



# **New Mexico Health Information Collaborative (NMHIC)**

## **The Statewide Health Information Exchange (HIE) Network**

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Legislative Health and Human Services Committee Update  
October 21, 2015



New Mexico  
**Legislature**



# 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.



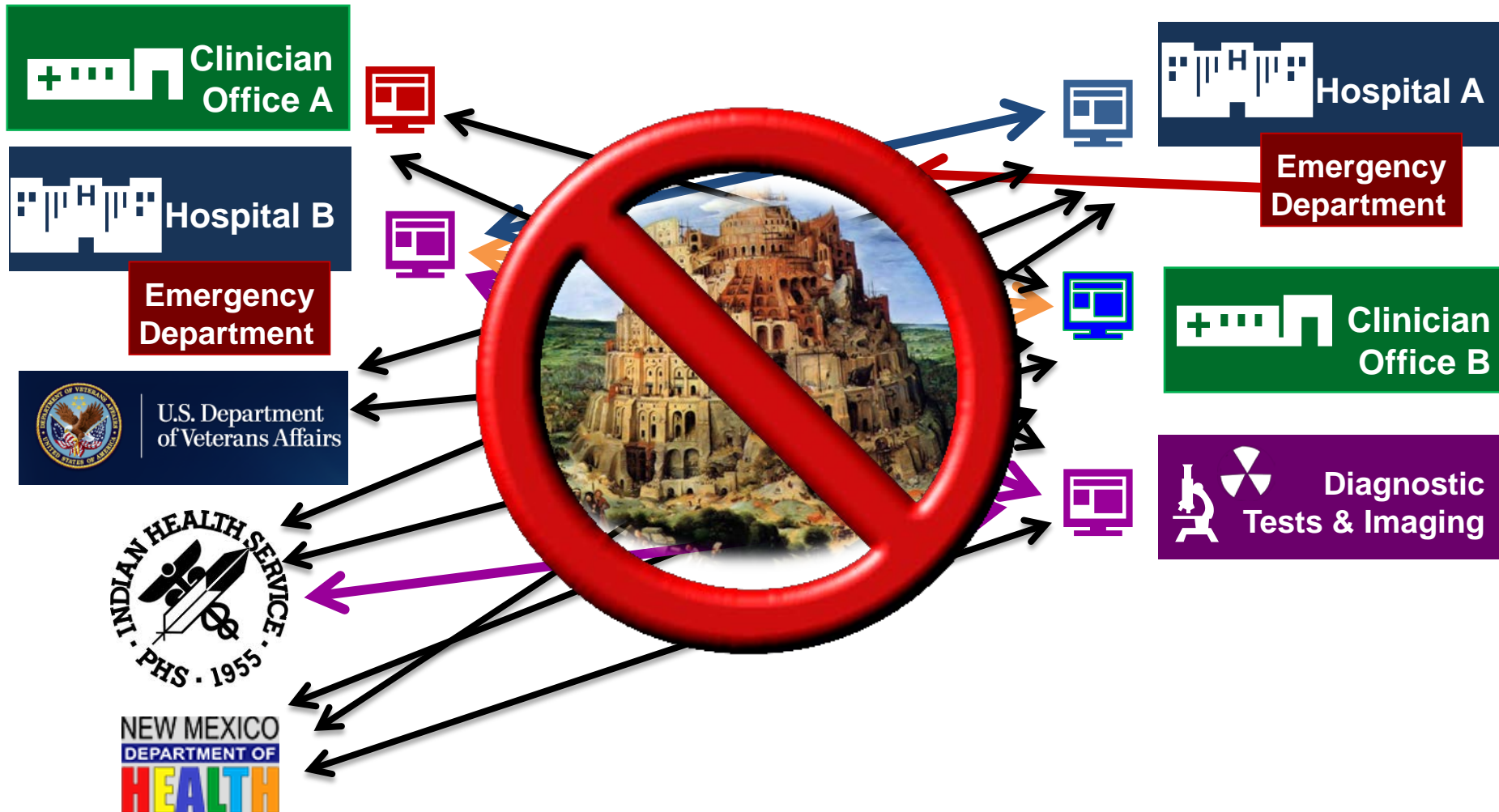
# Why use a Health Information Exchange?

