



Community Betterment Through HIE

*"Engaging Community Stakeholders
to Create a Sustainable, Large-Scale HIE"*

**NeHII Current Status
Broadband Webinar
February 15, 2012**



What is an HIE?

- Non-Profit Organization
- Collaboration of Diverse Group of Stakeholders
Created to Improve Patient Safety and Care
While Controlling Costs
- Umbrella Connection Between All the EMRs –
Emphasis on Interoperability!
- Universal Portal and Vendor Agnostic
- HIE Services Similar to Web Services

What is NeHII?

- One of the **first** state-wide HIEs in the country
 - 4 health systems in the pilot, nearly 2.0 million lives
- One of the **first** to offer full functionality
 - eRx, Clinical Messaging, Physician Referral
- One of the most **efficient** virtual models in the country
- Originally intended for **treatment and payment purposes** and **now adding public health reporting** to meet Meaningful Use requirements

NeHII in the News



- Managed Healthcare Executive – March 2012 – Article on Health Information Exchange
- Information Week – October 2011 – 14 Rural Hospitals Join Nebraska Health Data Exchange
- Ignite Magazine – Fall 2011 – Network of Networks: The Future of HIEs
- HealthLeaders Magazine – September 2011 – Jump Into HIEs Now or Wait for the Winning Model?
- Nebraska Medicine – Winter 2011 – Entire publication outlining NeHII

