

UTILIZING HEALTH DATA: NORTH DAKOTA HEALTH INFORMATION NETWORK



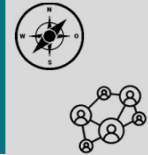
1

WHAT IS THE ND HEALTH INFORMATION NETWORK (NDHIN)

- NDHIN is a public /private partnership of healthcare stakeholders charged with expanding the secure exchange of health information in the state of ND.
- NDHIN resides in a ND state agency (ND IT) and collaborates closely with other key state agencies such as ND Department of Human Services, including Medicaid, and the ND Department of Health.

2

NDHIN HISTORY



- Launched in 2010 with federal funds (HITECH)
- Broad stakeholder support statewide
- Governor Appointed Advisory Committee
- Worked with Medicaid to support the EHR Incentive Program (Meaningful Use/Promoting Interoperability)
- Worked with the ND HHS to facilitate electronic public health reporting

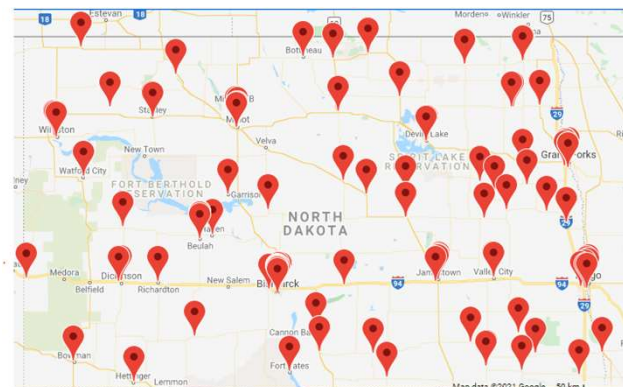
3

ND HEALTH INFORMATION NETWORK (NDHIN)



2022 SNAPSHOT

- 352 Participation Agreements
- 1.47M Unique Patient IDs
- All tertiary and Critical Access Hospitals participating
- Data feeds increased from 361 feeds in 2018 to 679 feeds in 2022
- 5331 Active Users



<https://www.ndhin.nd.gov/providers/providers-map>

4

NDHIN FUNCTIONALITY & SERVICES



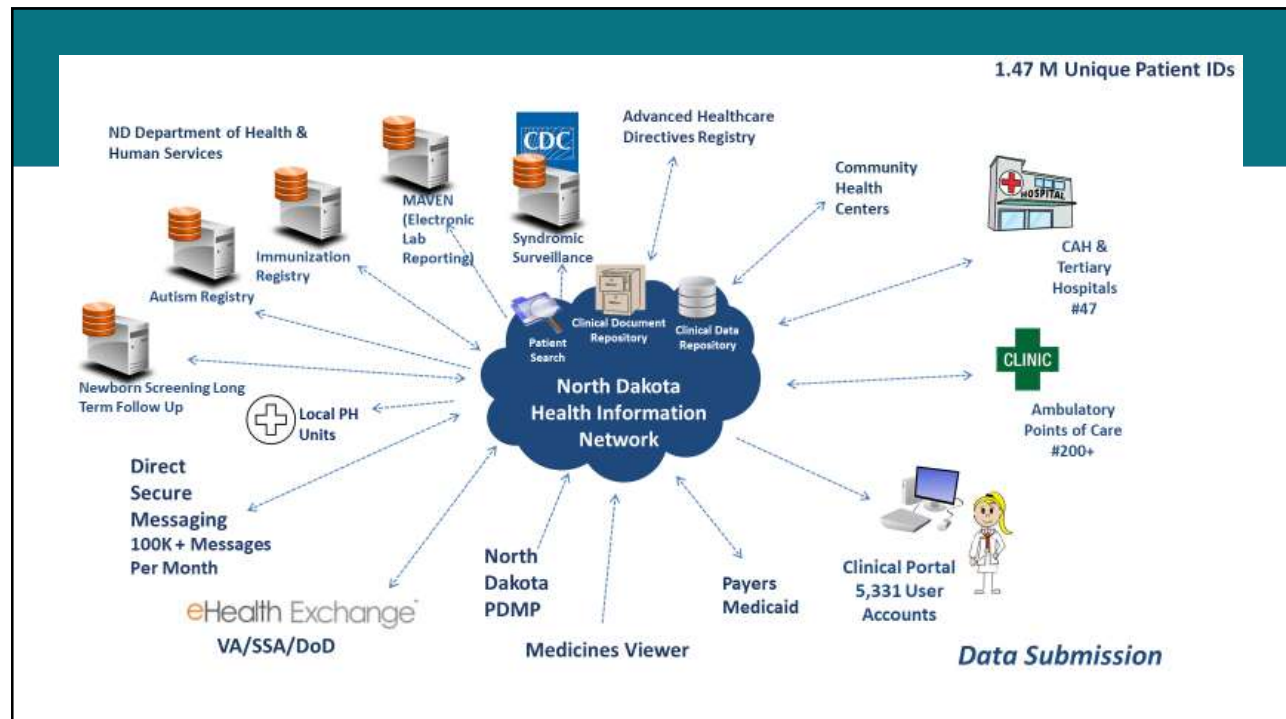
▪ Patient record search for the following patient information:

- Allergies
- Medications
- Encounters
- Laboratory Results
- Radiology Reports
- Transcribed Documents
- Images
- Prescription Drug Monitoring Program (PDMP)
- Access to National Networks (eHealth Exchange, Patient Centered Data Home, Carequality)

▪ NDHIN Services:

- EHR interoperability with Single Sign On access capability
- Clinical Portal Access
- Direct Secure Messaging/Communicate Portal, HISP, XDR
- Encounter alerts and notifications
- Electronic Public Health Reporting
 - Immunization Data
 - Syndromic Surveillance Data
 - Electronic Lab Reporting/Reportable Conditions
 - Autism Registry
- Advanced Health Directive Registry
- Send/receive sensitive messages securely

5



6

NDHIN & ND HEALTHCARE PROVIDERS

- Health information exchange of patient medical records with all hospitals – tertiary & critical access; most Community Health Centers; all Rural Health Clinics
- Longitudinal community health record made up of all records transmitted to NDHIN is provided back to participating providers for coordination of patient care
- Facilitates required public health reporting electronically on to the ND Department of Health to assist providers with compliance

7

NDHIN & ND MEDICAID

- Supporting Managed Care Organizations to improve coordination of care for the Medicaid Expansion population
- Sanford Health Plan
- Blue Cross Blue Shield North Dakota
 - Alerts & Notifications



8

NDHIN & HHS COLLABORATION



Electronic Public Health Reporting

- Meets regulatory compliance required by NDDOH and ND Century Code
- Ensures reporting is done in a timely manner
- Facilitates electronic reporting of immunizations, syndromic surveillance, and electronic laboratory reporting (ELR) from healthcare providers on to State and CDC
- Specialized Registries:
 - Autism/Advance Healthcare Directives
- Electronic Test Orders and Results (ETOR)
- Meets regulatory reporting requirements for Merit-based Incentive Payment System (MIPS)/Interoperability reporting
- Data Modernization Initiative – improving interoperability with public health systems

9

ND IMMUNIZATION INFORMATION SYSTEM

- North Dakota Immunization Information System (NDIIS)
- Confidential, population-based, computerized information system that collects vaccination data on North Dakotans
- NDIIS Immunizations link displays collected vaccination data for adult patients as well as children
- Displays immunization record as well as immunization forecast
- Includes information on immunizations administered, and due

10

NORTH DAKOTA IMMUNIZATION INFORMATION SYSTEM (REGISTRY)



MOUSE, Mickey sex Male DOB Feb-10-1947 (73y)

Patient Summary Medicines Viewer Timeline External Record Images Circle of Care Laboratory Results Flow Sheet