- 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*



# Different EHRs of Different Healthcare Provider Organizations can't easily "talk" to each other to share information



# Why does it matter?

## Medical Errors in New Mexico:

- Kill 196 patients per month
- 1,980 patients suffer a serious complication each month
- Cost \$545 Million Dollars per month
- Does not include impact of sub-optimal care
- **#1 and #2 Root Causes of Medical Error are Communication Problems and Inadequate Information Flow.**



*US Medical Error rates from a 2014 Senate Hearing presentation by Tejal Gandhi, MD, president of the National Patient Safety Foundation*

*Causes of medical error from Agency for Health Research and Quality publication #04-RG005*

*Estimates for New Mexico made by using a population ratio from US Census Bureau NM 2,085,572 / USA 318,857,056 Ratio: 0.00654 or 0.654%*





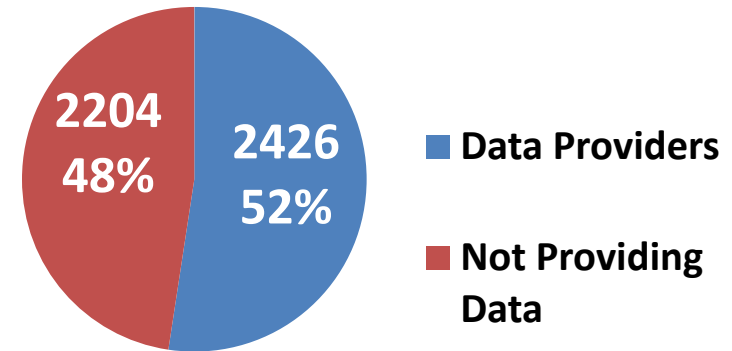
# Perfectly informed healthcare for New Mexico



# New Mexico HIE- How It Works

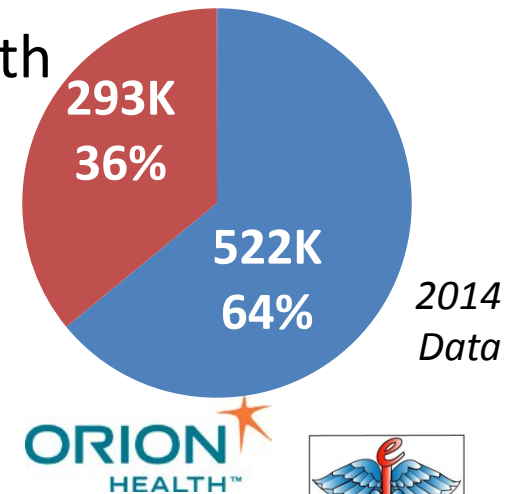


## NMHIC – Status



- HIE – Orion System Live since 5/2015
- Data from Jan. 2013 forward
- >150M Messages in clinical data repository
- Over 1.5 Million patients- All of Centennial Care
- 3.6 M Messages inbound each month
- 52K public health reporting transactions per month

64% NM Emergency Dept Admissions in NMHIC

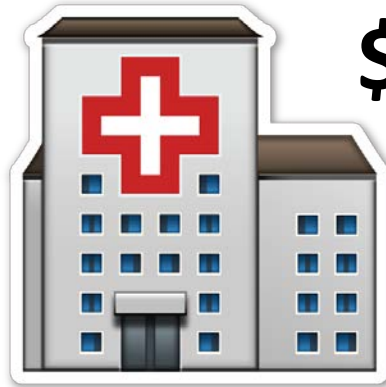
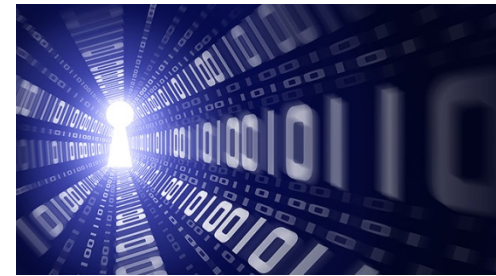


- Direct secure messaging now available
- eHealth Exchange gateway will be live soon





