# Public Report on New Mexico Health Information Collaborative (NMHIC)

**Professional Services**

**7/15/2015**

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# Introduction

In support of the initial planning phases of the state of New Mexico's Health System Innovation initiative, Iatric Systems was engaged to provide a number of consulting related services. More recently, Iatric Systems was asked to provide an initial, high-level assessment of the state HIE – New Mexico Health Information Collaborative (NMHIC) - in terms of its technical capabilities and readiness to provide some level of the information technology (IT) infrastructure needed for the Health System Innovation initiative. This report represents our current assessment of NMHIC.

To adequately organize the report, while delivering a complete and concise message, the assessment evaluated three different aspects of NMHIC – Information Technology, Participation, and Sustainability. Each of the three aspects presented in its own section of the report, as follows:

- Current State of NMHIC – Information Technology
- Current State of NMHIC – Participation
- Current State of NMHIC – Sustainability

Following the above first three sections of the report, is the assessment itself – presented in the form of a SWOT Analysis – identifying what we consider to be NMHIC's current Strengths, Weaknesses, Opportunities, and Threats, based on the information provided and made available. We also included a section of General Observations/Questions, which do not fall in any of the four categories of the SWOT Analysis.

A summary Conclusion is then provided, which outlines our overall findings and opinions, based in total on the before mentioned SWOT Analysis.

Finally, there are two sections included at the end of this document:

- Appendix – History and Overview of NMHIC
  This is provided primarily for those who may not be very familiar with the history of LCF Research and NMHIC. In addition, the Appendix also provides general information relative to NMHIC, such as general descriptions of; staffing, available patient information in NMHIC, patient consent, and intended benefits for the participants in NMHIC.

- Sources
  This section lists the sources of the information used and contained within this report.

We do want to acknowledge and thank Thomas East, CEO and CIO of NMHIC, who so graciously provided so much information that was needed for this report, answered what seemed like an endless list of questions, and spent 2-3 hours of his valuable time on conference calls to discuss and clarify some of the information.



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# Current State of NMHIC – Information Technology

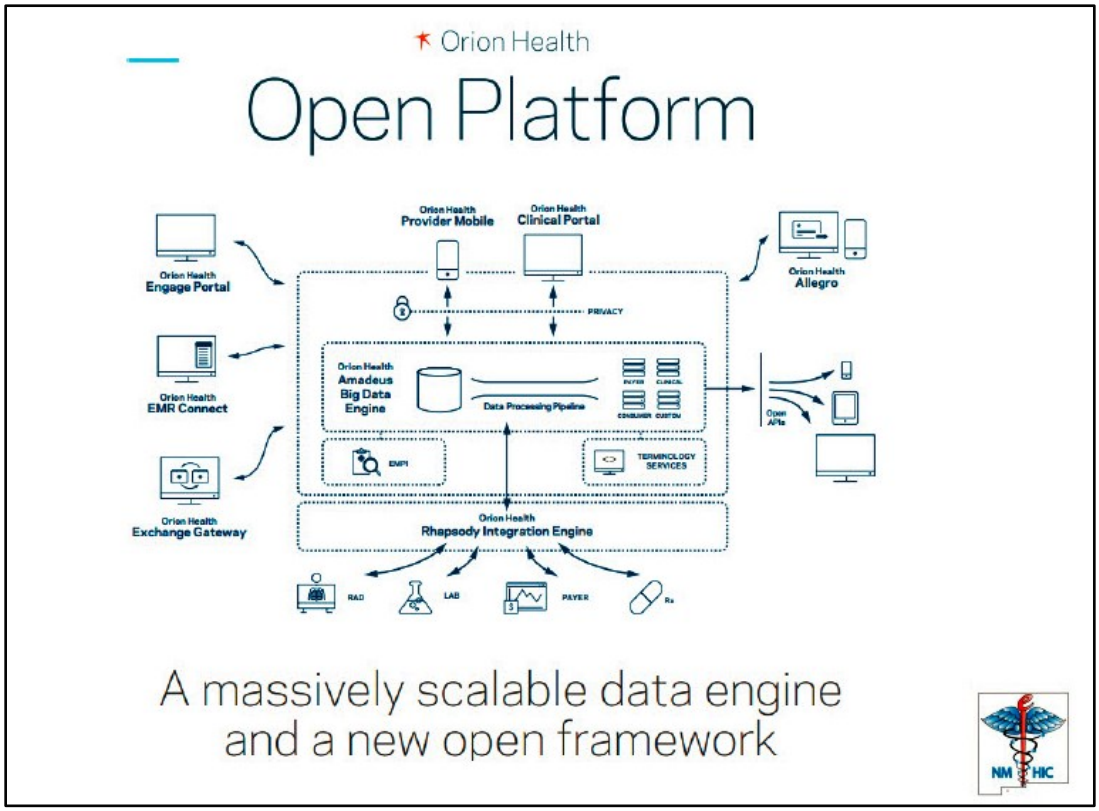
## Background Information

From 2009 to 2013, the New Mexico Health Information Collaborative (NMHIC)'s primary information technology vendor was MedPlus, using its Centergy platform – which at the time was the healthcare information technology subsidiary of Quest Diagnostics. In addition to the MedPlus Centergy platform, NMHIC also utilized other integrated HIE related IT solutions such as IBM/Initiate Systems enterprise master patient index (eMPI), InterSystems Ensemble integration engine, and some Harris Corporation/Carefx components as well.

Due to the fact that MedPlus notified LCF Research in mid-2011 that it was leaving the HIE business and would no longer support their HIE product, NMHIC and its Board of Directors made a decision in 2012 to migrate to a new information technology vendor — Orion Health and its cloud-based SaaS Orion Health HIE solution platform. The migration began in 2013 and the vast majority of the work was completed by April/May 2015.

Some data and documents from the previous MedPlus system were migrated over to the Orion Health platform, so that the current HIE data repository and document repository contain all data received from 1/1/2013 to the present.

In regards to costs associated with the Orion Health platform, there was a one-time implementation cost coupled with an ongoing all-inclusive monthly service fee. The only additional Orion Health fees would be for adding new interfaces, single sign-on integration, and/or Direct secure messaging connections where NMHIC would provide HISP services to the customer's EHR.



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As of July 1, 2015, NMHIC has contracted for the following Orion Health HIE solutions – components below in **RED** are now operational and in production use (although a couple are currently in limited use):

**HIE Base Solution**

- **Clinical Portal with Results Viewer**
- **Clinical Data Repository**
- **Rhapsody Interface Engine**
- **EMPI – Enterprise Master Patient Index** (NextGate)
- **Health Languages** (Wolters Kluwer Health Language Enterprise Terminology Management)

**HIE Module**

- CCD Exchange
- **XDS.b Repository**
- **Event Notifications**
- Send to my EHR
- **Direct Secure Messaging** (Orion Health Communicate)
- **Single Sign-On from EHRs**
- **Privacy & Consent**
- **Auditing**

**Additional Modules**

- Patient Portal
- eHealth Exchange Gateway
- Replicated CDR (for reporting, analytics, etc.)
- Custom HL7 Event Notifications Delivery Path

Note: NMHIC does provide Public Health Reporting services as well, but not via Orion Health products. Using an internally developed solution, NMHIC provides electronic lab reporting, emergency department reporting and National Syndromic Surveillance Program reporting; as well as custom reporting and analytics tools.



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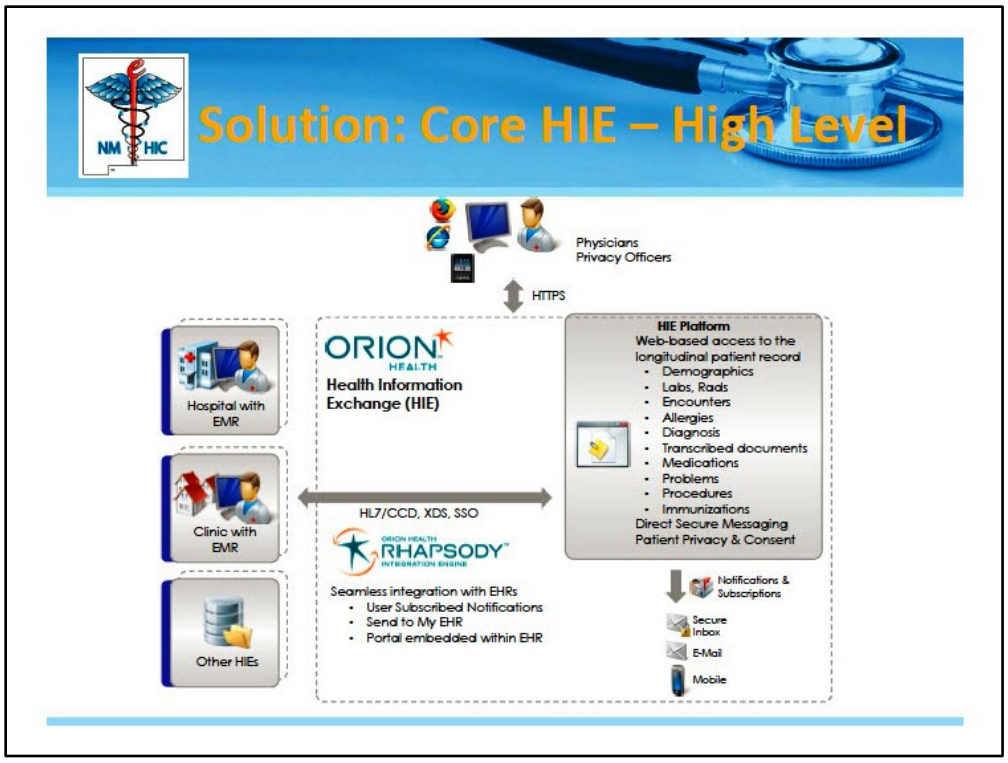