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

Immunizations

Dose Date	Provider	Lot	Reaction	VFC	Vaccine	Valid
01/04/2021	1112 - OAKES COMM HOSPITAL	025J20-2A	NONE	UNKNOWN	COVID19 (Moderna)	Yes
10/15/2019	9999 - UNKNOWN		NONE	UNKNOWN	INFL (HIV4 P/F)	Yes
10/10/2018	9999 - UNKNOWN		NONE	UNKNOWN	INFL (HIV4 P/F)	Yes
10/16/2017	9999 - UNKNOWN		NONE	UNKNOWN	INFL (HIV3 W/P)	Yes
01/04/2017	4921 - SANFORD DICKINSON EAST	3Z27B	NONE	PRIVATE	TDAP	Yes
10/05/2016	9999 - UNKNOWN		NONE	UNKNOWN	INFL (unspecified)	Yes
09/29/2015	4921 - SANFORD DICKINSON EAST	329TN	NONE	PRIVATE	INFL (HIV4 P/F)	
10/03/2014	4921 - SANFORD DICKINSON EAST	759XC	NONE	PRIVATE	INFL (HIV4 P/F)	
10/18/2013	4921 - SANFORD DICKINSON EAST	XE294	NONE	PRIVATE	INFL (HIV4 P/F)	
11/02/2012	4921 - SANFORD DICKINSON EAST	UH711AB	NONE	PRIVATE	INFL (HIV3 P/F)	

Immunization Forecast

Vaccine	Recommended Date	Minimum Valid Date	Dose
Td/Tdap	01/04/2027	01/04/2022	2
PCV	12/20/2049	12/20/2049	1
PPV	12/20/2050	12/20/2050	1
Varicella	11/11/2009	11/11/2009	1
Shingles	12/20/2034	12/20/2034	1
COVID19 (Moderna)	02/02/2021	02/02/2021	2

11

NDHIN DATA FEEDS



Admission, Discharge, Transfer (ADT)

Patient Demographics

Encounter History

Allergies

Diagnoses

Procedures

Observation Results (ORU)

Imaging Studies

Medical Document Management (Clinical Documents)

Lab

Radiology Reports/Documents

Summaries – Discharge/Encounter

H&P's

ED Visit Notes

Reports – Operative/Consult

CCD/CDA

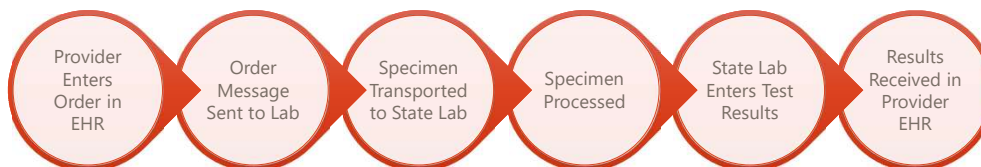
12

ELECTRONIC TEST ORDERS & RESULTS



Benefits of ETOR

- Reduces errors
- Improves Efficiency/Saves Time
- Improves coordination of patient care
- ND Locations: 22



13

NEWBORN SCREENING



- NDHIN Pathway used for care coordination
 - Benefits
 - Improved coordination of care for a very vulnerable population
 - Potential reduction of costs for a high-cost Medicaid population
 - Use of Care Coordination module to develop a care pathway



14

ADVANCED DIRECTIVE REGISTRY



Welcome Mickey Log Out
Powered by NDHIN

ND Health Care Directive Registry

Mickey's Account

Profile

Demographics

Name: Mickey Mouse
Date of Birth: 09/25/1953
Address: 1120 S Broadway
Minot, ND 58701
Phone: 703-222-2222 Cell
Email: cmitch@nd.gov

[Edit Profile](#)

Security

Access ID: 20TA234P

[Return](#) [Deactivate Account](#)

Documents

Current Document

File	Type
JCSZ.pdf	'ADVANCE DIRECTIVE'