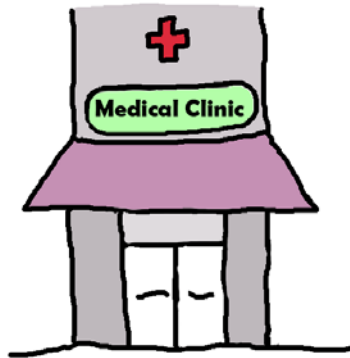
# NMHIC – Participation Fees



**\$125/bed/yr**



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



**\$150/provider/yr**

**\$0.20/member/month**



# Public Health Reporting



- Since 2010, NMHIC has been contracted by NMDOH to provide Emergency Department Syndromic Surveillance Reporting and Notifiable Conditions/Reportable Laboratory Results Reporting.
- 3/31/2015 Went live with a completely new version of software with expanded functionality and support for new meaningful use 2 ( MU2) required interfaces.
- Current status
  - NMHIC is currently providing Reportable Laboratory Results on behalf of 23 hospitals or reference laboratories (52%), and is currently onboarding an additional 15 hospitals or reference laboratories for meeting MU2 reporting requirements.
  - NMHIC is currently providing ED Syndromic Surveillance data on behalf of 24 hospitals (67%), and is currently onboarding an additional 8 hospitals for meeting MU2 reporting requirements.



# Participating Organizations

## Hospitals / Health System

- UNM Health System
- Presbyterian Health System
- Lovelace Health System
- Memorial Medical Center
- Los Alamos Medical Center
- Christus St. Vincent Regional Medical Center
- Gila Regional Medical Center
- Holy Cross Hospital
- Nor-Lea General Hospital

- San Juan Regional Medical Center
- Sierra Vista Hospital
- Union County Hospital

## Diagnostic Service Centers

- Laboratory Corp. of America
- Quest Diagnostics
- TriCore Reference Labs
- X-Ray Associates of New Mexico

## Payers

- Molina Healthcare
- United Healthcare
- New Mexico Health Connections

**Data Provider Only**

**Portal User Only**

**Data Provider and user of HIE portal**

**Contract signed, in queue for implementation**

# Participating Organizations

## Provider Groups

**ABQ Health Partners**

**Hematology Oncology Associates**

InnovAge

Jeffrey D. Miller, MD

Monica Luna, DOM

**NM Oncology Hematology Associates**

**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

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# Interested Organizations

- DaVida Healthcare
- De Baca Family Practice Clinic
- First Choice Community Healthcare
- First Nations Community HealthSource
- Genesis Healthcare
- Gerald Champion Regional Medical Center
- Guadalupe County Hospital
- Kindred Hospital
- La Clinica De Familia
- Las Cruces IPA
- Miner's Colfax Medical Center
- Presbyterian Medical Services
- Santa Fe Imaging
- Southwest CARE Center
- Southwest Gastroenterology Associates
- Rio Arriba Community Health Council





# 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*



# NMHIC HIE Data Providers & Elements

NMHIC HIE Portal data elements	ABQ Health Partners	Christus St. Vincent (Santa Fe)	Lovelace Health System*	Presbyterian Healthcare Services**	Holy Cross Hospital (Taos)	TriCore Reference Laboratories	UNM Hospitals***
• Patient Summary							
○ Patient Demographics	X	X	X	X	X		X
○ Allergy List	X	X	X	X (2013 only)	X		
○ Encounter History		X	X	X	X		X
○ Diagnoses		X	X	X	X		X
○ Medication History (Orders)	X			X (2013 only)			
○ Insurance Information	X	X	X	X	X		X
○ Immunizations	X			X			
○ Procedures		X	X		X		
○ Problems	X (Apr. 2014 forward)						
• Document Tree							
○ Laboratory results		X	X	X	X	X	X
○ Pathology reports		X	X	X	X	X	X
○ Radiology reports	X	X	X	X (Jan. 2013 through Apr. 2014)			
○ Cardiology (History)				X (2013 only)			
○ Patient Notes	X		X				

The NMHIC HIE Portal includes clinical data from January 2013 to present (unless noted otherwise).