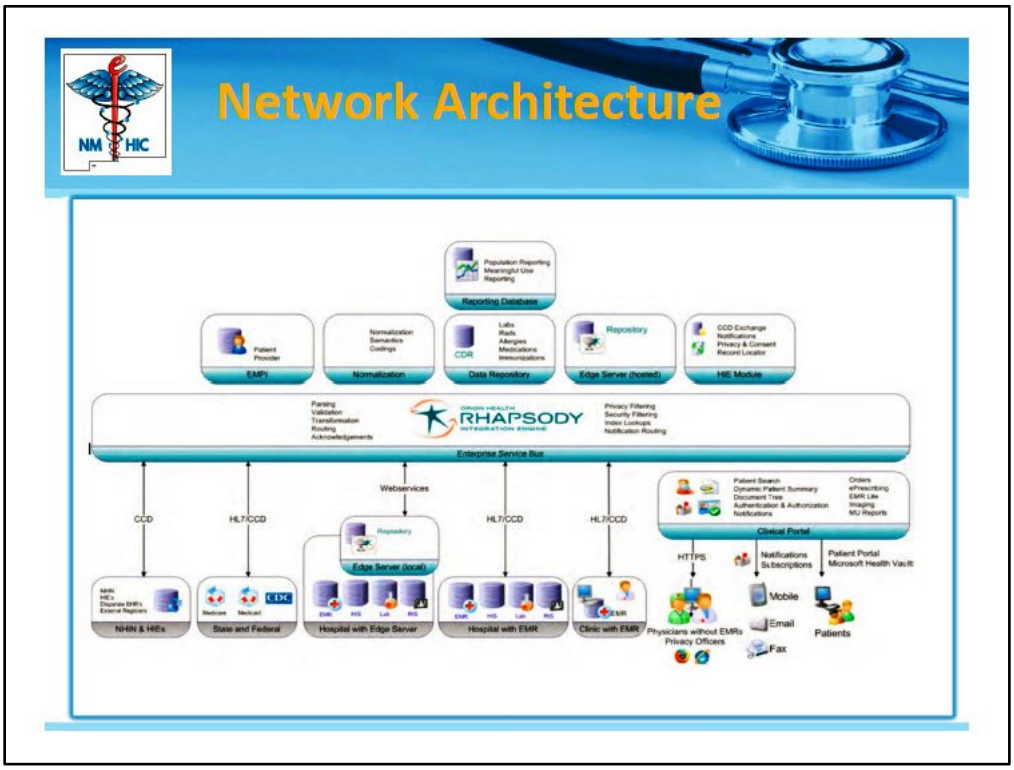




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Currently, NMHIC has approximately 1.5 million patients in the NextGate enterprise master patient index (eMPI). NMHIC's current monthly transaction volume consists of:

- 3,602,244 transactions inbound (to NMHIC)
- 52,568 public health reporting transactions inbound (to NMHIC)

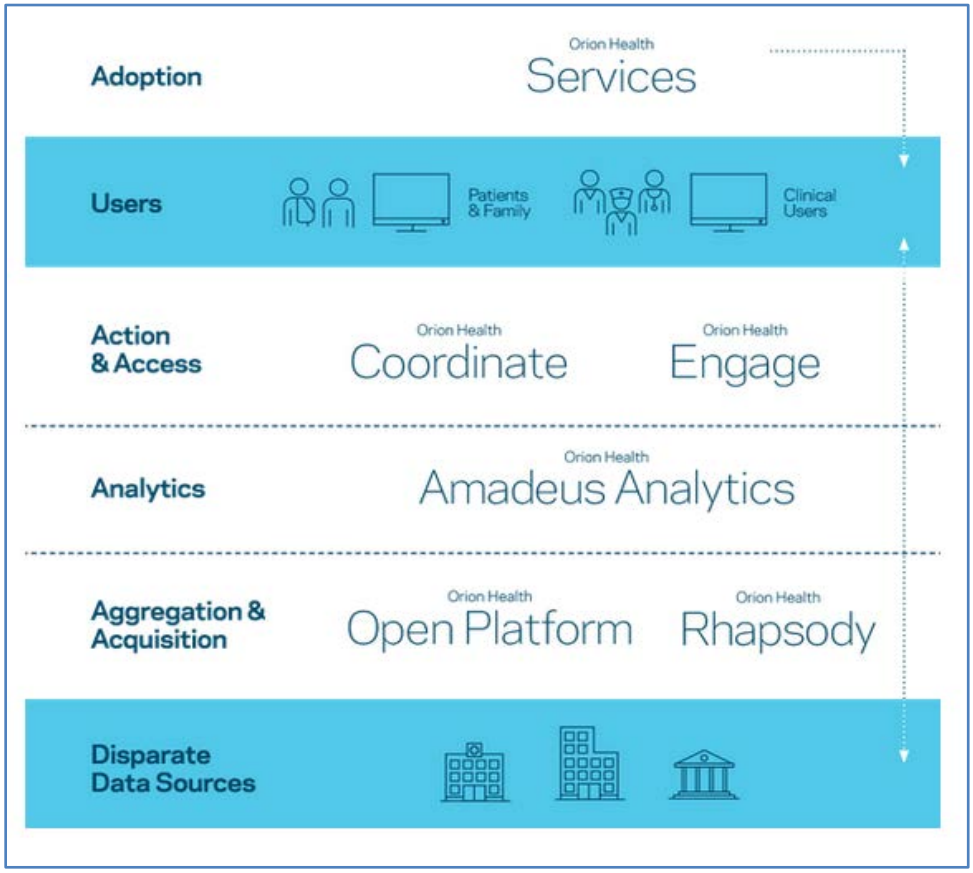
## Meaningful Use Related Technology and Services

NMHIC can currently provide the following Meaningful Use (MU) related services for eligible hospitals and eligible providers:

- MU compliant public health reporting
- Direct Secure Messaging (DSM) for transitions of care
- NMHIC can receive CCD (Continuity of Care document) for a transition of care
- NMHIC can be used to inform hospitals and providers of a transition of care
- NMHIC plans to have gateway connection to the eHealth Exchange established in the Fall 2015 timeframe, which can be used as a pathway for transitions of care

## Orion Health - Future Development Plans

Here are a couple of documents outlining some of Orion Health's future development plans for their HIE platform and related products – in the areas of Coordination of Care, Engagement, and Analytics.



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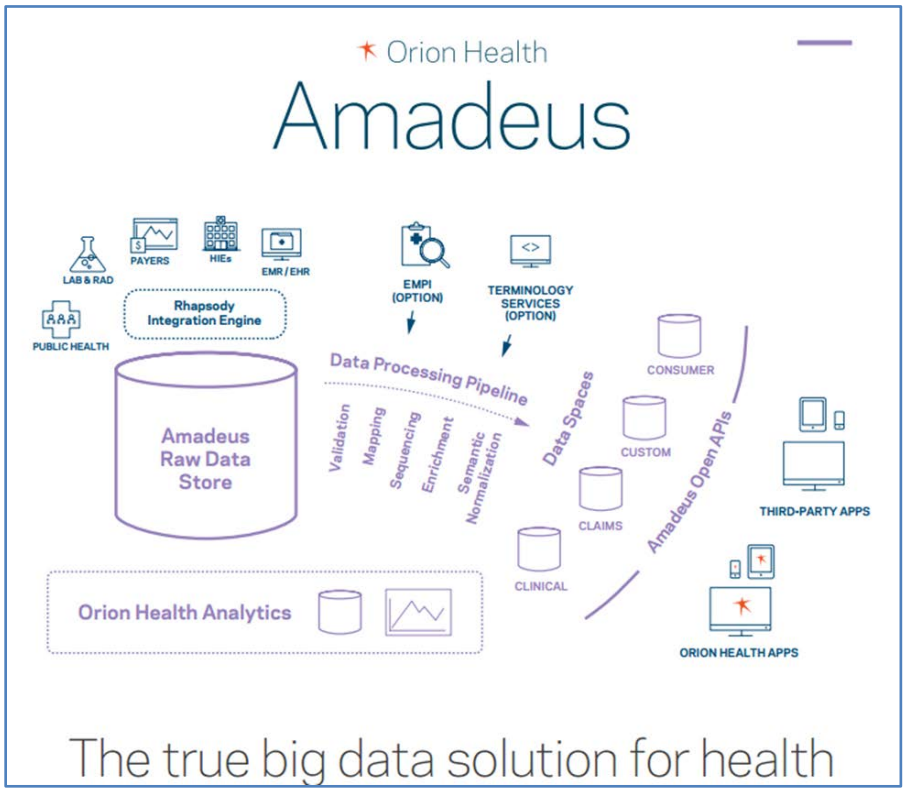


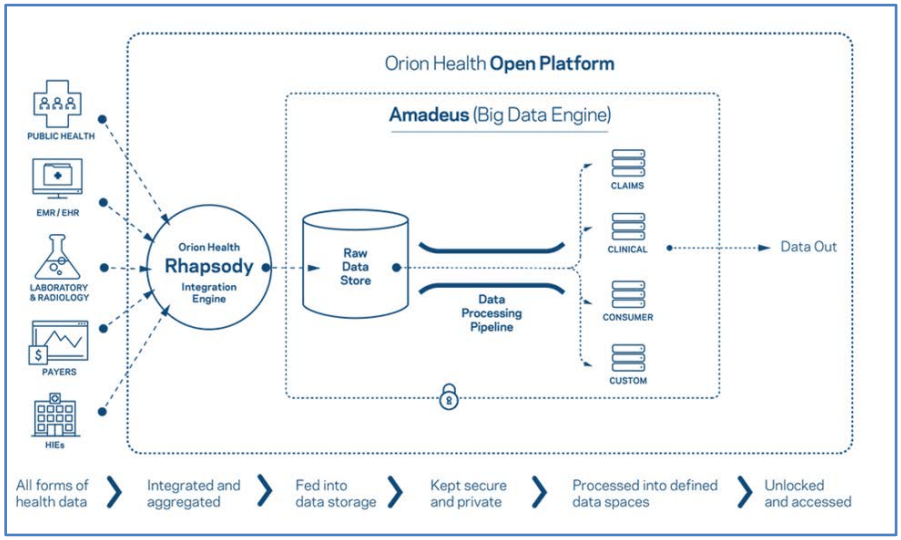




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# Current State of NMHIC - Participation

## Current New Mexico Acute Care Hospital Participation

As of July 1, 2015, NMHIC has the following acute care hospital participants:

- Christus St Vincent Regional Medical Center
- Dr. Dan C Trigg Memorial Hospital
- Heart Hospital of New Mexico
- Holy Cross Hospital
- Lincoln County Medical Center
- Lovelace Medical Center
- Lovelace Westside Hospital
- Lovelace Women's Hospital
- Plains Regional Medical Center
- Presbyterian Espanola Hospital
- Presbyterian Hospital
- Presbyterian Kaseman Hospital
- Presbyterian Rust Medical Center
- Roswell Regional Hospital
- Sandoval Regional Medical Center
- San Juan Regional Medical Center (in implementation)
- Socorro General Hospital
- University of New Mexico Carrie Tingley Hospital
- University of New Mexico Children's Hospital
- University of New Mexico Hospital

Although this list of acute care hospital participants (highlighted in gold/tan color on following chart) represents only 19 out of the 47 acute care hospitals in New Mexico, it does represent 60.56% of the total staffed acute care hospital beds in the state.

In regards to the level of participation of the current hospitals, for the most part, they are only submitting data to NMHIC — most are submitting ADT, Allergies, Insurance Information, Lab Results, Radiology Reports, Cardiology Reports, Medication History, Public Health Data, etc. However, there are gaps — for various reasons, some of the current hospital participants are not submitting a complete patient data portfolio to NMHIC. For example, Presbyterian Healthcare Services and the University of New Mexico Hospitals are not currently submitting radiology reports, cardiology reports, discharge summaries, or medication history while Christus St. Vincent Medical Center and Holy Cross Hospital are not submitting cardiology reports, discharge summaries, or medication history.

In terms of hospitals, and their providers, accessing and receiving data from the state HIE, that is almost exclusively limited to some provider portal access and receipt of automated ADT Event Notifications. Although some of the new and more recently executed contracts include some of these components as deliverables, to date there hasn't been a lot of progress made in getting hospitals to adopt and/or implement some of the more advanced HIE services, such as; CCD Exchange (especially query based), Direct Secure Messaging, Hospital EMR/HIE Workflow Integration, etc.