[Upload File](#)

Document History

Date	File	Type
10/10/2019 08:48:32 AM	'TEST.pdf'	'ADVANCE DIRECTIVE'

[See More History](#)

Personal Identification Numbers (PIN)

View Only PIN

VBPUYN

[Print Card](#) [Regenerate PIN](#)

Manage Health Directive PIN

66R7XJ

[Manage Access](#)

Profile: Yes PIN: Yes Documents: Yes
Deactivate/Reactivate: Yes

[Print Card](#) [Regenerate PIN](#) [Manage Access](#)

Copyright © 2016 North Dakota Health Information Network - 4201 Normandy Street | Bismarck, ND 58503 - 1324 | 855-761-0034
Adobe Reader Accessibility Disclaimer Privacy Policy Security Policy W3C CSS W3C WAI-ARIA W3C HTML Compliant

15

CLINICAL PORTAL

16

PATIENT SEARCH

Minimum search criteria: Medical record number and organization
-- OR --
Last name

Additional search criteria: First name
Date of Birth
Gender

The screenshot shows a 'Patient Search' form with the following fields and values:

- Identifier: (empty)
- Organization: North Dakota Health Information Network
- Name: First Name(s) testpatient
- Date of Birth: MM/DD/YYYY
- Sex: Male | Female | All

Buttons: Search, Reset

Results table:

<input type="checkbox"/>	Consent	Identifier	Name	Date of Birth (Age)	Sex	Address
<input type="checkbox"/>	Opted in	AAA-00000-0	Testpatient, Cameron	Aug 08-1980 (39 years)	Male	123 Rhodes Way, Columbus, KS, 43215, USA (Home)
<input type="checkbox"/>	Opted in	AAA-00200-2	Testpatient, James	Dec-12-1979 (39 years)	Male	123 Another Street, Phoenix, AZ, 85254, USA (Home)

Buttons at the bottom: Add checked results to worklist, Replace worklist with checked results

Annotation: Use to add patients to worklists

17

BREAK THE PRIVACY SEAL

The screenshot shows the 'Access Sealed patient' dialog box for patient TESTPATIENT, Cameron (SEX Male, DOB Aug-08-1980 (39y)).

Reason: -- Select Reason --

I understand that this will be recorded and may be audited.

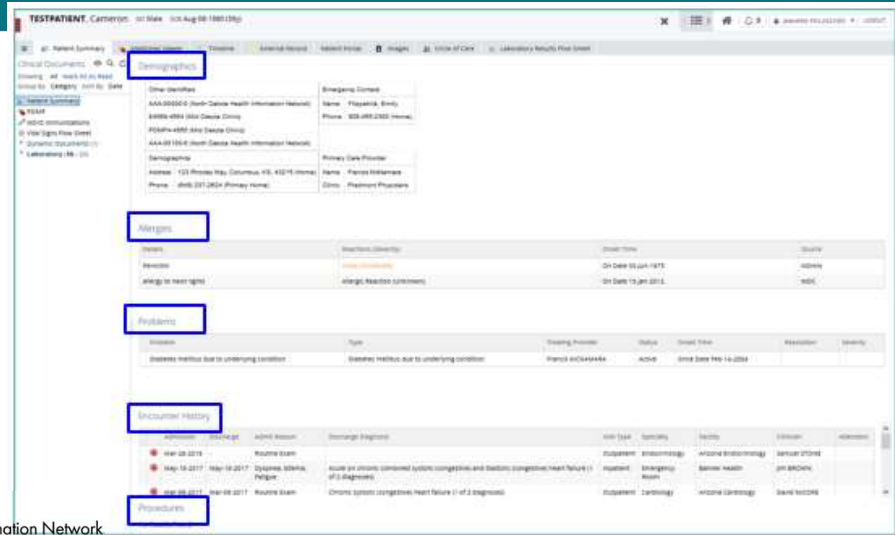
Buttons: Break Privacy Seal, Cancel

Break the Seal reasons
** -- "Other" requires comment

- Emergency Access
- IT Support **
- Validation Testing
- Consent
- Attending Clinician
- Nurse
- Pharmacist
- Primary Physician/Mid Level
- Specialist or Referral Physician
- Support Staff (Unit Clerk, Medical Assistant)
- Therapist
- Public Health
- Payer
- Voc Rehab
- Other **