Version: 10/09/15



# 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*



# 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.
- Security meets industry standards such as SSAE16 (auditing), ISO 27001 and EHNAC



# Patient Consent



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

**Patient's control who can access the record**



**→ Break the Seal**





# Examples of NMHIC HIE



# Looking at the Patient's Chart

**Patient Context Bar**

008901\_111 (AHP-ABQHithPrt) 106532R (LHS-MedicalCtr) 84568-4564 (LHS-MedicalCtr) CARDINAL John Q ( M 64 years )

**Document View**  
Showing All Mark All As Read  
Group By Category Sort By Date

**Document Tree**

- Patient Summary
- Dynamic Documents (1)
  - Patient Snapshot
- Laboratory (20 / 43)
  - Blood Gases (1)
    - 01/09/2005 \* Arterial Blood Gas (1) Dr Joe Martin
  - Chemistry (10)
    - 04/24/2012 Electrolytes (5) Dr Timothy Orange
    - 04/25/2006 INR (4) Dr John Black
    - 01/09/2005 Creatinine (1) Dr Joe Martin
  - Hematology (19 / 29)
    - 05/01/2012 HBA1C (2 / 7) Dr Joe Martin
    - 05/01/2012 \* CBC (17 / 22) Dr Alerberto Jose
  - Immunology (1 / 2)
    - 01/22/2001 HEPATITIS SCREEN (1) Dr. Peter Black
    - 01/22/2000 HIV ANTIBODY (1 / 1) Dr. Peter Black
  - Serology (1)
    - 01/09/2005 Cross Match Dr Alerberto Jose
- Microbiology (5)
  - Microbiology (5)
    - 05/01/2012 \* Urine Culture@ORION Dr Francis McNamara
    - 11/02/2006 Midstream Urine Dr Joe Martin
    - 04/22/2006 \* Midstream Urine Dr Joe Martin
    - 04/21/2006 \* Midstream Urine Dr Timothy Orange
    - 04/20/2006 Midstream Urine Dr Joe Martin
- Pathology (1)
- Radiology (1 / 7)
  - CAT Scan (4)
  - Radiology (1 / 3)

**EMPI Demographics**

Cardinal, John Q

Other Identifiers		Emergency Contact	
AHP-ABQHithPrt	008901_111	Name	Jargon, Carol
LHS-MedicalCtr	106532R	Relationship	Not specified
LHS-MedicalCtr	84568-4564	Phone	(408) 455-2112

**Demographics**

Sex	Male	Name	WOO
Date of Birth	11/12/1949 ( 64 years )	Clinic	Bough Family Clinic
Address	840 Chester Ave Pasadena Sulphur 6532		
Phone	(463) 321-456		

**Allergies & Alerts**

Details	Reaction	Severity	Date Entered	Facility
Latex	Difficulty breathing		2011-11-05	Hospital A Medical Center
ibuprophen	Difficulty breathing		2011-11-05	Hospital A Medical Center
Vancomycin	Wheezing		2011-11-05	Hospital A Medical Center
Vancomycin	allergicreaction	Moderate	2011-11-05	Hospital A Medical Center
ibuprophen	allergicreaction	Moderate	2011-11-05	Hospital A Medical Center
Latex	allergicreaction		2011-11-05	Hospital A Medical Center