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Because CCD Exchange has not yet been implemented, and Direct Secure Messaging was just a fairly recent available NMHIC service offering, it would not be expected that many of the participating hospitals have utilized the state HIE to any degree in meeting Meaningful Use Stage 2 (MU2) requirements, with the exception of some of the participating hospitals using NMHIC for their MU2 public health reporting.

Based on the current level of participation, along with the inability of NMHIC to significantly assist participating hospitals with MU2, it would be reasonable to expect that the current participating hospitals are not likely realizing a value proposition for their participation in the state HIE. This was not confirmed by actually surveying the participating hospitals, but we do believe it's a reasonable assumption based on the information presented above.

**New Mexico - Acute Care Hospitals**

| # | Hospital Name | Hospital Type | Net Patient Rev | #Beds | #Discharges | City | Parent Network |
|---|---|---|---|---|---|---|---|
| 1 | Acoma Canoncito Laguna PHS Hospital | Short Term Acute Care | | 6 | 249 | San Fidel | Indian Health Services |
| 2 | Alta Vista Regional Hospital | Short Term Acute Care | $39,419,694 | 46 | 1,742 | Las Vegas | Community Health Systems |
| 3 | Artesia General Hospital | Short Term Acute Care | $44,156,261 | 34 | 784 | Artesia | Community Hospital Corp |
| 4 | Carlsbad Medical Center | Short Term Acute Care | $104,393,057 | 90 | 3,070 | Carlsbad | Community Health Systems |
| 5 | Christus St Vincent Regional Medical Center | Short Term Acute Care | $328,335,543 | 180 | 11,507 | Santa Fe | CHRISTUS Health |
| 6 | Cibola General Hospital | Critical Access Hospital | $30,339,961 | 25 | 940 | Grants | |
| 7 | Crownpoint PHS Indian Hospital | Short Term Acute Care | | 25 | 540 | Crownpoint | Indian Health Services |
| 8 | Dr Dan C Trigg Memorial Hospital | Critical Access Hospital | $15,738,191 | 25 | 269 | Tucumcari | Presbyterian Healthcare |
| 9 | Eastern New Mexico Medical Center | Short Term Acute Care | $112,171,748 | 162 | 5,000 | Roswell | Community Health Systems |
| 10 | Gallup Indian Medical Center | Short Term Acute Care | | 78 | 3,397 | Gallup | Indian Health Services |
| 11 | Gerald Champion Regional Medical Center | Short Term Acute Care | $99,777,501 | 99 | 2,907 | Alamogordo | |
| 12 | Gila Regional Medical Center | Short Term Acute Care | $61,178,018 | 58 | 2,495 | Silver City | Gila Regional Medical Center |
| 13 | Guadalupe County Hospital | Short Term Acute Care | $5,297,806 | 10 | 209 | Santa Rosa | |
| 14 | Heart Hospital of New Mexico | Short Term Acute Care | $73,273,689 | 55 | 2,819 | Albuquerque | Lovelace Health System |
| 15 | Holy Cross Hospital | Short Term Acute Care | $32,601,953 | 47 | 1,761 | Taos | |
| 16 | Lea Regional Medical Center | Short Term Acute Care | $81,308,239 | 143 | 3,386 | Hobbs | Community Health Systems |
| 17 | Lincoln County Medical Center | Critical Access Hospital | $30,731,098 | 25 | 1,381 | Ruidoso | Presbyterian Healthcare |
| 18 | Los Alamos Medical Center | Short Term Acute Care | $58,012,786 | 47 | 1,137 | Los Alamos | LifePoint Health |
| 19 | Lovelace Medical Center | Short Term Acute Care | $256,987,746 | 268 | 10,752 | Albuquerque | Lovelace Health System |
| 20 | Lovelace Westside Hospital | Short Term Acute Care | $48,416,262 | 71 | 2,304 | Albuquerque | Lovelace Health System |
| 21 | Lovelace Womens Hospital | Short Term Acute Care | $145,374,585 | 162 | 6,239 | Albuquerque | Lovelace Health System |
| 22 | Memorial Medical Center Of Las Cruces | Short Term Acute Care | $205,025,380 | 298 | 9,216 | Las Cruces | LifePoint Health |
| 23 | Mescalero PHS Indian Hospital | Short Term Acute Care | | 11 | 265 | Mescalero | Indian Health Services |
| 24 | Mimbres Memorial Hospital | Critical Access Hospital | $34,331,209 | 25 | 1,767 | Deming | Community Health Systems |
| 25 | Miners Colfax Medical Center | Critical Access Hospital | $12,407,314 | 25 | 751 | Raton | |
| 26 | Mountain View Regional Medical Center | Short Term Acute Care | $153,006,935 | 142 | 7,927 | Las Cruces | Community Health Systems |
| 27 | Nor Lea General Hospital | Critical Access Hospital | $50,370,464 | 25 | 584 | Lovington | |
| 28 | Northern Navajo PHS Indian Hospital | Short Term Acute Care | | 59 | 2,197 | Shiprock | Indian Health Services |
| 29 | Plains Regional Medical Center | Short Term Acute Care | $88,893,485 | 106 | 5,228 | Clovis | Presbyterian Healthcare |
| 30 | Presbyterian Espanola Hospital | Short Term Acute Care | $54,776,212 | 63 | 2,129 | Espanola | Presbyterian Healthcare |
| 31 | Presbyterian Hospital | Short Term Acute Care | $1,200,460,315 | 453 | 36,913 | Albuquerque | Presbyterian Healthcare |
| 32 | Presbyterian Kaseman Hospital | Short Term Acute Care | | 172 | | Albuquerque | Presbyterian Healthcare |
| 33 | Presbyterian Rust Medical Center | Short Term Acute Care | | | | Rio Rancho | Presbyterian Healthcare |
| 34 | Rehoboth Mckinley Christian Health Services | Short Term Acute Care | $42,372,764 | 60 | 2,628 | Gallup | |
| 35 | Roosevelt General Hospital | Short Term Acute Care | $22,360,694 | 24 | 642 | Portales | |
| 36 | Roswell Regional Hospital | Short Term Acute Care | $39,947,955 | 26 | 1,379 | Roswell | Lovelace Health System |
| 37 | San Juan Regional Medical Center | Short Term Acute Care | $269,459,771 | 188 | 9,550 | Farmington | |
| 38 | Sandoval Regional Medical Center | Short Term Acute Care | $54,091,035 | 60 | 2,467 | Rio Rancho | Univ of New Mexico Hosp |
| 39 | Santa Fe PHS Indian Hospital | Short Term Acute Care | | 4 | 153 | Santa Fe | Indian Health Services |
| 40 | Sierra Vista Hospital | Critical Access Hospital | $14,693,352 | 15 | 467 | Truth or Consequences | |
| 41 | Socorro General Hospital | Critical Access Hospital | $24,917,710 | 24 | 530 | Socorro | Presbyterian Healthcare |
| 42 | Turquoise Lodge Hospital | Short Term Acute Care | | | | Albuquerque | |
| 43 | Union County General Hospital | Critical Access Hospital | $10,262,319 | 25 | 228 | Clayton | Community Hospital Corp |
| 44 | University of New Mexico Carrie Tingley Hospital | Short Term Acute Care | | 24 | | Albuquerque | Univ of New Mexico Hosp |
| 45 | University of New Mexico Childrens Hospital | Childrens Hospital | | | | Albuquerque | Univ of New Mexico Hosp |
| 46 | University of New Mexico Hospital | Short Term Acute Care | $709,437,862 | 451 | 26,955 | Albuquerque | Univ of New Mexico Hosp |
| 47 | Zuni Indian Hospital | Short Term Acute Care | | 27 | 528 | Zuni | Indian Health Services |
| | Totals | | | | | | |
| | | Hospital Beds (Participants): | | 2212 | 55.82% | | |
| | | Hospital Beds: (Implementation): | | 188 | 4.74% | | |
| | | Hospital Beds (Total): | | 3963 | | | |



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Also, as of July 1, 2015, NMHIC has signed agreements with the following additional hospitals:

- Gila Regional Medical Center
- LifePoint – Memorial Medical Center
- LifePoint – Los Alamos Medical Center
- Nor-Lea General Hospital
- Sierra Vista Hospital
- Union County General Hospital

## Current New Mexico Specialty Care Hospital Participation

As of July 1, 2015, NMHIC has the following specialty care hospital participants:

- Lovelace Rehabilitation Hospital

This list of specialty hospital participants (highlighted in gold/tan color on following chart) only represents 1 out of 13 specialty care hospitals in New Mexico. It also represents just 8.26% of the total staffed specialty care hospital beds in the state.

Here is a list of the specialty care hospitals in New Mexico:

**New Mexico - Specialty Care Hospitals**

| # | Hospital Name | Hospital Type | Net Patient Rev | #Beds | #Discharges | City | Parent Network |
|---|---|---|---|---|---|---|---|
| 1 | Advanced Care Of Southern New Mexico | Long Term Acute Care Ho | $9,075,395 | 20 | 215 | Las Cruces | |
| 2 | AMG Specialty Hospital - Albuquerue | Long Term Acute Care Ho | $11,090,008 | 25 | 282 | Albuquerque | |
| 3 | Central Desert Behavioral Health Center | Psychiatric Hospital | $2,480,820 | 26 | 243 | Albuquerque | |
| 4 | Haven Behavioral Hospital of Albuquerque | Psychiatric Hospital | $3,160,303 | 34 | 319 | Albuquerque | |
| 5 | Healthsouth Of New Mexico | Rehabilitation Hospital | $25,682,051 | 87 | 1,805 | Albuquerque | Healthsouth |
| 6 | Kindred Hospital Albuquerque | Long Term Acute Care Ho | $19,861,370 | 60 | 452 | Albuquerque | |
| 7 | Lovelace Rehabilitation Hospital | Rehabilitation Hospital | $19,065,271 | 56 | 1,121 | Albuquerque | Lovelace Health System |
| 8 | Mesilla Valley Hopsital | Psychiatric Hospital | $17,371,318 | 120 | 1,735 | Las Cruces | Universal Health Services |
| 9 | New Mexico Rehabilitation Center | Rehabilitation Hospital | $1,683,903 | 15 | 242 | Roswell | |
| 10 | Rehab Hospital Of Southern New Mexico | Rehabilitation Hospital | $16,184,006 | 40 | 871 | Las Cruces | |
| 11 | San Juan Regional Rehab Hospital | Rehabilitation Hospital | $4,529,475 | 18 | 238 | Farmington | |
| 12 | The Peak Hospital | Psychiatric Hospital | $16,673,809 | 119 | 1,456 | Santa Teresa | |
| 13 | University of New Mexico Psychiatric Center | Psychiatric Hospital | | 58 | | Albuquerque | |
| | Totals | | | | | | |
| | | Hospital Beds (Participants): | | 56 | 8.26% | | |
| | | Hospital Beds: (Implementation): | | 0 | 0.00% | | |
| | | Hospital Beds (Total): | | 678 | | | |

## Current New Mexico Physician Provider Participation

As of July 1, 2015, NMHIC has the following physician provider participants:

- ABQ Health Partners (includes 222 physician providers)
- Christus St Vincent Medical Group (includes 360 physician providers)
- Holy Cross Hospital (includes 47 physician providers)
- Sandia Neurology (includes 1 provider)
- Lovelace Health System (includes 88 physician providers)
- Presbyterian Healthcare Services (includes 517 physician providers)
- University of New Mexico Hospitals (includes 872 physician providers)



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The above list of 2,107 physician provider participants represents 20.09% of the total 10,483 physician providers identified as being licensed in the state (see chart below). However, this number is slightly misleading, due to the fact that the majority of the current participating physician providers (1524 out of 2107) are hospital-based providers that are included as part of their hospitals being participants in the state HIE. Only ABQ Health Partners, Sandia Neurology, and Christus St. Vincent Medical Group are truly participating physician practice organizations.