NeHII in the News

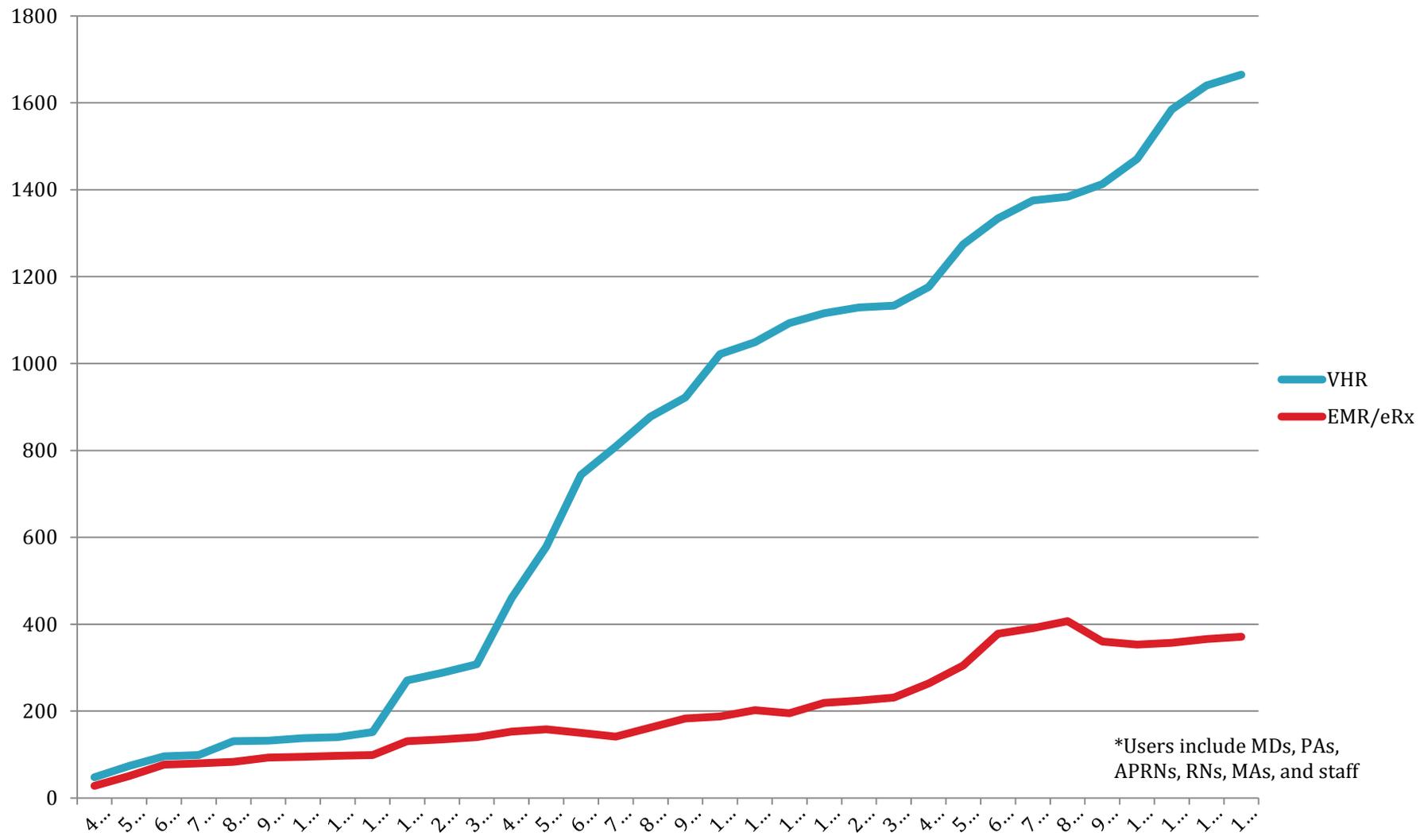


- Journal of AHIMA – June 2010 – Virtual Record - Nebraska HIE Offers Light Solution for Robust Data Exchange
- Journal of AHIMA – May 2011 – Opting for Opt Out – How One HIE Manages Patient Consent
- HIMSS HIELights – February 2011 - A Revenue-Sharing Model with a Promise
- HIMSS HIELights – May 2011 - Two Pharmacies Join NeHII
- HIMSS News – May 2011 - Viewpoint: Technical Strategy

NeHII Statistics (As of February 10, 2012)

- Patients in the System 2,000,679
- Physicians & Staff
 - Using the Virtual Health Record (VHR) 1,670
 - Using the EMR 361
- Percentage of Requests Completed in Less than 2 Seconds 95.81%
- Number of ePrescriptions 104,111
- Number of Results Sent to the Exchange 28,410,331
 - LAB 20,447,573
 - RAD 4,384,467
 - Transcription 3,578,291