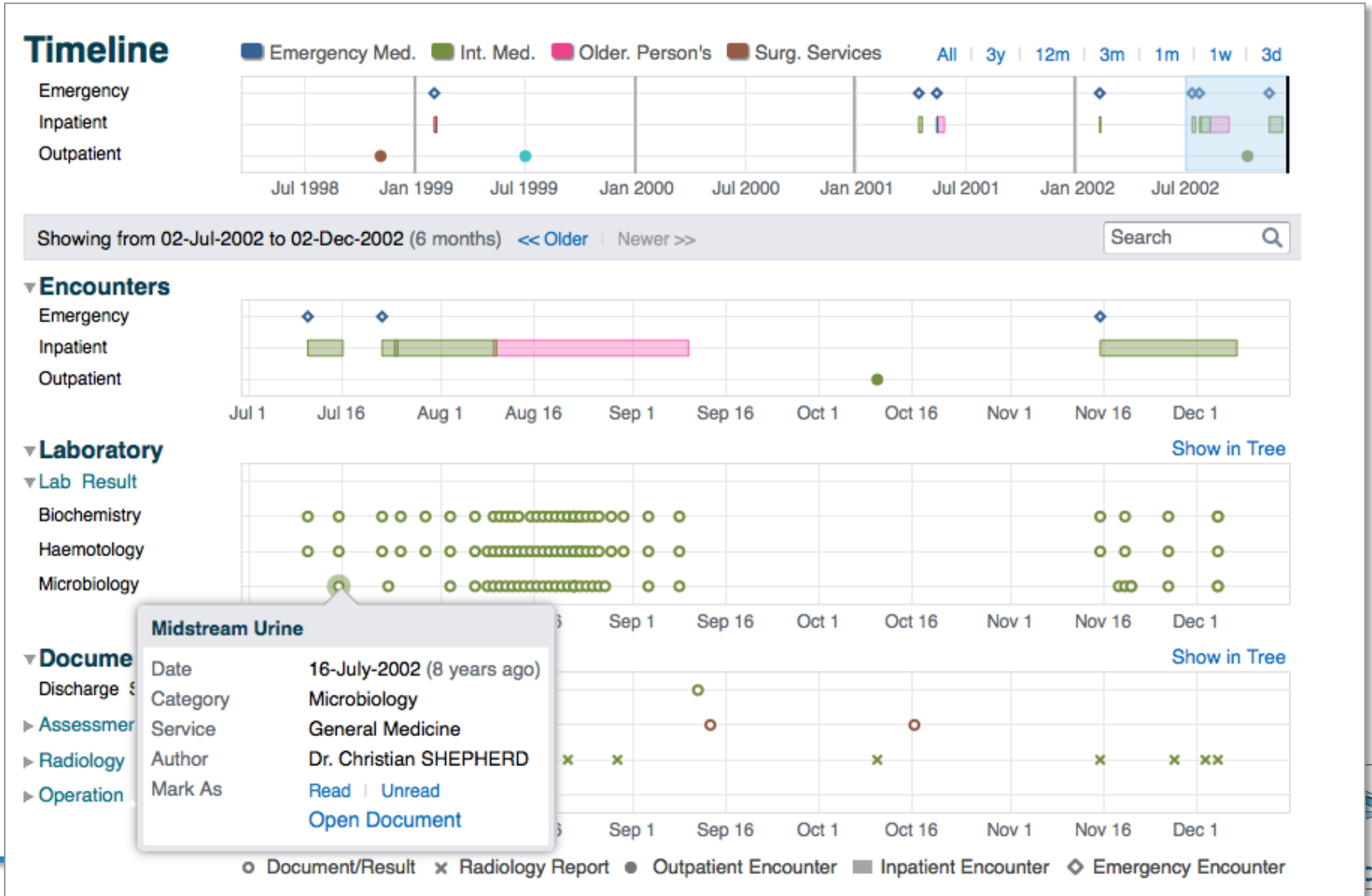
**Portal Mail Indicator**

**Patient Demographics**

**Windowlets**



# Complete Medical History at a Glance



Document View

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

Patient Summary

- ▶ Clinical Content (1)
- ▼ Laboratory (1 / 11)
  - ▼ Chemistry (1 / 3)
    - 11/03/2011 Basic Metabolic
  - ▼ Hematology (8)
    - 11/04/2011 \* Complete Blood Count
- ▶ Radiology (2)

\* Complete Blood Count W/Differential (2 years ago)

Print | Send | Send To Dir

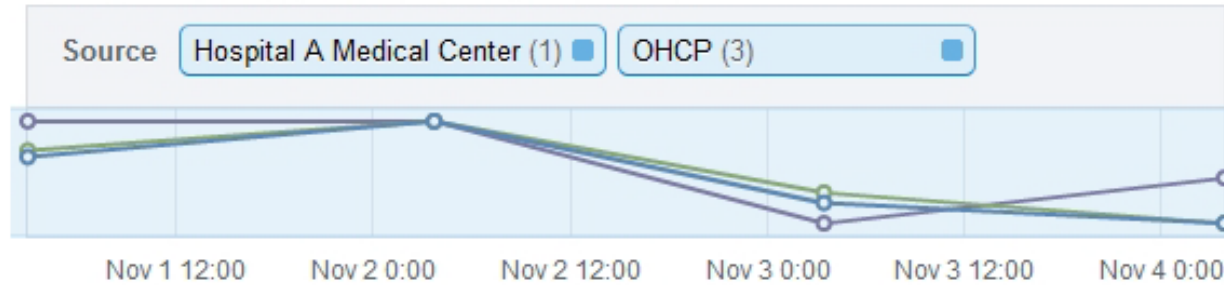
Complete Blood Count W/Differential Cumulative « Show Older