As was stated previously, regarding the level of participation among acute care hospitals, the same general observation can be made regarding the current participating physician providers. As with the hospitals, for the most part, the two main physician practice groups (ABQ Health Partners and Christus St. Vincent Medical Group) are only submitting data to NMHIC – both are submitting ADT, Allergies, Clinic Notes, Radiology Reports, and Insurance Information. However, as with the hospitals, there are gaps in the providers' data submission portfolio. Data such as Medication History and Procedures may be submitted by one physician practice group, but not the other.

Again, as was stated regarding the participating hospitals, in regards to accessing and receiving data from the state HIE, the participating physician providers have been almost exclusively limited to provider portal access and receipt of automated ADT Event Notifications. To date, there hasn't been a lot of progress made in getting physician providers to adopt and/or implement some of the more advanced HIE services, such as; CCD Exchange (especially query based), Direct Secure Messaging, Physician EMR/HIE Workflow Integration, etc.

As with the participating hospitals, it would be reasonable to expect that the current participating physician providers are not likely realizing a value proposition for their participation in the state HIE. Again, this was not confirmed by actually surveying the participating physician providers, but we do believe it's a reasonable assumption based on the information presented above.

Also, as of July 1, 2015, NMHIC has signed agreements with the following additional physician providers:

- Dr. Monica Luna, LLC (includes 1 physician provider)
- Dr. Jeffrey D. Miller, MD, PC (includes 1 physician provider)
- New Mexico Orthopedics (includes 30 physician providers)
- New Mexico Primary Care Association (includes 250 physician providers)
- Norman Harrison, DO (includes 1 physician provider)
- Rio Abajo Family Practice, PC (includes 3 physician providers)
- Surgical Oncology and Gastrointestinal Surgery Consultants (includes 1 physician provider)
- Taos Clinic for Children and Youth (includes 8 physician providers)
- X-Ray Associates of New Mexico (includes 22 physician providers)



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Here is a summary of the total number of providers in New Mexico:

**New Mexico - Providers**

| Physician/Provider Type | Total | Source |
|---|---|---|
| Active Physician Licenses | 4881 | Medical Board- 9/22/2014 |
| Active Physician assistant licenses | 642 | Medical Board- 9/22/2014 |
| Active NM DO licenses | 600 | 7/1/2015 from: http://www.rld.state.nm.us/boards/Look_Up_A_License.aspx |
| Active Dental Licenses | 1480 | 7/1/2015 from: http://www.rld.state.nm.us/boards/Look_Up_A_License.aspx |
| Active Certified Nurse Practitioner licenses | 1680 | 7/1/2015 from: http://www.rld.state.nm.us/boards/Look_Up_A_License.aspx |
| Active Certified Nurse Anesthetist licenses | 440 | 7/1/2015 from: http://www.rld.state.nm.us/boards/Look_Up_A_License.aspx |
| Active Psychologist licenses | 760 | 7/1/2015 from: http://www.rld.state.nm.us/boards/Look_Up_A_License.aspx |
| **Total Providers** | **10483** | |

## Current New Mexico Non-Acute and Other Provider Participation

As of July 1, 2015, NMHIC does not have any Non-Acute and Other Provider participants.

This category of participation will include providers such as; (a) Long Term Care facilities, (b) Home Care providers, (c) social services, (d) EMT providers, (e) behavioral health, (f) DME providers, etc.

## Current New Mexico Reference Lab Participation

As of July 1, 2015, NMHIC has the following other reference lab participants:

- TriCore Reference Laboratories (joint venture of Presbyterian Healthcare Services and UNM Hospitals)
- Quest Diagnostics (in implementation)
- LabCorp (in implementation)

Reference lab participation is currently defined as submitting lab results and pathology reports to the state HIE. TriCore Reference Laboratories has expressed interest in a more collaborative arrangement with NMHIC, where they may become users of the HIE data – but nothing has been negotiated, finalized, or implemented.

## Current New Mexico Payer/Insurance Carrier Participation

As of July 1, 2015, NMHIC has the following payer/insurance carrier participants:

- New Mexico Centennial Care (formerly, the New Mexico Medicaid system)

Services for Centennial Care are provided by four (4) managed care organizations (MCOs):

- Blue Cross Blue Shield of New Mexico
- Molina Health Care of New Mexico, Inc.
- Presbyterian Health Plan, Inc.
- United Health Care Community Plan of New Mexico

** Centennial Care includes over 800,000 subscribers/members.



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Participation among payers/insurance carriers is currently defined as submission of a data file that is used to create an insurance record reflecting Medicaid coverage in the HIE. In the future, plans are for Centennial Health to also submit claims data to the HIE, which is part of plans and discussion regarding an All Payers Claims Database (APCD) for the state of New Mexico. In addition, Centennial Health will eventually be using the HIE's provider portal for their care managers, but they first need to be trained and given access and credentials (has occurred for United Healthcare). Centennial Health is also looking at using reporting for their consented population for a variety of purposes, as well as providing their care managers with ADT Notifications

Also, as of July 1, 2015, NMHIC has signed agreements with the following additional payers/insurance carriers:

- New Mexico Health Connections

## Current New Mexico Public Health Participation

As of July 1, 2015, NMHIC provides services to the New Mexico Department of Health (NMDOH), such as:

- CDC NSSP (BioSense) Syndromic Surveillance – currently, 19 hospitals participating
- ED Syndromic Surveillance – currently, 23 hospitals participating
- Electronic Laboratory Result Reporting (ELR) – currently 23 hospitals and labs participating

For the above public health interfaces, NMHIC; (a) manages and supports the required interfaces with each hospital and/or laboratory, (b) collects the data via the public health interfaces, (c) aggregates the data within NMHIC hosted data repositories, and (d) forwards the aggregated data and ELR messages to the New Mexico Department of Health (NMDOH) electronic disease surveillance systems (NM-EDSS).

Currently, Immunizations data is being collected, aggregated, and reported on solely by the New Mexico Department of Health (NMDOH), without NMHIC involvement. However, the NMDOH is currently exploring the selection and implementation of a new immunization reporting system, which may be able to interface with NMHIC.



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# Current State of NMHIC - Sustainability

## Background Information

In the five years since the HITECH Act brought funding for public health information exchanges (HIEs), the technology and the organizations that offer it have seen a varied evolution. Other sources of start-up and implementation funding were the Centers for Medicare and Medicaid Services (CMS), the Agency for Health Research and Quality (AHRQ) and Health Services and Research Agency (HRSA) - all provided grants for state and regional public HIEs. All of these grants were primarily intended to provide the necessary "seed money" funding in order to launch the HIEs — to hire staff, acquire office space, acquire the required HIE technology, market the HIE, complete onboard initial participants, implementation of technology and interfaces, etc.

However, once the initial federal and/or state grant funding ran out, many state and regional public health information exchanges (HIEs) have struggled with achieving long-term sustainability. In order to become sustainable, HIEs have to be able to demonstrate and provide a value proposition to its participants and stake-holders that many of those same participants and stake-holders would be willing to pay for. Many public HIEs were overly focused on the technology itself and often times operated from a "if you build it, they will come" philosophy. Building and demonstrating value was often overlooked. Consequently, many have either ceased operations, scaled back operations and services, or have merged with other public HIEs.

## HIE Sustainability Strategy and Model

There are a number of sustainability strategies or models that HIEs can adopt and incorporate in their own sustainability model or plan, these include:

- Usage Fee Model – subscription or transaction based
- Public Utility Model – levy based
- Shared Revenue Model (or Brokerage Fee Model)
- Value Added Services – clinical, administrative, or payer

The New Mexico Health Information Collaborative (NMHIC) has adopted the Public Utility Model, as its current sustainability strategy or model. Under the public utility model, it is assumed that data providers, consumers, and users provide, share, and use information for the common good. In addition, the cost of participation in NMHIC is based on the level of benefit that each participant derives from its participation. The greater the benefits achieved, the greater the cost of participation in NMHIC.

The Public Utility Model considers health information exchange (HIE) to be a public good, similar to other public utilities. Therefore, many states are considering utilizing taxes to support state and/or regional public HIEs. Many states are beginning to explore this model because HIE provides such a significant "shared" benefit, since it is assumed that all participants and stakeholders benefit from the exchange. Usually, state legislation is required to levy a new tax. State governments may use various methods of taxation including; (a) revenue based, (b) per member/per month, (c) transaction fees, or (d) part of a provider or hospital's state licensure fee. For example, North Carolina is proposing a tax on provider, hospital, and insurance licenses. However, given the current economic and political environment, it may be difficult to enact legislation levying new taxes on businesses or individuals.



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## Primary Source of Revenue - Participant Fee Structure

Since NMHIC has adopted Public Utility Model, its fee structure is largely based on a "per member/per month" basis, which varies depending on the nature of the participating organization. These fees are from a 9/2014 fee schedule, therefore fees can and will be adjusted based on comparisons to other HIEs or as needed to assure sustainability:

| | |
|---|---|
| Acute Care Hospital Participants: | Currently, acute care hospital participants pay $125.00 per bed per year. For example, a 100-bed hospital would pay $12,500 per year to NMHIC. |
| Specialty Care Hospital Participants: | Currently, specialty care hospital participants pay $125.00 per bed per year. For example, a 100-bed hospital would pay $12,500 per year to NMHIC. |
| Physician Provider Participants: | Currently, physician provider participants pay $150 per provider per year. For example, a physician practice with 10 physician providers would pay $1,500 per year to NMHIC. |
| Non-Acute and Other Provider Participants: | Currently not applicable – no non-acute or other provider participants at this time. |
| Reference Lab Participants: | Currently, reference lab participants are only providing data and NMHIC does not charge a fee for their data submissions. |
| Payer/Insurance Carrier Participants: | Currently, payer/insurance carrier participants pay $2.40 per member per year. For example, a payer with 100,000 members would pay $240,000 per year to NMHIC. |
| Public Health Participants: | Currently, The New Mexico Department of Health (NMDOH) pays per the following fee structure:<br>- Support and Maintenance of EDR/Syndromic Surveillance Repository and Reportable Lab Results (ELR) Repository ($10,000/month)<br>- Reporting Subscription Service ($5,350/month)<br>- New Syndromic or ELR Data Feeds ($3,210 one-time fee)<br>- New CDC BioSense (NSSP) Data Feeds ($535.00 one-time fee) |

## Other Potential Sources of Revenue

Another potential future source of revenue is related to NMHIC's planned implementation of the Orion Health eHealth Exchange Gateway (planned for Fall 2015), which will establish connectivity between NMHIC and the eHealth Exchange (formerly known as the Nationwide Health Information Network or NwHIN).