18

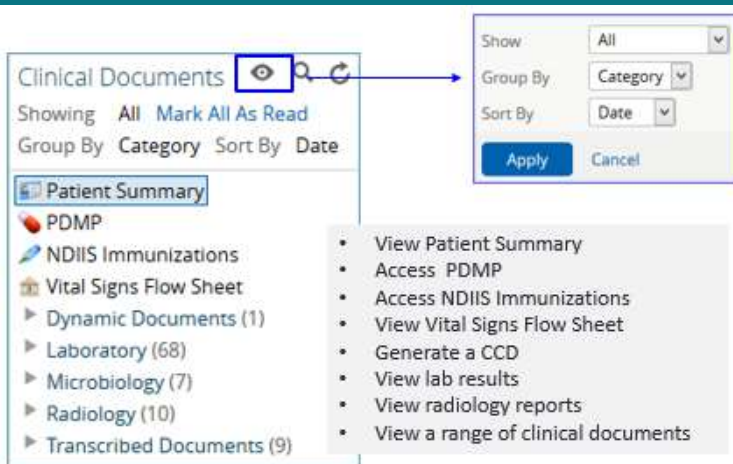
PATIENT SUMMARY



NORTH Dakota | Health Information Network
Be Legendary.™ INFORMATION TECHNOLOGY

19

CLINICAL DOCUMENTS OVERVIEW



Navigation tools
Show: All | Last 72 hours | Last 14 days | Last 3 months | Last ... | Specific Range
Group By: Category | Date | Service | Author
Sort By: Date | Service | Author

- View Patient Summary
- Access PDMP
- Access NDIIIS Immunizations
- View Vital Signs Flow Sheet
- Generate a CCD
- View lab results
- View radiology reports
- View a range of clinical documents

20

TRANSCRIBED DOCUMENTS

- Transcribed Documents folders are organized by document type
- Information is displayed as received from sending facility
- Unread documents are displayed in bold

MOUSE, Mickey - SEX: Male DOB: Feb-10-1947 (73y)

Patient Summary Medicines Viewer

Clinical Documents

Showing: All Mark All As Read

Group By: Category Sort By: Date

Patient Summary

- PDMP
- NDIIS Immunizations
- Vital Signs Flow Sheet
- Dynamic Documents (1)
- Laboratory (26 / 68)**
 - Blood Gases (1)
 - Chemistry (1 / 31)**
 - Hematology (25 / 36)**
 - Microbiology (3 / 7)**
- Radiology (1 / 11)**
- Transcribed Documents (9)**
 - Consult Report (1)
 - Discharge Summary (1)
 - ED Visit Notes (1)
 - Encounter Summary (1)
 - HP (1)
 - Feb-14-2019 Physical [TRIN] IRA MICHAELSON, MD
 - Operative Notes (1)
 - SUMMARIZATION OF EPISODE NOTE (3)
 - Apr-16-2019 Encounter Note [Sanford] SITTING MARY
 - Apr-16-2019 Encounter Note [Sanford] SITTING MARY
 - Apr-16-2019 Encounter Note [Sanford] JALLI SAJJID**
- Transcriptions (2)

Fargosds, Patientone (MR # 10042794) DOB: 06/02/1951

Patientone Fargosds
 11/1/2018 9:04 AM Admission Description: 67 year old male
 MRN: 10042794 Department: Colon Screen Ctr Smf CSN #: 55753