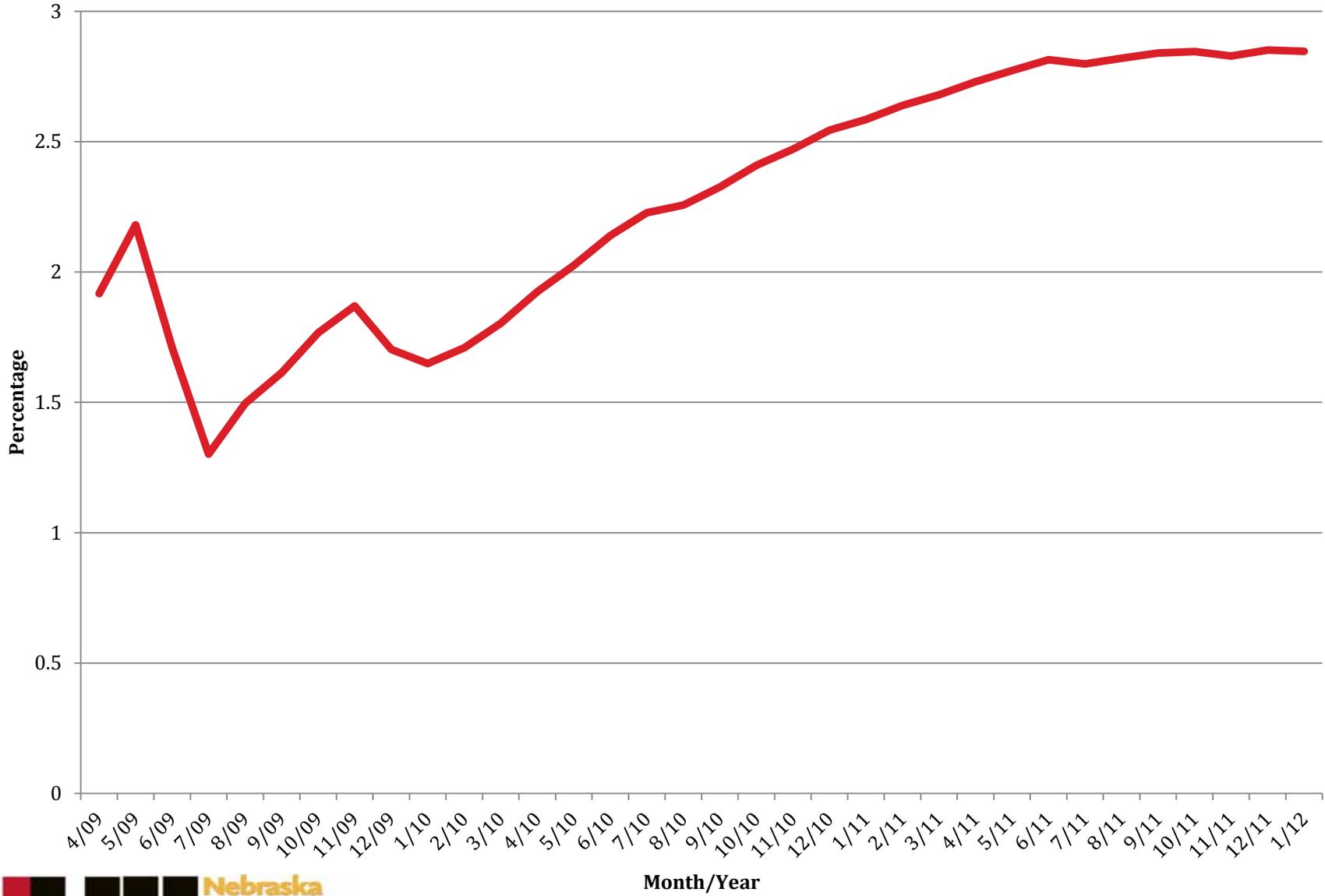
NeHII Total Users*



*Users include MDs, PAs, APRNs, RNs, MAs, and staff



NeHII Opt-Out Rates



NeHII Pilot & Milestones

- Pilot Phase
 - Initiated February 16, 2009
 - Completed June 30, 2009
- NeHII Framework for Statewide HIE
 - Based on Hybrid Federated Model
 - HIPAA Compliant
 - Uses **Elysium** Software Developed by **Axlotl**
 - CCHIT Certified
 - Website: www.nehii.org
 - Statewide Rollout Began July 2009
 - State Designated Integrator Received September 2009
 - 501(c)3 Status Received November 2009



INGENIX®



NeHII, Inc. Business Model

- Non-Profit NE Corporation
- Owned by NeHII Collaborative
- Managed by Board of Directors
- Operations
 - Funded by License Fees Paid by Participants to NeHII, Inc.
 - Sustainable
- Implementation
 - Funded in part via Class B Membership Fees (one-time)
 - Grant from Nebraska Information Technology Commission (NITC)



Current NeHII Participant Status

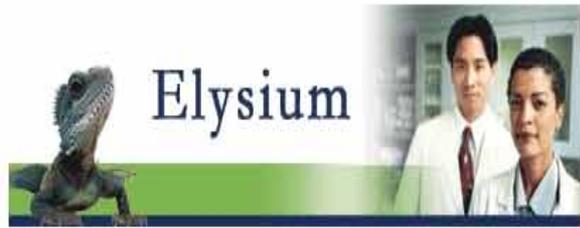
- Current Participant List
 - Alegent Health
 - **Children's Hospital & Medical Center**
 - Methodist Health System
 - The Nebraska Medical Center
 - Mary Lanning Memorial Hospital
 - BlueCross BlueShield of Nebraska
 - Creighton Medical Center
 - Great Plains Regional Medical Center



NeHII Participation Status

- Updates
 - Regional West, Scottsbluff, NE – February 2012
 - Lincoln, NE Health Systems
 - CAH Participation
 - Approaching 1,900 Total Users
 - Future Participant Targets





[Log In](#)

[New Users Start Here](#)

[Download the Elysium Print Program](#)





Nebraska Health Information Initiative

Support Desk 402.449.2187

Server Logon

Please enter your Username and Password

Username

Password

Log On

Set Password

Forgot password? Click [here](#).
Set Challenge answers [here](#).

Demographics:

Last Name:

Date of Birth: (mm/dd/yyyy)

First Name:

Gender:

Middle Initial:

Administrative:

Medical Record #(*):

Facility:

Encounter/Visit #(*):

Financial:

Insurance Policy #(*): Insurance Company:

(*)- primary search terms

ACCESS RESTRICTED BEYOND THIS POINT

Name: NEHII, GRAPIE Age: 85 Years Born: 05-Apr-1926 Sex: F Elysium ID: 000323290013

Consent to Access Yes**Usage Terms and Conditions**

I am accessing this patient information for treatment or payment purposes and agree to the NeHII Terms of Use.

IMPORTANT NOTE: The patient information available through the NeHII system may not include the following categories: alcohol and substance abuse treatment program records, records of emergency protective custody proceedings, records of predictive genetic testing, HIV testing information, mental health information and, for minors, records of STD testing and treatment (including HIV testing) and diagnosis and treatment of suspected abuse by a parent, guardian or personal representative. In addition, some NeHII data providers may chose to hold back additional information as a matter of policy. This list of excluded patient information may be changed from time-to-time and by individual NeHII data providers. For the complete medical record, please contact the appropriate organization.

 Accept Usage Terms and Conditions **Decline** Usage Terms and Conditions

Continue

Cancel



NEHII, GRAPIE - 04/05/1926 F Visit: [] Facility: [] From: [] To: []

All Summary Cumulative Lab Lab Radiology Reports ADT Patient Info Open Report



Lab

<input type="checkbox"/>		12/10/2006 5:05:00 PM	CBC/PLATELETS/COMPREHENSIVE	J Contreras
<input type="checkbox"/>		7/29/2006 7:25:00 PM	URINE CULT - COLONY COUNT...	J Contreras
<input type="checkbox"/>		7/23/2006 6:35:00 PM	CYTOPATHOLOGY REPORT - PA...	T Morningstar
<input type="checkbox"/>		2/5/2006 6:25:00 PM	CBC/PLATELETS/RETICULOCYT...	J Sullivan
<input type="checkbox"/>		7/29/2004 7:25:00 PM	URINE CULT - COLONY COUNT...	J Contreras

Radiology

<input type="checkbox"/>	2/13/2007 11:20:00 AM	CT BRAIN W/O	T Kennedy
<input type="checkbox"/>	2/13/2007 11:20:00 AM	CT BRAIN W/O	D Smith
<input type="checkbox"/>	12/4/2003 2:00:00 PM	Bilateral Screening Mammo...	S Johansen

Reports

<input type="checkbox"/>	11/21/2006 2:00:00 AM	SCREENING SIGMOIDOSCOPY	T Morningstar
<input type="checkbox"/>	2/5/2006 12:00:00 PM	ER Care Record	J Contreras

ADT

No results matched your search.