The eHealth Exchange is a group of federal agencies and non-federal organizations that came together under a common mission and purpose to improve patient care, streamline disability benefit claims, and improve public health reporting through secure, trusted, and interoperable health information exchange. The eHealth Exchange

is managed by The Sequoia Project, previously Healtheway, which was chartered as a non-profit 501(c)(3) to advance the implementation of secure, interoperable nationwide health information exchange. The Office of the National Coordinator for Health Information Technology, part of the US Department of Health and Human Services, transitioned management of its eHealth Exchange to The Sequoia Project for maintenance. Since 2012, the eHealth Exchange has grown to become the largest health information exchange network in the country. Today, the eHealth Exchange includes; all 50 states, four federal agencies (including the SSA), 30% of all US hospitals, 10,000 medical groups, 900+ dialysis centers, 8200 pharmacies, and supports more than 100 million patients.

Although NMHIC became a participant in the eHealth Exchange in 2010 that was via the previous MedPlus HIE technology platform. Now, since the migration to the Orion Health HIE technology platform, NMHIC would have to go through testing again with the eHealth Exchange, using their new Orion Health platform. After contacting The Sequoia Project, the good news is there isn't a current testing backlog or waiting list on the eHealth Exchange side. Because NMHIC is a current participant, all that would be needed is a new eHealth Exchange Testing Readiness Checklist, along with a new eHealth Exchange Testing Agreement — completed and signed by NMHIC. As soon as Orion Health is ready, NMHIC can begin testing in the DIL test environment. There would be a testing fee associated with the DIL testing. When NMHIC and Orion Health are ready, a call can be setup with eHealth Exchange to further discuss the details of fees and timelines.

Once the eHealth Exchange Gateway is implemented and in production, NMHIC plans to restart their SSA connection and therefore will receive revenue from the Social Security Administration (SSA) for disability determination services. NMHIC has crafted and executed a new secondary Data Use and Reciprocal Support Agreement (DURSA) and governance process. NMHIC plans to charge for reporting services, in alignment with the adopted secondary DURSA and governance process, as well as all applicable state and federal regulations.

When NMHIC was connected to the eHealth Exchange, and ultimately with the SSA, previously with the MedPlus HIE platform, here is a summary of the fee structure, volume of CCDs (Continuity of Care documents) provided, and revenue generated:

Fee Structure: SSA paid $15 for each CCD provided for their disability determination process

Volumes and Revenue: SSA pulled CCDs on Albuquerque HealthPartners patients only, with the following volume breakdown by year:

- In 2012 SSA received 966 CCDs = $14,490 (4/1/2012 thru 12/31/2012)
- In 2013 SSA received 640 CCDs = $9,600 (1/1/2013 thru 12/31/2013)
- In 2014 SSA received 504 CCDs = $7,560 (1/1/2014 thru 9/2/2014)

Average = 75 CCDs/month = $1,125/month = $13,500/year

If NMHIC is able to expand the number of organizations that they can provide data for to the SSA, then the number of CCD requests could increase significantly in the future (for example, if NMHIC was to provide data to the SSA on Lovelace Health System patients).



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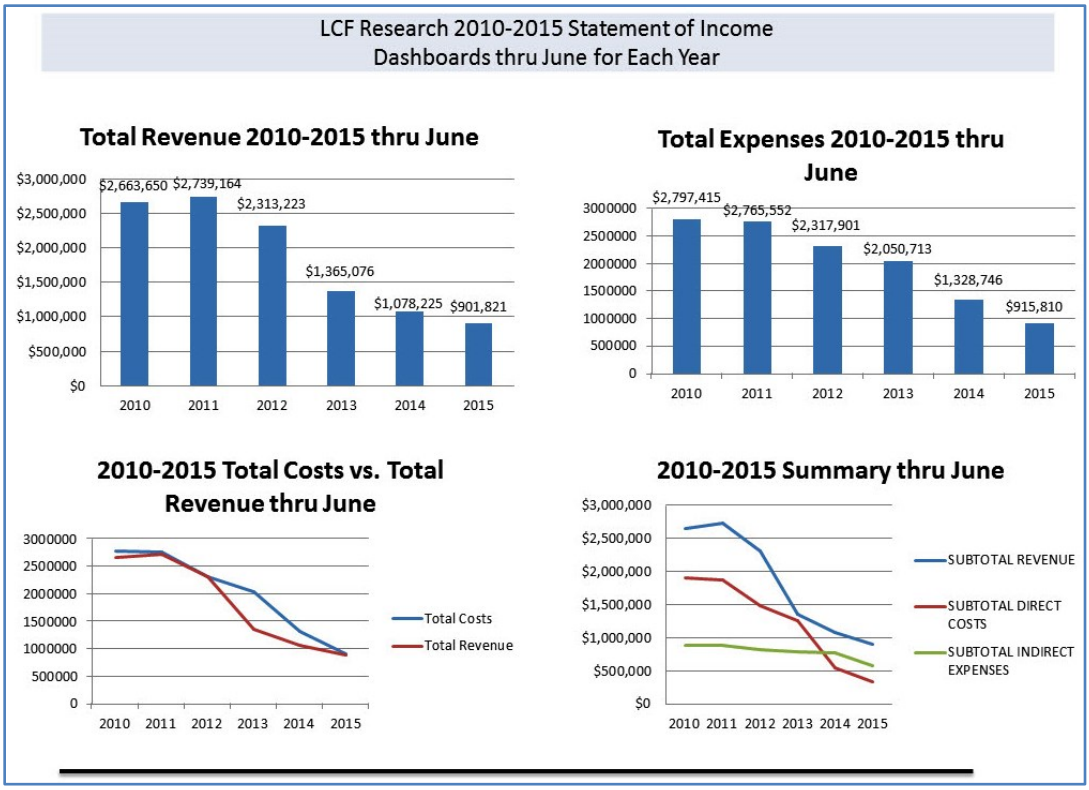
## Overall Financial Position of LCF Research and NMHIC

From a Balance Sheet perspective, NMHIC is appears to be currently financially stable - with a 7/15/2015 current ratio of 1.65, quick ratio of 1.65 and a cash ratio of 0.86. A positive trend is observed in terms of matching revenues with expenses, especially in 2015.

Included here is a Statement of Income and other related information provided by NMHIC, to provide a glimpse into its current overall financial position — they are largely self-explanatory, but some additional comments are included as well. Please bear in mind, these reports are as of June 30, 2015 and that LCF Research and NMHIC are on a January 1 thru December 31 fiscal year.




In the above Statement of Income, in the Total Revenue 2010-2015 thru June graph (upper left hand corner), total YTD revenue shows a steady downward trend, reflecting the fact that the initial federal funding for the state HIE and Regional Extension Center (REC) are running down during this period.

Also in the above Statement of Income, in the 2010-2015 Total Costs vs. Total Revenue thru June, a positive trend is again observed in terms of matching revenues with expenses – especially in 2015.

The graph below shows a breakdown of the total revenue, by revenue source:

- **Federal** (mostly in the form of initial grants for HIE/REC)
- **State** (mostly in the form of public health reporting contract with NMDOH)
- **Restricted**
- **Commercial** (fees collected from participating organization in the state HIE)



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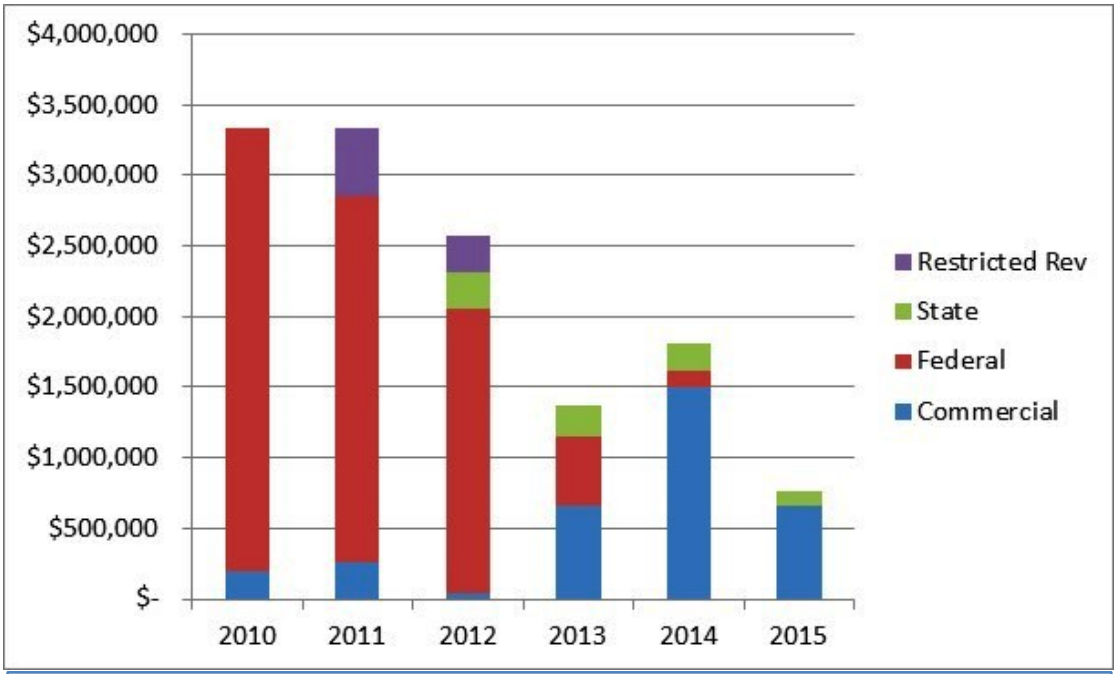
Again, this illustrates the difficult transition that all public state and regional HIEs face, as initial federal (and sometimes state) funding grants run out, and their need to be replaced with some form of fee structure to ensure ongoing sustainability.




| Year | Commercial | Federal | State | Restricted | Total |
|---|---|---|---|---|---|
| *2010* | $ 192,830.00 | $ 3,145,724.71 | $ - | $ - | $ 3,338,554.71 |
| *2011* | $ 256,410.00 | $ 2,599,532.46 | $ - | $ 475,919.00 | $ 3,331,861.46 |
| *2012* | $ 34,922.50 | $ 2,021,338.80 | $ 254,840.00 | $ 255,035.00 | $ 2,566,136.30 |
| *2013* | $ 656,861.40 | $ 493,523.54 | $ 221,000.00 | $ - | $ 1,371,384.94 |
| *2014* | $ 1,500,836.32 | $ 112,316.30 | $ 202,768.00 | $ - | $ 1,815,920.62 |
| *2015* | $ 656,588.58 | $ - | $ 106,180.00 | $ - | $ 762,768.58 |

Note: 2015 is through the end of June.



