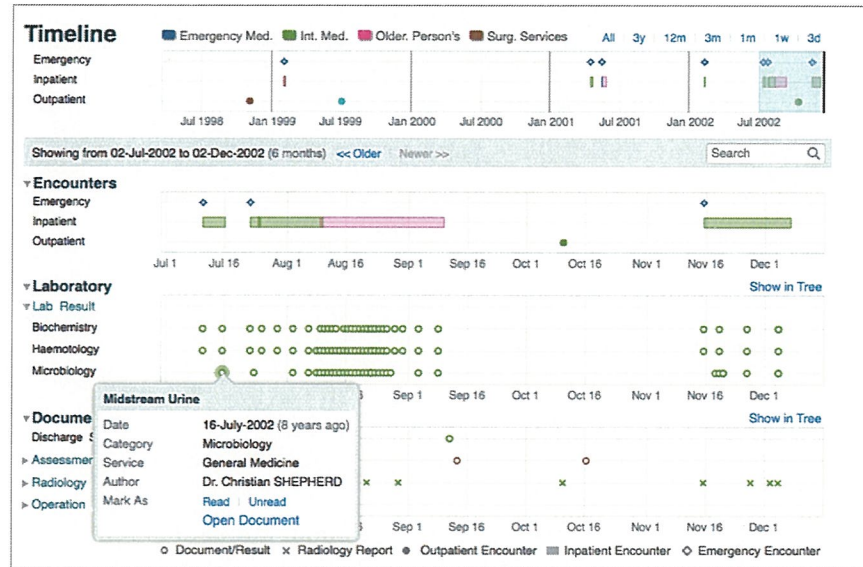
Browse with document view

3 clicks to most documents

Focus document tree to a date range



Clinical Portal



NMHIC HIE Use is Climbing Rapidly