NEHII, GRAPIE - 04/05/1926 F Visit: Facility: From: To:

All Summary Cumulative Lab Lab Radiology Reports ADT Patient Info Open Report

* All action times shown on this page are in Central Daylight Time.

Elysium FINAL LAB RESULTS FROM ABC LAB

NEHII, GRAPIE ID: 456789[GEN] DOB: 05-Apr-1926 Age: 85 Years Sex: F Phone: (831)423-903

Ordered ROUTINE by Josepha Contreras, MD

* All clinical times shown on this page are in Pacific Standard Time.

CBC/PLATELETS/COMPREHENSIVE ME...

CBC/PLATELETS

Sample taken on: 10-Dec-2003 03:05 PM

Observation	Value	Reference Range	Units	Note
WHITE CELL COUNT	9.5	3.8-10.8	THOUS/MCL	
RED CELL COUNT	↓ 3.62	3.80-5.10	MILL/MCL	
HEMOGLOBIN	↓ 7.2	11.7-15.5	G/DL	
HEMATOCRIT	↓ 24.5	35.0-45.0	%	
MCV	↓ 68	80.0-100.0	fL	
MCH	↓ 19.9	27.0-33.0	pg	
MCHC	↓ 29.3	32.0-36.0	g/dL	
RDW	↑ 16.6	11.0-15.0	%	
PLATELET COUNT	382	140-400	THOUS/MCL	
MPV	10.0	7.5-11.5	FL	
NEUTROPHILS	↑ 81	40-75	%	
LYMPHOCYTES	↓ 7	20-45	%	



NEHII, GRAPIE - 04/05/1926 F Visit: Facility: From: To:

All Summary Cumulative Lab Lab Radiology Reports ADT Patient Info Open Report

Show All Search:

<input type="checkbox"/>	Result	Ordered By	Clinical Date	From/To	Attending Physician
<input type="checkbox"/>	CBC/PLATELETS/COMPREHENSIVE...	J Contreras	12/10/2006 5:05:00 PM	ABC Lab	
<input type="checkbox"/>	URINE CULT - COLONY COUNT...	J Contreras	7/29/2006 7:25:00 PM	ABC Lab	
<input type="checkbox"/>	CYTOPATHOLOGY REPORT - PA...	T Morningstar	7/23/2006 6:35:00 PM	ABC Lab	
<input type="checkbox"/>	CBC/PLATELETS/RETICULOCYT...	J Sullivan	2/5/2006 6:25:00 PM	ABC Lab	
<input type="checkbox"/>	URINE CULT - COLONY COUNT...	J Contreras	7/29/2004 7:25:00 PM	Dr PCP	
<input type="checkbox"/>	URINE CULT - COLONY COUNT...	J Contreras	7/29/2004 7:25:00 PM	Dr PCP	
<input type="checkbox"/>	CBC/PLATELETS	J Sullivan	4/27/2004 1:00:00 PM	Dr PCP	
<input type="checkbox"/>	CBC/PLATELETS	J Contreras	3/19/2004 6:50:00 PM	Dr PCP	