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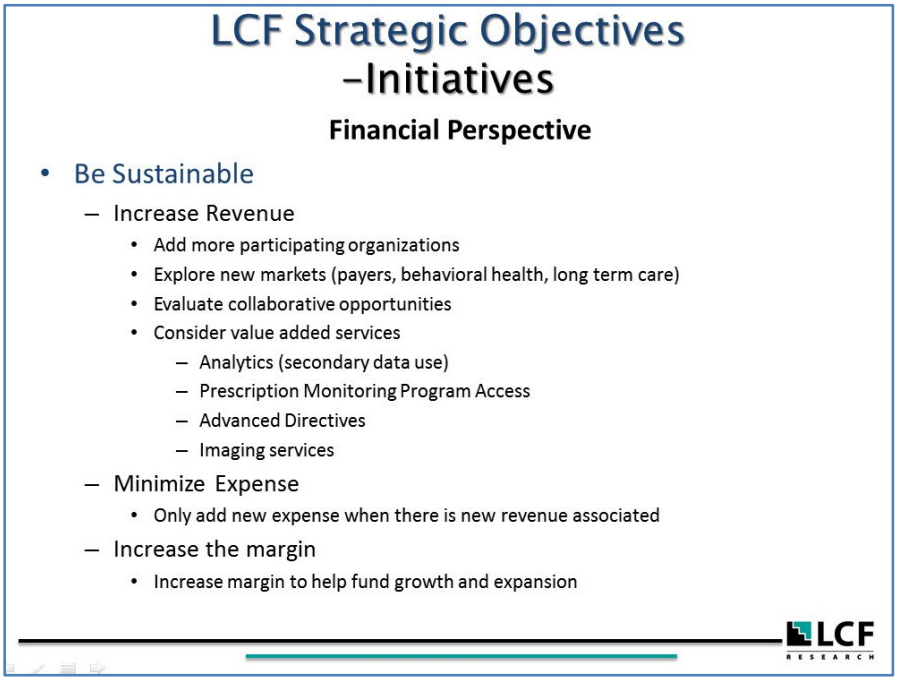
## NMHIC – Strategic Plan and Initiatives

Below are two slides from a recent presentation that Thomas East, CEO and CIO of NMHIC, gave during the second New Mexico Health System Innovation Summit held on June 16, 2015. These two slides detail NMHIC's current Strategic Objectives and Initiatives - from a Customer perspective, Financial perspective, Internal Process perspective, and a Learning and Growth perspective.

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## LCF Strategic Objectives –Initiatives

**Internal Process Perspective**

- High Quality and Dependable HIE Services
  - Fully implement Orion HIE deliverables
  - Monitor system uptime and response time and hold Orion to contracted performance
  - Develop and implement process to monitor interface errors and work with customer and Orion for rapid resolution
  - Develop and implement help desk and call team
  - Develop and implement process to routinely work potential EMPI duplicates
  - Develop and implement process for monitoring customer use and a rapid response team for just in time support and recovery of customers.
- Reduce implementation time and cost for new participants
  - Develop and use in house resources for interfaces
  - Consider contract with 3rd party Rhapsody Experts for interfaces
  - Improve training team, tools, techniques
- Innovative New Services
  - Grant for ONC FOA for Interoperability
  - Grant to workforce training
  - Evaluate collaborative opportunities
- Trusted Consulting Services

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## LCF Strategic Objectives –Initiatives

**Learning and Growth Perspective**

- Employ and retain a highly competent, innovative and aligned workforce
  - Design and implement an employee satisfaction survey and use feedback to make change and inform strategy
  - Design and implement employee goals and performance measures aligned with strategic objectives.
  - Use Studer leadership principles- routine rounding, thank you notes
  - Provide training and growth opportunities
  - Reward customer service and innovation
  - Celebrate success
  - Re-instate LCF contribution to retirement

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In addition to the above Strategic Objectives and Initiatives, here are two other strategic planning topics that were raised during the development of this report:

(1) Are there current plans and a timeline to connect NMHIC to any other state or regional HIEs?

NMHIC's current contract with Orion Health allows NMHIC to provide access and usage to any participant within 150 miles of the state of New Mexico's borders. Theoretically, this will allow NMHIC to provide services throughout major referral and service areas, which may extend into western Texas, eastern Arizona, as well as southern Colorado. NMHIC has also had discussions with other HIEs, in regards to establishing connectivity with them. However, as of the date of this report, connections with other HIEs currently do not exist.

(2) Is NMHIC currently connected to an ACO and/or are there plans to connect to an ACO?

Per NMHIC, there has not been any demand or requests to date. Presbyterian Healthcare Services did setup and establish a pioneer ACO, but later abandoned it. On June 23, 2015 Presbyterian Healthcare Services and United Healthcare announced that they would be jointly forming a new ACO.

# SWOT Analysis

## NMHIC Strengths

As of July 1, 2015, here are identified strengths, which will significantly contribute to the continued and future success of NMHIC:

(1) NMHIC is a Not for profit organization, with a community board in place – which lends itself to having greater neutrality in oversight and leadership.
(2) NMHIC is receiving a significant amount of data from the largest hospitals and IDNs in the state, including; Presbyterian Healthcare Services, Lovelace Health System, University of New Mexico Hospitals, and Christus St. Vincent Regional Medical Center.
(3) Orion Health is a significant player in the healthcare IT industry, as well as in the HIE marketplace.
(4) Via its contract with Orion Health, NMHIC appears to have a very robust information technology foundational platform and suite of applications, to not only support HIE related functions but possibly all or most of the functionality required for the proposed patient centered medical home model.
(5) The Orion Health cloud-based SaaS information technology platform that NMHIC has adopted and implemented will likely ensure high system availability, uptime, and performance.
(6) The planned implementation of a replicated copy of the Clinical Data Repository (CDR) will further ensure that NMHIC and its participants benefit from optimum system availability and performance. This will also enable the development of population health reporting, analytics reporting, etc.
(7) It appears that NMHIC's Orion Health platform is standards-based, conforming to interoperability standards such as HL7 and IHE as well as semantic standards such as SNOMED, LOINC, RxNorm, ICD-9/ICD-10, CPT, etc. By adhering to these widely adopted standards, NMHIC will be able to more easily integrate with hospital and provider EMRs, other state and regional HIEs, eHealth Exchange, etc.
(8) NMHIC and LCF Research have a long history of relationships with providers in the state of New Mexico, going back to the HIT Regional Extension Center and the original launching of the state HIE.
(9) Since 2010, NMHIC has been contracted to provide public health reporting services to the New Mexico Department of Health (NMDOH).
(10) From the standpoint of managing revenues vs. expenses and achieving a level of profitability, NMHIC has established a positive trend, although recent and short-term, as it has significantly improved its bottom line from 2014 to 2015.

## NMHIC Weaknesses

As of July 1, 2015, here are identified weaknesses, which may be problematic for continued and future success of NMHIC:

(1) Although NMHIC has made great progress in the past 12-24 months in onboarding a number of hospitals in New Mexico, it still has a considerable way to go to get all or the vast majority of the states acute care hospitals onboard, as well as a critical mass of physicians and other providers. In order to adequately support the Health System Innovation initiative and a patient centered medical home model, a minimum level of NMHIC participation will need to be defined, as well as a timeline and project plan to get there.
(2) Although the decision was the only option available given the circumstances at the time, the migration from one HIE platform (MedPlus) to another (Orion Health) in 2012/2013, essentially reset NMHIC back to square one in many ways. NMHIC staff had to experience a learning curve with a new



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technology platform, existing participants had to be re-implemented on the new platform, some previous data or functionality may have been lost (even if only temporarily), and efforts to add new participants likely had to either be put on hold for a period of time or delayed. Again, in the long-term, this very likely will result in its intended positive outcome, but in the short-term (2013-2015) it has slowed development and expansion of the HIE.

(3) Even among the currently participating hospitals and physician providers, there are gaps in the total patient data portfolio that each organization is sending to NMHIC. Citing just one example, since its migration to Epic, Presbyterian Health Services is no longer sending NMHIC its patients' cardiology reports, radiology reports, discharge summaries, or medication history. Whether it is via HL7 or CCD (Continuity of Care document), this current data deficiency from the largest hospital system in New Mexico need to be addressed.

(4) NMHIC has a fairly significant number of Orion Health components and solutions that have been implemented and are now available for production use, but have not yet been adopted by and/or deployed to participant organizations. These include; Direct Secure Messaging, CCD Exchange, XDS.b Repository (receiving, archiving, responding to query requests), EMR/HIE Integration, etc. As with participation levels, in order to adequately support the Health System Innovation initiative and a patient centered medical home model, these and other components and solutions will need to be evaluated for their level of criticality. For those determined to be pre-requisites for the success of the patient centered medical home model, a timeline and project plan will need to be developed to get them deployed to all the required participant organizations.

(5) There have been occasional delays in implementation and deployment of some of the HIE technology platform and individual components, due to availability of resources with the HIE technology vendor - Orion Health.

(6) Currently, NMHIC has only one participating specialty care hospital (out of 13 state-wide) and no participating non-acute providers, such as; long-term care facilities, home health agencies, behavioral health clinics, etc.

## NMHIC Opportunities

As of July 1, 2015, here are identified opportunities, which NMHIC can leverage and use to its advantage:

(1) Now that NMHIC has a MU2 certified Direct Secure Messaging (DSM) solution through Orion Health, opportunities exist to leverage DSM in order to provide value added services (example: ADT Notifications and MU2 required Transitions of Care delivery via DSM) for hospitals, physician providers, and other providers.

(2) NMHIC has set-up and implemented, but has not yet deployed to participating organizations; CCD Exchange and the XDS.b repository (with exception of the fact that previous MedPlus documents are now stored in the repository), so this will be an opportunity to utilize CCDs (Continuity of Care documents) to replace or supplement HL7 interfaces while also assisting hospitals and physician providers in meeting MU2 and MU3.

(3) NMHIC has targeted the Fall 2015 for when it will be LIVE and operational with a connection to the national eHealth Exchange (formerly, known as the Nationwide Health Information Network or NwHIN), which will introduce opportunities to connect to the Indian Health Service (HIS), the Veterans Administration (VA), other HIEs and provider organizations outside of the state of New Mexico, as well as allowing NMHIC to re-establish its connection with the Social Security Administration (SSA).

(4) Once hospital participants have been implemented on more advanced HIE functionality, such as CCD Exchange, Direct Secure Messaging, EMR/HIE Integration, etc., and are experiencing a more significant value proposition for their participation in NMHIC, there will be an opportunity to increase their



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current participation fees. Obviously, this would need to occur when it is time to renew their agreements with NMHIC. It is recommended that the participation fee for each hospital be increased, and move to a more flat rate fee, based on where their number of staffed beds fall into predefined bed ranges (for example, <101 beds, 101-200 beds, 201-350 beds, 351-500 beds, >500 beds). This is based on what we see other state HIEs charging their hospital participants. The end result is an opportunity to increase revenues from the largest provider organizations (hospitals), who one can argue are using the HIE the most, and are experiencing the greatest benefit from the HIE.