PostOp Progress Note by Jalli, Sajid, MD at 11/1/2018 9:22 AM

Author: Jalli, Sajid, MD Service: --- Author Type: Physician
 Filed: 11/1/2018 9:22 AM Date of Service: 11/1/2018 Note Type: PostOp Progress Note
 Status: Signed Editor: Jalli, Sajid, MD (Physician)

Immediate Post-Operative / Post Procedure Progress Note

Att. Phys: Jalli, Sajid, MD
 Pt. Type: Ambulatory Surgery
 Operative Date: 11/1/2018
 Surgeon: Surgeon(s) and Role:
 * Jalli, Sajid, MD - Primary
 Assistant: Moderate Sedation RN: Klein, Joshua A, RN
 GI Technical Specialist: Murat, Debbi Lee, RN

Pre-Operative Diagnosis: Pre-Op Diagnosis Codes:
 * Hx of adenomatous polyp of colon (Z68.010)

21

PDMP: NEW LOOK, MORE INFORMATION

Clinical Documents: Overview | NarxScores | Overdose Risk Score | Lorazepam MgBgram Equivalents

Showing: All Mark All As Read

Group By: Category Sort By: Date

Patient Summary

PDMP

NDIIS Immunizations

Vital Signs Flow Sheet

Dynamic Documents (1 / 1)

Laboratory (10 / 25)

Cameron Testpat Narx Report Tab

Date: 04/19/2019

Cameron Testpatient

Risk Indicators

NARX SCORES			OVERDOSE RISK SCORE	ADDITIONAL RISK INDICATORS (3)
Narcotic	Sedative	Stimulant	690 (Range 000-999)	<ul style="list-style-type: none"> 1 => 5 opioid or sedative providers in any year in the last 2 years 1 => 4 opioid or sedative dispensing pharmacies in any 90 day period in the last 2 years. 1 => 100 MME total and 40 MME/day average
839	625	000		

Explanation and Guidance

Additional information

Click to view tutorials

22

MEDICINES VIEWER

The screenshot shows the 'Medicines Viewer Tab' interface. At the top, there is a search bar and a 'Group by Medication' button. Below this is a table of medications with columns for Medication, Instructions, Days Supply, Supply Qty, Action Date, Prescriber, and Source. A pop-up window for 'Levothyroxine Sodium 0.2 MG Oral Tablet' is open, showing details like ORIGINAL MEDICATION, ACTION DATE, and DISPENSE PRESENTED. A list of current medications is shown at the bottom, including atorvastatin, Amlodipine, Levothyroxine Sodium, Methocarbamol, Oxycodone Hydrochloride, and Oxycodone Hydrochloride 5 MG Oral Capsule.

23

TIMELINE

- Quick visual reference for patient encounters
- User can zoom in on specific time frames and drill down into data points to see detailed information

The screenshot shows the 'Timeline' interface with a horizontal axis representing time from 2003 to 2018. It includes a legend for encounter types (SG1-SG6, LINK) and a 'Show Key' button. A zoomed-in view shows 'Encounters' and a 'Patient Summary' for the period from May 2016 to Jun 2018. A detailed view for 'HbA1c [NDHIN]' is shown, including source date, category, service, and author. A 'SUMMARIZATION OF [1]' section is also visible.

24

VIEWING OUT OF STATE RECORDS

- Allows user to search HIEs across the country for additional information about this patient
- Available to providers, nurses, pharmacists
- Patient's demographic information is auto-populated, search by SSN for exact matches
- List of available HIEs can be found by clicking 'Add' next to the 'Location' field

External Patient Search

Name * MOUSE, Mickey Phone (480) 896-7543
 Change
 Add Name Example: +1-201-555-0123

Sex * Male Female Unknown Address 1420 Milton Avenue
 Phoenix AZ 85013 USA
 Change

Date of Birth Feb-10-1947 (74 years)

SSN
 Example: 123-12-1234

Purpose * Treatment

Location * All Specific Add

25

QUESTIONS

NORTH
Dakota Be Legendary.™
 Health Information Network
 INFORMATION TECHNOLOGY

26