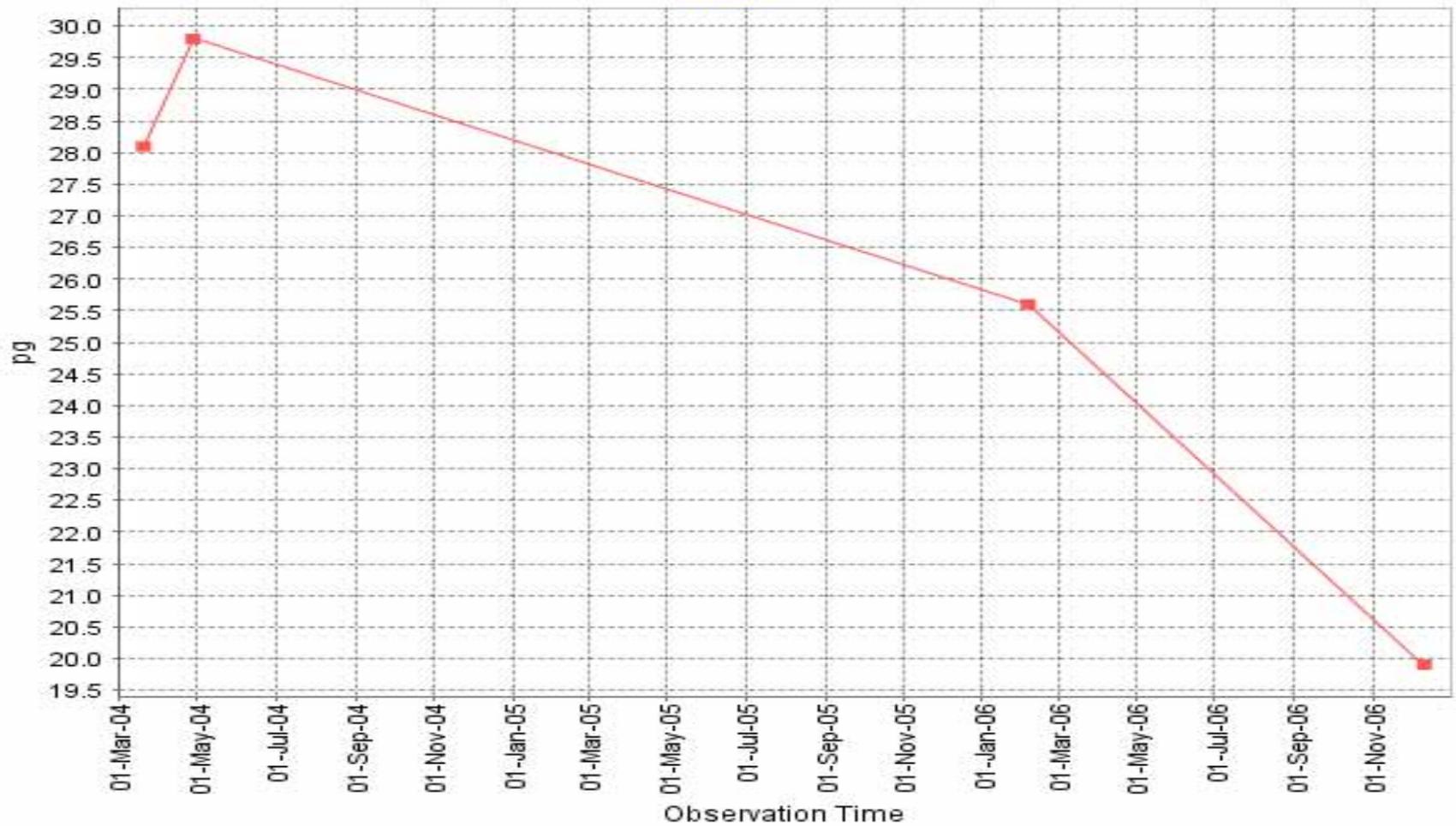
- Vital Signs
- All Elements
- Glucometer Readings
- Chemistry
- Diabetes Related

Not all lab test results and observations can be displayed in a cumulative view. For specific observations not present in this view, search within the lab or other tabs.

Group/Element: Time Axis: **Horizontal** Time Range: **All**

Elements	12/10/06 05:05 PM	07/29/06 07:25 PM	02/05/06 06:25 PM	07/29/04 07:25 PM	04/27/04 01:00 PM	03/19/04 06:50 PM
HCT	24.5		41.3		37.4	40.8
PROTEIN-TOTAL	6.9					
BUN	23					
MCV	68		83		88	89
URINE PROTEIN	NEGATIVE	TRACE		TRACE		
ALT	9					
LYMPHOCYTES	7		9		11	6
PLATELETS	382		273		213	285
HEMOGLOBIN, URINE	NEGATIVE	TRACE		TRACE		
BILIRUBIN	0.4					
WBC	9.5		8.2		6.4	9.2
RBC	3.62		4.95		4.23	4.57

Elysium Chart for MCH
NEHII, GRAPIE Age: 85 Sex: F Phone: DOB: 05-Apr-1926
MCH



Close



NEHII, GRAPIE - 04/05/1926 F Visit: [] Facility: [] From: [] To: []

- All
- Summary
- Cumulative Lab
- Lab
- Radiology
- Reports
- ADT
- Patient Info
- Open Report

Consent to Access Yes

Given to Provider: Support Updated By: Connie Pratt Workgroup: NeHii Administration Workgroup On: 05/03/2011 10:20:40 AM CDT Supporting Document

Basic

Name: NEHII, GRAPIE Gender: F Age: 85 Years
 Address: 8407 MCLELLAN ROAD Born: 05-Apr-1926
 Santa Anna, CA 95076 Alias: Ethnicity: Not Hispanic or Latino or Spanish Origin 456789 [GEN]
 Home: Work: Language: English MRN or ID: N0710097 [DHS] Race: White
 Mobile: Email: 000323290013 [Elysium]
 Preferred Method of Contact:

Medical Insurance Plans

Insurance Co. ▾	Plan ▾	Benefit ▾	Member ID ▾	Grp ID ▾	Admin. ▾	Eff. ▾	Exp. ▾	CP ▾	Primary Physician ▾
BLUE SHIELD PLAN 0200 (PLUS)	-	-	4308457077-000	-	-	-	-	\$10	DR SMITH

Pharmacy Benefits

Query

Last failed query: 09/01/11 11:07 AM * Expired.