(5) As was stated earlier in the report, opportunities exist for establishing connectivity with other neighboring state, regional, and even private HIEs, where referral and service areas overlap. This will allow for a more complete patient record within the HIE, especially for patients residing in southeast New Mexico and adjacent to El Paso, TX.

## NMHIC Threats

As of July 1, 2015, here are identified threats to continued and future success of NMHIC:

(1) The number one threat to all HIEs — and NMHIC is no exception — is long-term sustainability. Not only does this require having an appropriate and equitable participant fee structure in place in order to provide revenue sources, but the greater issue is demonstrating and delivering continuous value to those same participants. This not only results in a positive impact on current participants level of satisfaction with the HIE (given the fees and costs associated with participating), but also increases the likelihood of current participants to want to further invest in, engage with, and help promote the HIE. This also results in a more compelling story to tell, when marketing to non-participating organizations. At this time, we have concerns that many of the current participants are not receiving adequate value, which may hinder further development and expansion of the HIE.

(2) The limited availability of broadband data services throughout much of New Mexico, may prove to be a significant barrier for rural participation. Other technologies, such as cellular services, may need to be researched and evaluated in those areas.

(3) The costs for interfaces, whether via HL7 or CCD (Continuity of Care document) for example can be a significant barrier to participation, especially for smaller participating organizations, such as solo physician practices, as well as for participating organizations that may have severe resource constraints, such as critical access hospitals and long-term care (LTC) facilities. In many cases, these organizations have interface costs on both the HIE side, as well as with their EMR vendor. Beyond the purchase of the actual interfaces and/or interface software, participating organizations also need to have resources available to implement and test. This can also represent a significant barrier to participation in the state HIE.

(4) Another potential threat to the overall state HIE's success are current staffing resources constraints in technology support and implementation. These kind of staffing resources are needed to not only support current participants, but also to onboard new participants and implement additional Orion Health components and solutions. In order to address gaps in data submissions by some of the participants, roll out new components (such as Direct Secure Messaging, CCD Exchange, EMR/HIE Integration, etc.), and onboard and implement new participants, NMHIC will likely require a temporary, but significant, increase in staffing resources and costs.

## NMHIC General Observations/Questions

This section includes some general observations and questions regarding NMHIC. They are not currently categorized as a Strength, Weakness, Opportunity, or Threat, since we either concluded that they did not fall into one of those four categories or we did not feel we had enough information to draw any conclusions.

(1) New Mexico is largely a very rural, and in some cases, remotely populated state, with essentially only three significant populations areas (Albuquerque, Las Cruces, and Santa Fe) all located towards the middle of the state and spread out from north to south. This is in contrast with other states, which may have urban centers forming “HIE anchors” — either spread throughout the state or on opposite sides of the state. As a result, developing and supporting a state HIE in New Mexico requires a very unique and non-traditional HIE model and approach, as compared to other states.

(2) It appears that the current participants in NMHIC have a variety of term agreements with NMHIC – some are 1 year, 3 year, 4 year, and 5 year.

## Conclusions

The New Mexico Health Information Collaborative (NMHIC) has gone through a lot of changes since its beginning: changes in leadership, changes in technology, etc. Currently, from a technology, leadership and sustainability perspective, it appears that NMHIC is well positioned to be able to expand and successfully move forward as the state HIE. However, that is not without its challenges, all of which have already been presented and discussed in this report.

In summary, some of those challenges include; (a) filling in data submission gaps associated with current participants, (b) onboarding all or the vast majority of the acute care hospitals in the state, along with a critical mass of the physician providers in the state, (c) onboarding a critical mass of non-acute providers, such as long-term care (LTC) facilities, home health agencies, specialty hospitals, behavioral health clinics, etc., (d) deploying or more widely deploying some of the more advanced, and complex, HIE functionality – such as CCD Exchange, Direct Secure Messaging, EMR/HIE Integration, etc., and (e) focusing on increasing value to all types of participating organizations. As if these challenges were not enough, all of the above needs to be done in a fairly aggressive timeframe, which will likely require staffing and other resource increases, while maintaining sustainability by monitoring the bottom line.

As it relates to the topic at hand — the state of New Mexico's Health System Innovation initiative and the patient centered medical home model — a number of additional questions need to be answered before a conclusion can be made regarding if and how NMHIC can be successful in providing some of the key elements of data integration, data aggregation and analytics, interoperability, and care coordination. These questions include:

(1) *What are all the IT related requirements of the patient centered medical home model?*

Once that complete list is identified, it can then be compared to NMHIC's capabilities — current and future — along with the results of the state-wide IT assessment and gap analysis, to identify any and all deficiencies in required functionality. Once the deficiencies are identified, an evaluation and selection can be initiated to determine how best to address those deficiencies.

(2) *What is the timeline for the development and implementation of the patient centered medical home model?*

(3) *For the patient centered medical home model to be viable from the start, what are the minimum requirements in regards to participation levels among hospitals, physician providers, other providers, reference labs, payers/insurance carriers, and public health entities?*

Once questions (2) and (3) can be answered, an analysis can be made as to whether NMHIC can achieve the level of participation required, within the necessary timeline for the launch of the patient centered medical home model. This analysis will need to consider time, resources, technology, funding, and the participants' capabilities to commit.



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# Appendix – History and Overview of NMHIC

## What is the New Mexico Health Information Collaborative (NMHIC)?

The New Mexico Health Information Collaborative (NMHIC) is the New Mexico statewide health information exchange (HIE) network. It enables the electronic exchange of patient health information among different and unrelated healthcare organizations, such as doctors' offices, hospitals, laboratories, pharmacies, and skilled nursing facilities (SNF) using electronic health record (EHR) systems.

LCF Research staffs and operates NMHIC.

LCF Research initiated NMHIC in 2004 with a federal grant from the Agency for Healthcare Research and Quality. NMHIC was awarded a federal contract in 2008 from the Office of the National Coordinator (ONC) to participate in the development of what was known then as the Nationwide Health Information Network (NwHIN).

The American Recovery and Reinvestment Act (ARRA) included the Health Information Technology for Economic and Clinical Health (HITECH) Act. HITECH provided funds to states or state-designated entities to develop and implement HIEs.

NMHIC was awarded implementation funding for 2010-2013 under the State HIE Cooperative Agreement Program.

NMHIC also received a Social Security Administration award to support HIE efforts to electronically convey medical information from health delivery organizations to disability claims adjudicators.

NMHIC is recognized by the New Mexico Department of Health (DOH) as its agent for electronic public health reporting.

## Who is LCF Research?

LCF Research was established in 1990 as a non-profit organization to foster health services research among physicians, hospitals, health plans and academic institutions, and to provide continuing professional education for health professionals. LCF Research expanded its core mission in 2004 to include health information technology.

LCF Research was a key collaborator in drafting the New Mexico legislation that established the 2009 Electronic Medical Records Act. LCF Research staffs and operates the New Mexico Health Information Collaborative (NMHIC), the state's Health Information Exchange (HIE) network. The HIE allows healthcare providers to access patient information from healthcare organizations that participate in NMHIC. LCF Research continues to develop NMHIC in collaboration with New Mexico's healthcare organizations and providers.

LCF Research previously lead a collaborative of three organizations that managed the New Mexico Health Information Technology Regional Extension Center (NM HITREC), a program that supported providers throughout the state in achieving meaningful use of certified electronic health record (EHR) technology. The expertise developed for NM HITREC makes it possible for LCF Research to offer EHR/Meaningful Use and Privacy & Security services to specialty practices.



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The Health Services Research Division of LCF Research (HSRD) specializes in practical and applied interventional and translational research. Research expertise includes pharmacoeconomics, cancer epidemiology and screening, prescribing safety, disease management, racial and ethnic disparities, and interventional studies. HSRD staff provides a number of consultative services including program evaluation, process improvement, statistical analysis, research design, and medical record review.

LCF Research maintains an accredited continuing education program that complements its health services research and health information technology capabilities. The Continuing Professional Education program helps to translate research into practice by providing educational interventions for physicians and other medical, nursing, pharmacy, and ancillary healthcare providers as a part of applied research projects. The program also works with clinicians to become meaningful users of health information technology. The CPE program is accredited with commendation by the New Mexico Medical Society.

As an expansion of LCF Research's work with primary care providers to implement or upgrade to a certified electronic health record (EHR) system, LCF Research has and is offering EHR/Meaningful Use and Privacy & Security services to specialty practices. In addition, LCF Research is the lead organization for the New Mexico Health Information Collaborative, the statewide health information exchange (HIE).

LCF Research currently consists of a staff of seventeen (17) FTEs, who are also responsible for staffing and supporting NMHIC. Here is a list of some of the leadership at LCF Research:

- Thomas East, Chief Executive Officer and Chief Information Officer
- Dale Alverson, Chief Medical Informatics Officer
- Douglas Mapel, Medical Director, Health Services Research
- Pam Carpenter, Director of Administration and Human Resources
- Rebecca Wahler, Privacy Officer

If necessary, NMHIC can leverage its partnership with HealthInsight New Mexico, a Quality Improvement Organization (QIO), to supplement staff to support a temporary "ramp up" to bring on new participants. However, at this time, it is unclear as to what skill sets would be available and not available through this relationship with HealthInsight New Mexico.

## What does NMHIC do?

NMHIC brings health information systems together, across the state of New Mexico, in order to provide access to a patient's information in one centralized record. Healthcare providers, with authorized access to clinical information and the patient's consent, have access to more comprehensive information about a patient.

Both patients and providers benefit through better coordination of care because NMHIC HIE access allows authorized providers to track and manage patients as they move between different care settings and facilities.

## Available Patient Information in NMHIC

Currently, the types of patient Information being exchanged via NMHIC include; problems lists, diagnoses, medications, immunizations, allergies, procedures, laboratory results, radiology results, transcribed medical records reports, notes, and encounters.

## Patient Consent - Privacy, Security, and Confidentiality



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The NMHIC HIE allows for secure access to patient information by authorized users only. Participating providers are required to meet the rigorous Health Insurance Portability and Accountability Act (HIPAA) regulations and Health Information Technology for Economic and Clinical Health (HITECH) Act privacy and security standards.

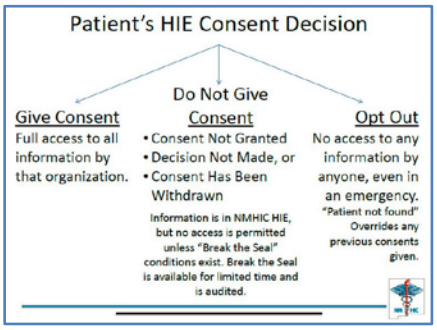
The New Mexico Electronic Medical Records Act established that all available electronic health information is included in the HIE. All patient information is sent to a secure storage area where data is organized and maintained. This means that all clinical information from participating providers is available and included in the HIE, including specially protected information.