Show Newer »

<input type="checkbox"/>	Number	1	2	3	4	Ref. Range (Units)
	Collected	11/01/2011 02:55	11/02/2011 03:43	11/03/2011 03:30	11/04/2011 03:56	
	Source	OHCP	OHCP	OHCP	Hospi...	
<input type="checkbox"/>	WBC	9.4	9.4	8.5	8.9	4.0-10.0 (K/uL)
<input type="checkbox"/>	RBC	* 3.61	* 3.82	* 3.31	* 3.09	4.10-5.90 (M/uL)
<input type="checkbox"/>	Hemoglobin	* 10.3	* 11.0	* 9.4	* 9.0	13.2-17.2 (g/dL)
<input type="checkbox"/>	Hematocrit	* 30.4	* 32.2	* 27.7	* 25.8	39.0-50.0 (%)
<input type="checkbox"/>	MCV	84.4	84.2	83.5	83.6	78.0-100.0 (fL)
<input type="checkbox"/>	MCH	28.6	28.8	28.5	29.0	28.0-32.0 (pg)
<input type="checkbox"/>	MCHC	33.9	34.1	34.2	34.8	33.0-36.0 (g/dL)
<input type="checkbox"/>	RDW	* 17.1	* 16.5	* 16.7	* 17.0	11.5-14.5 (%)
<input type="checkbox"/>	Platelet Count	225	229	225	197	130-400 (K/uL)
<input type="checkbox"/>	MPV	* 6.7	* 6.7	* 6.5	* 6.9	7.4-10.4 (fL)
<input type="checkbox"/>	Neutrophils	* 83.0	* 84.3	* 82.6	* 85.7	42.0-75.0 (%)
<input type="checkbox"/>	Lymphocytes	* 7.9	* 7.9	* 7.4	* 6.3	21.0-51.0 (%)
<input type="checkbox"/>	Monocytes	8.0	7.4	9.1	7.4	4.0-12.0 (%)
<input type="checkbox"/>	Eosinophils	0.9	0.3	0.6	0.5	0.0-5.0 (%)
<input type="checkbox"/>	Basophils	0.2	0.1	0.3	0.1	0.0-2.0 (%)
	Anisocytosis	1+	1+	1+	1+	

# Complete Blood Count W/Differential Graph

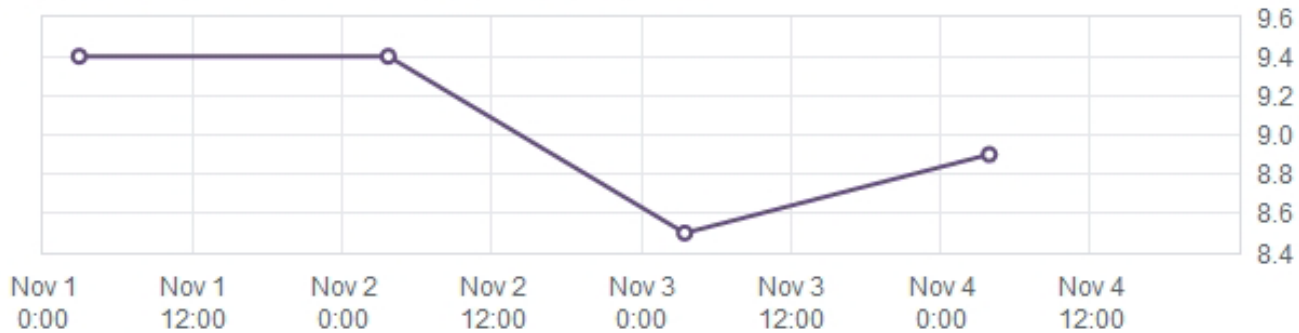
Information is available from 11/01/2011 to 11/04/2011