There is no pharmacy benefit information available for this patient.

Allergies

First Noted ▾	Allergy ▾	Reaction ▾	Group ▾	Reported By ▾
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Allergies

First Noted	Allergy	Reaction	Group	Reported By
02/08/04	Amoxicillin	Skin Rashes/Hives	Penicillins	D. PCP
01/08/03	Erythromycin Base	Nausea/Vomiting/Diarrhea	Macrolides	D. PCP
01/19/09	Nafcillin Sodium	Skin Rashes/Hives	Penicillins	D. Smith

= Non-coded entries

Medications

Query Last Query: 08/18/10 09:24 AM * Expired. Last failed query: 09/01/11 11:04 AM * Expired.

Started On	Drug Name	Dose Form Strength	Sig	Stop On	Ongoing	Rx By
12/15/04	Amitriptyline HCl	Amitriptyline HCl Tab 10 MG	1 TABLET at bedtime		>>	D. PCP
10/19/07	Amaryl	Glimepiride Tab 1 MG	1TQD		>>	D. PCP
01/19/09	Levothyroxine Sodium	Levothyroxine Sodium Tab 100 MCG	1/2 qd am po		>>	D. Smith
02/24/09	Nafcillin Sodium	Nafcillin Sodium For IV Soln 2 GM	2GMQ6H		>>	D. Smith
02/25/09	Penicillin G Potassium	Penicillin G Potassium For Inj 20000000 Unit	1MUQ4H		>>	D. Smith
04/25/11	TEGretol XR	Carbamazepine Tab SR 12HR 200 MG	1TBID		>>	R.A. Cooper
06/06/11	Ativan	Lorazepam Tab 0.5 MG	1 TABLET QID		>>	C.J. Buda
08/03/11	NexIUM	Esomeprazole Magnesium Cap Delayed Release 40 MG	1 CAPSULE DAILY		>>	J.D. Deck
08/12/11	Keppra	Levetiracetam Tab 500 MG	2 tablets po bid	08/11/12		R.E. Steg

= Free-text medication

Expired Medications

Problems

Date Diagnosed	ICD-9	Description	Group	Chronicity	Last Noted	Reported By
04/05/01	401.1	BENIGN HYPERTENSION	Essential hypertension			D. PCP
02/08/03	272.2	MIXED HYPERLIPIDEMIA	Disorders of lipid metabolism			D. PCP
10/29/07	250.4	DIABETES RENAL MANIFESTATION				D. PCP
01/04/07	250.4	DIABETES RENAL MANIFESTATION				D. PCP

01/19/09	290.0	DIABETES MELLITUS W/O COMP	D. Smith
01/19/09	428.0	CHF NOS	D. Smith
01/19/09	715.90	OSTEOARTHROS NOS-UNSPEC	D. Smith
01/19/09	244.9	HYPOTHYROIDISM NOS	D. Smith
01/19/09	290.13	PRESENILE DEPRESSION	D. Smith
01/19/09	401.1	BENIGN HYPERTENSION	D. Smith
05/11/09	E905.3	HORNET/WASP/BEE STING	H.A. Sakowski

Inactive Problems

Vaccinations

Given On	Drug Name	Dose	Route	Lot	Rx By
05/08/02	Pneumococcal Vac Polyvalent	0.5 ml	SC	112233	D. Urgent
02/08/05	Tetanus-Diphtheria Toxoids Td	0.5 ml	IM	334433	D. PCP
01/01/05	Tetanus-Diphth-Acell Pertussis	0.25 ml	SC		D. Smith
01/01/05	Pneumovax 23	0.25 ml	SC		D. Smith

Removed Vaccinations

Encounters

There is no encounter information available for this patient.

Providers

There is no provider information available for this patient.