All medical records are confidential under the federal regulation known as HIPAA. New Mexico and other federal laws provide special protection for certain medical conditions and/or test results, including human immunodeficiency virus (HIV), sexually transmitted diseases, genetic information, alcohol and drug treatment, and behavioral health treatment.

NMHIC enforces the security of confidential data by authenticating, authorizing, and auditing users' access to its data. Authentication ensures that only authorized personnel can access the secured system. Access rights are based on the assigned user role and access privileges are checked for each data request. Auditing ensures that the data are accessed for the purpose of performing an approved duty. Access to the NMHIC HIE is captured in an audit trail, which includes the identification, tracking, and reporting of suspicious incidents, usage behaviors or access patterns.

Participating healthcare organizations and their facilities are required to ensure that their end-users are accessing patient information appropriately based on their organization's pre-established consent rules, HIPAA, and applicable state law. The healthcare organization and their facilities are responsible for the following on-going tasks:

- Collecting signed patient consent forms and integrating the process into their workflow
- Monitoring appropriate patient record access by participating organization and their facilities' staff
- Maintaining appropriate policies and procedures for patient consent management, including system administration for managing consent and updating consent status if it changes
- Ensuring that appropriate justifications are provided for "Break the Seal" access, and that steps are taken to obtain written consent following any "Break the Seal" access
- Correcting inappropriate access by healthcare organization and their facilities' staff in a timely manner and reporting inappropriate "Break the Seal" situations to the Participant's Privacy Officer and NMHIC as soon as possible



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**NMHIC - Understanding Patient Consent FAQ:**

What is patient consent?

New Mexico law states that patients must give consent before authorized providers at different healthcare organizations and their facilities may view and share information in the patient's NMHIC HIE electronic medical record.

How does a patient give consent?

At each healthcare organization where a patient receives care, the patient will be asked to provide written consent to allow access to the patient's NMHIC HIE record. The NMHIC HIE consent form can be included with the other consent forms the organization is required to provide to the patient.

How does the consent process work?

When a patient signs the NMHIC HIE consent form, a consent flag is added to their NMHIC HIE record that allows their authorized providers to view their personal health information.
When a patient visits their doctor or specialist and gives consent, then the patient's personal health information can be exchanged electronically and securely.

Who can see a patient's protected health information (PHI)?

An authorized user can view the patient's record, including the most current medical history, recent labs, and test results from participating healthcare organizations and their facilities. There are different levels of restricted access for administrative and clinical staff.

What can they see?

The New Mexico Electronic Medical Records Act, passed by the state legislature in 2009, established that all available electronic health information is included in the NMHIC HIE. All patient information is sent to a secure storage area where data is organized and maintained.

This means that all clinical information from participating healthcare organizations and their facilities is available and included in the HIE, including specially protected information. All medical records are confidential under the federal regulation known as HIPAA. New Mexico and other federal laws provide special protection for certain medical conditions and/or test results, including human immunodeficiency virus (HIV), sexually transmitted diseases, genetic information, alcohol and drug treatment, and behavioral health treatment. Because this information is not separated out, the patient's consent covers all information in the HIE.

What do you mean by "Provider"?

A provider under the New Mexico Electronic Medical Records Act is an individual licensed, certified, or otherwise permitted by law to provide health care in the ordinary course of business or practice of a profession.

How is a patient's health information protected?



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The privacy, confidentiality, and security of personal health information is protected by state and federal laws. These protections are safeguarded and built in to the NMHIC HIE.

All health organizations and their facilities that participate in the NMHIC HIE are required, by contract, to meet the rigorous privacy and security standards as defined by HIPAA and the HITECH Act. All health organizations and their facilities that participate in the NMHIC HIE are required to safeguard the confidentiality, integrity, and availability of your health information.

Participating healthcare organizations and their facilities are responsible for ensuring that their end-users are accessing patient information appropriately based on their organization's pre-established consent rules, HIPAA, and applicable state law. The healthcare organization is responsible for the following on-going tasks:

How is authorization managed?

The NMHIC HIE allows for secure access by authorized users only and supports the state requirement for patient consent at the healthcare organization level. This includes the ability to manage change to the status of consent when a patient's legal status changes (i.e., minor child to adult), a patient's decision to withdraw consent, a patient's decision to Opt Out of participating in the NMHIC HIE altogether, and a patient's decision to Opt Back In and participate in the NMHIC HIE.

How does the NMHIC HIE know that a patient's healthcare provider accessed their information?

All authorized users of the NMHIC HIE have individual user names and passwords to access the NMHIC HIE system. Every time someone accesses the NMHIC HIE, the system logs that information.

Does consent expire?

Consent remains in effect and does not expire. However, a healthcare organization may choose to annually review and renew their consent files, so a patient may be asked to confirm their previous consent decision.

Is the information in the NMHIC HIE different than the information a patient's healthcare provider has?

The NMHIC HIE does not create, change, or remove information about the patient. The information stored within the NMHIC HIE is what the participating healthcare organization created themselves in the normal activities of the healthcare organization and their facilities (medical records). The difference is that a provider may view information about care a patient received from other healthcare providers.

Don't healthcare providers share patient information with each other already?

In most cases, healthcare providers only share enough information to make a referral, but don't usually share the entire record. This can occur with a quick phone call between the healthcare providers, a few sheets of the most current information faxed or mailed to the other healthcare providers, or your entire record could be copied and sent.

It is quite common for a patient to get care from many different healthcare organizations and their facilities. For example, the family healthcare provider works at Healthcare Organization A, your foot healthcare provider works by



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himself at Healthcare Organization B, and your arthritis healthcare provider works at Healthcare Organization C at the University. These healthcare organizations (A, B, and C) are all individual companies. They only share information on a case-by-case basis.

This means the patient has to work hard to make sure his/her medical information is shared with the correct healthcare organizations (and their facilities) and it's the correct information. Access to the NMHIC HIE allows the healthcare providers to view information and determine for themselves what information is important for the diagnosis and treatment of your problem.

Can a patient opt out of participating in the NMHIC HIE?

If a patient chooses not to participate in the NMHIC HIE, then a consent form is not required. The patient's care team will not be able to access their personal health information in the NMHIC HIE. However, in the event of a life threatening situation, where the patient is unable to give consent, a provider can "Break the Seal" and locate the patient's electronic medical record. Break the Seal access has a time-limit and is audited.

Patients may choose to Opt Out of participating in the system entirely, meaning no one can view their name or electronic medical record in a NMHIC HIE search, not even in an emergency situation. The Opt Out decision by a patient may possibly cause delays in treatment or require the patient to have repeat lab tests and x-rays if the needed information is not readily accessible through other methods.

The Opt Out decision applies only to the NMHIC HIE. Your healthcare providers can continue to create and store your health information in their electronic medical record system.

Patients may request an "Opt Out – Opt Back In" form (see below) by contacting NMHIC HIE at 505-938-9900 or emailing info@nmhic.org.

If a patient is in the emergency room and can't give permission, can the ER doctor access their patient's records?

Yes, as long as the patient has not Opted Out of the system, authorized access is for a limited time and it is audited.

Once a provider "breaks the seal" to access patient records, can they always look at their records?

No, access to the NMHIC HIE during a life-threatening emergency has a time limit. A consent form will need to be signed by the patient to give them ongoing access.

Can a patient opt back in if they change their mind?

Yes, the NMHIC HIE allows the patient to opt back in if they change their mind after opting out of the NMHIC HIE. Please contact NMHIC HIE for a copy of the "Opt Out – Opt Back In" form (see below) at 505-938-9900 or info@nmhic.org.

How does a patient request changes?

The healthcare organization where the patient requests to make the changes should be able to assist them. If the healthcare organization is unable to support a patient's change request, they are encouraged to contact the NMHIC HIE at 505-938-9900 or info@nmhic.org.

**NEW MEXICO HEALTH INFORMATION COLLABORATIVE (NMHIC)**

| **Do you need more information?** Email us at: info@nmhic.org Or call 505-998-9900 | **Opt-Out** Complete and mail or fax the form below. Address and fax number are the end of this form. | **Opt-Back In** Complete and mail or fax the form below. Address and fax number are the end of this form. |
|---|---|---|

## You have a choice and can change your mind at any time.

**Example – Decide to Opt-out:** If you fill out this form and mail or fax it in, the system will not allow access to any of your current or past medical information through the Health Information Exchange under any circumstances, including an emergency situation. If you change your mind later and would like to reverse your decision you can **Opt-Back In** at any time.

**I Choose to Opt-Out** ☐ **I Choose to Opt-Back In** ☐

After you have made your selection by checking one of the boxes above, fill out this form and mail to the address below.

**Note: If you are under 18 years of age, a parent or legal guardian must sign below. A decision to Opt-Out remains in effect until the minor turns 18, at which time the individual is responsible for making his or her own decision.**

*Patient Last Name: _____ *Suffix (if applicable, e.g., Jr.): _____

*First Name: _____ *Middle Name or Initial: _____

*Patient Date of Birth: (mm/dd/yyyy): _____ Last 4 digits of SS#: _____

*Home Address: _____

*City: _____ *State: _____ *Zip Code: _____

*Home Phone #: _____ Business Phone #: _____

Email Address: _____ *Gender (Male/Female): _____

** Signifies a required field*

When I have chosen to **Opt-Out** and sign and mail in this form, I understand that I am choosing for my health information not to be accessible in the NMHIC Health Information Exchange network to anyone under any circumstances.

When I have chosen to **Opt-Back In** and sign and mail this form, I understand that I am choosing for my health information to be available in the NMHIC Health Information Exchange network to authorized users who have obtained my written consent.

_____ *Date: _____

*Signature of Patient or Authorized Representative

☐ Check here if signing as parent, guardian, or authorized representative and print name and authority:

_____ *Date: _____

*Printed Name of Parent/Guardian & relationship to patient

**Fax form to 505-938-9940, or mail to:**
**New Mexico Health Information Collaborative, 2309 Renard Pl. SE, Suite 103, Albuquerque, NM 87106**

## What are the benefits of participation in NMHIC?

For patients, the benefits include:

- The NMHIC HIE consolidates information from various providers, reducing the amount of time patients are required to spend filling out paperwork and briefing their providers on their medical history. This allows the patients to be able to spend more time with their providers regarding their health concerns and treatment.
- By making patient information available to providers in a more timely and comprehensive basis, the NMHIC HIE helps patients avoid unnecessary or duplicate testing, hospitalization, and emergency department visits.

For hospitals, physician providers, other providers, payers/insurance carriers, and other healthcare organizations, the benefits include:

- Timely access to more accurate and complete patient information
- Provides more information to improve evaluation, diagnosis, management, and treatment of the patient by seeing the most current medical history, results, and other information from wherever the patient received care.
- Improves coordination of care as patients transfer between healthcare facilities and providers
- Helps facilitate more streamlined referral patterns
- Provides notifications when a patient is admitted or discharged from a hospital or received care elsewhere
- Provides access to diagnostic test results to avoid duplication of tests and services
- Allows engagement in HIPAA compliant, cost effective data exchange with physicians and other healthcare organizations



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