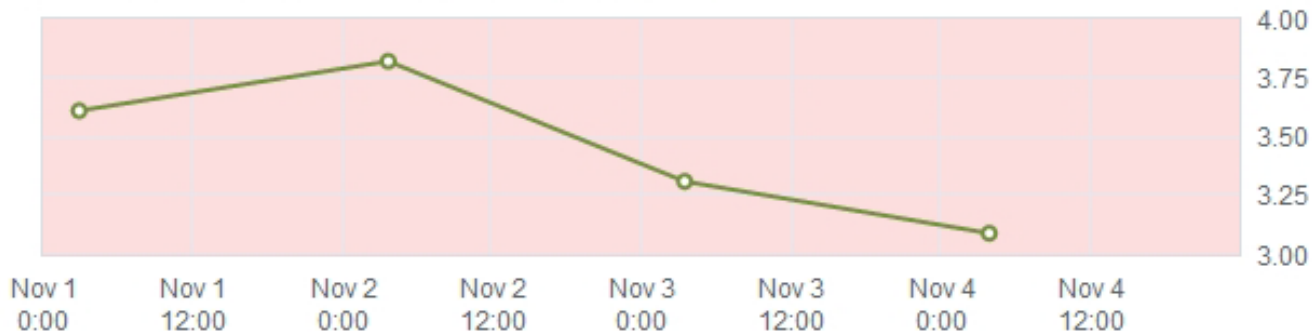
WBC 
  RBC 
  Hemoglobin

All | Default

## WBC (K/uL) Showing from 11/01/2011 to 11/04/2011



## RBC (M/uL) Showing from 11/01/2011 to 11/04/2011





# Notifications

- Notify By Direct Secure Messaging
- Notify By Email
- Notify By Portal Messaging
- Notify By SMS Text Message
- Notify in Daily Summary Email
- Notify in Daily Summary Portal Messaging
- Notify in Daily Summary SMS Text Message

Home | Help | 1 April Salisbury | Logout | ORION HEALTH

-staging.nmhc.org

lcfresearch.org

ect Secure Messaging

ail

Notify By Portal Messaging

- NOTIFICATIONS
- My Subscriptions
- PORTAL MESSAGING
- SECURE MESSAGING
- COMMON

- Notify By Portal Messaging
- Notify By SMS
- Notify in Daily S
- Notify in Daily S
- Notify in Daily S

Choose which notifications you want to receive so the detail must be sent else

All notifications are sent as they happen

### Subscriptions for patients

- Notification
- Inpatient Admission
- Inpatient Discharge
- Patient is admitted to ED
- Patient is discharged from ED
- A new document (imaging report) is available
- Final Radiology Report is available
- Final Laboratory Result is available
- Final Microbiology Result available
- Interim Microbiology Result available
- A new document is available

Save Cancel

You can alternatively subscribe to notifications differently for each type of relationship with the patient  
[Change to subscribe by Relationship Type](#)

- Notification
- Inpatient Admission
- Inpatient Discharge
- Patient is admitted to ED
- Patient is discharged from ED
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- Final Laboratory Result is available
- Final Microbiology Result available
- Interim Microbiology Result available
- A new document is available



# NMHIC Current Financial Status – OK

As of today:

NMHIC has cash in the bank, a revenue stream that funds its operations and is able to meet its current obligations.

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)



# Challenges to Adoption

1. Cost of Interfaces- both on the EHR side and the HIE side. One time cost for a hospital or health system can be \$80,000. For a provider group it can be over \$10,000. To provide full interoperability through New Mexico we estimate one time cost over \$3,000,000. Other states have been successful using HITECH administrative funding 90% federal /10% state matching to cover these costs. NMHIC is working with HSD to investigate further.



- ▶ Patient name
- ▶ Sex
- ▶ Date of birth
- ▶ Race
- ▶ Ethnicity
- ▶ Preferred language
- ▶ Smoking status
- ▶ Problems
- ▶ Medications
- ▶ Medication allergies
- ▶ Laboratory test(s)
- ▶ Laboratory value(s)/result(s)
- ▶ Vital signs
- ▶ Care plan field(s), including goals and instructions
- ▶ Procedures
- ▶ Care team members
- ▶ Immunizations
- ▶ Unique device identifier(s) for a patient's implantable device(s)
- ▶ Notes/narrative

## Challenges to Adoption

2. Getting organizations to share all the elements of an ONC summary of care (Common Clinical data set).

*Some states have legislation that mandates participation in an HIE and sharing of a minimum data set*



# Questions? Contact us:



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Visit: [www.nmhc.org](http://www.nmhc.org)