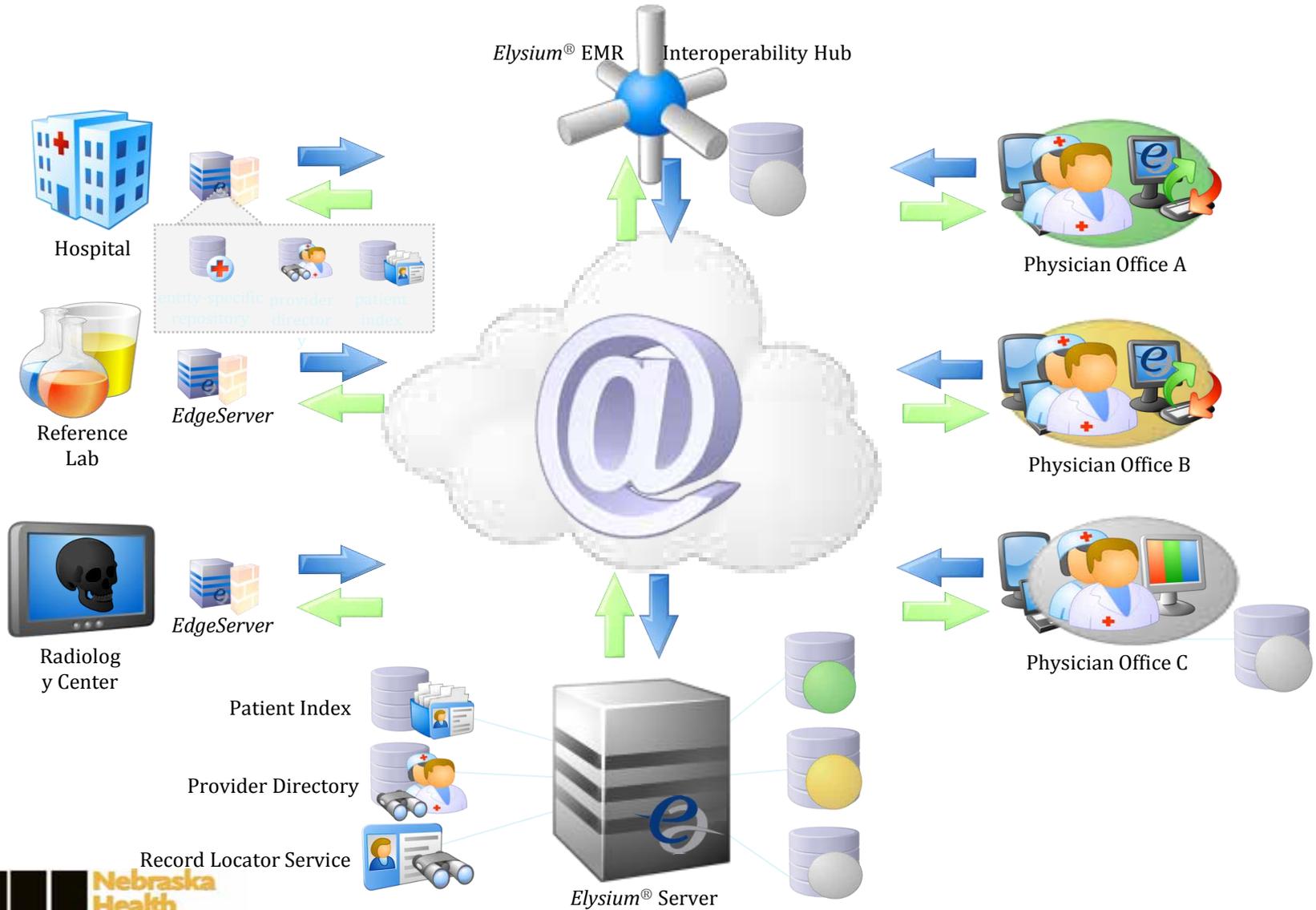
Contacts

There is no contact information available for this patient.

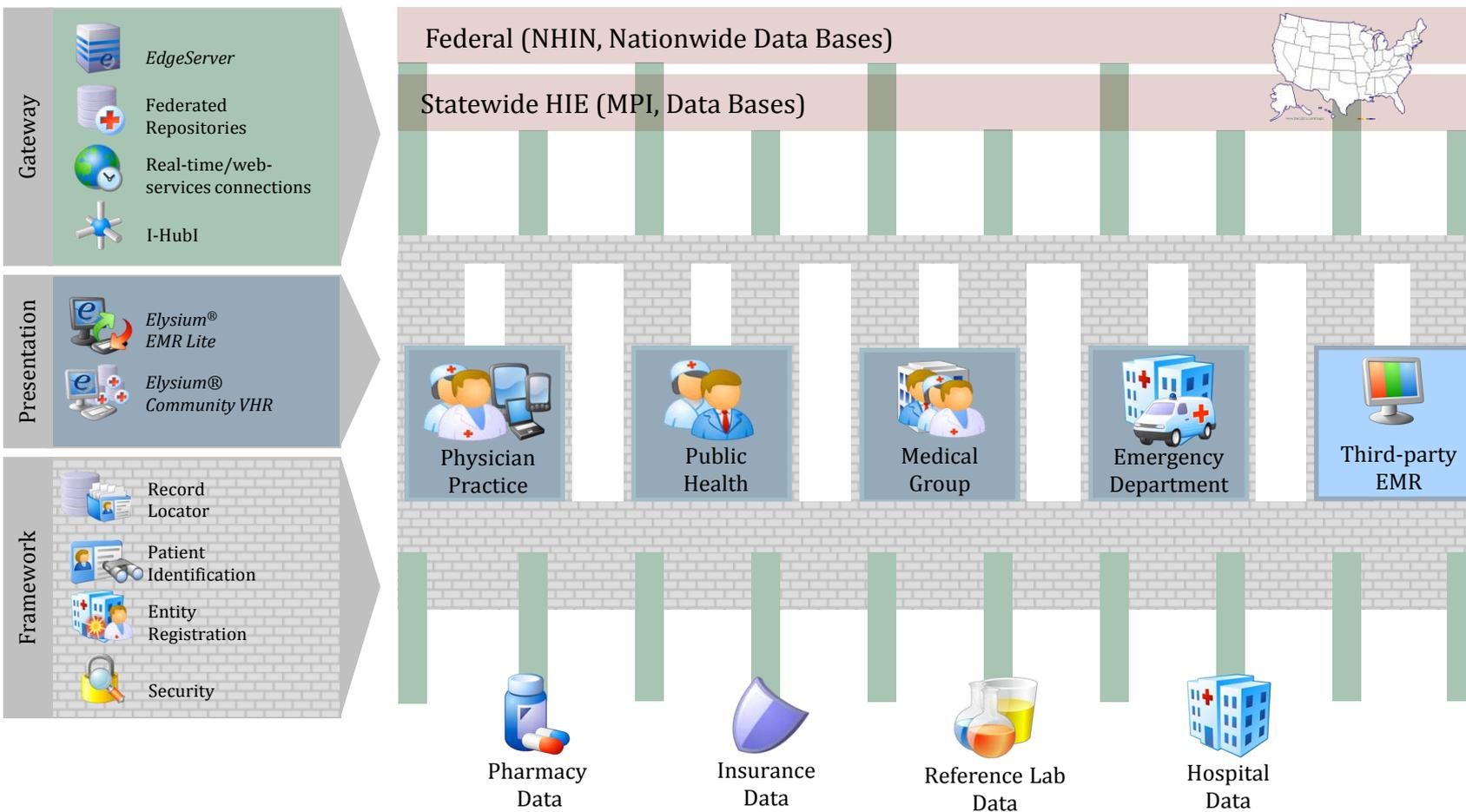
Advance Directives

There is no advance directive information available for this patient.

Elysium® Data Flows



Elysium® Architecture



NeHII Past & Present Challenges

- Governance Model
- Data Sharing, Participant Agreements
- Privacy/Security Policies
- Operational Manual
- Liability Insurance Coverage
- On-going Recruitment
- Resource Constraints



NeHII Success Factors

- Visionary Physician Leader
- Flexible Committee Structure
- Patient Centered
- Entrepreneurial Approach
- Pilot Study
- Accountability For Milestones
- Site Visits
- Public/Private Collaboration
- Managed Services Model



What About Meeting Meaningful Use Requirements?

- Obtaining Health Information Across the Continuum of Care
 - Medication History
 - Allergy Notification
 - Eligibility Verification
 - Major Problem List
 - Discharge Planning/Re-hospitalization Concerns
 - Vaccinations
 - Advanced Directives
 - State Registries

NeHII Licensing Model

- Licenses
 - Type
 - Physician/Staff
 - Data Provider
 - Hospital
 - Office EMR
 - Health Plan
 - Lab/Radiology
 - HIE/RHIO
 - Subscription
 - Transaction
 - Based On Size of Facility



NeHII Fee Structure

Hospital Size (# of beds)	Cost per month	Annual fee
1-25 beds	\$1,500	\$18,000
26-50 beds	\$2,000	\$24,000
51-150 beds	\$2,500	\$30,000
151-300 beds	\$4,000	\$48,000
301-500 Beds	\$8,000	\$96,000
> 500 beds	\$12,000	\$144,000

License Costs - Per Month	Physician
Physician Connection	\$10
VHR License	\$10
eRx Only	\$10
EMR	\$20
EMR w/ eRx	\$31.66
Direct	\$15

Consumer Awareness Campaign

- **Connect the “Docs”**

Sharing Information for Better Health Care

Review current Consumer Education Brochure to address public health reporting requirements and secondary use of data

Consumer Awareness Campaign

- Graphic Standards Guide
- Print Ad
- Public Service Announcement Media Kit
- Patient Information Brochure
- YouTube Video, Television/Radio PSA
- Consumer Microsite

Connect the Docs Sample

What does it all mean for healthcare?

- Faster, Better, Less Costly Access to Health IT
 - Delivers healthcare technology/applications at no capital cost
 - Removes financial/technical barriers to adoption; minimizes risk
 - Access to health IT applications as a service over the Web
 - Affordable service fees based on usage (per provider; per study)
 - Levels the playing field for providers regardless of size or location
 - Automates workflows for improved quality of care; reduces errors
 - Reliable service and support 24/7
 - Product and service innovation
 - HIE Sustainability



NeHII Contact Information

- Dr. Harris Frankel (President, NeHII Board of Directors)
- Deb Bass (Executive Director, NeHII)
- Chris Henkenius (Program Director, NeHII)



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