



NORTH CAROLINA HEALTH INFORMATION EXCHANGE AUTHORITY

House Select Committee on COVID-19,
Health Care Working Group

Christie Burris
Executive Director



NC HealthConnex Overview

We connect health care providers to safely and securely share health information through a trusted network to improve health care quality and outcomes for North Carolinians.



STATE DESIGNATED



SECURE



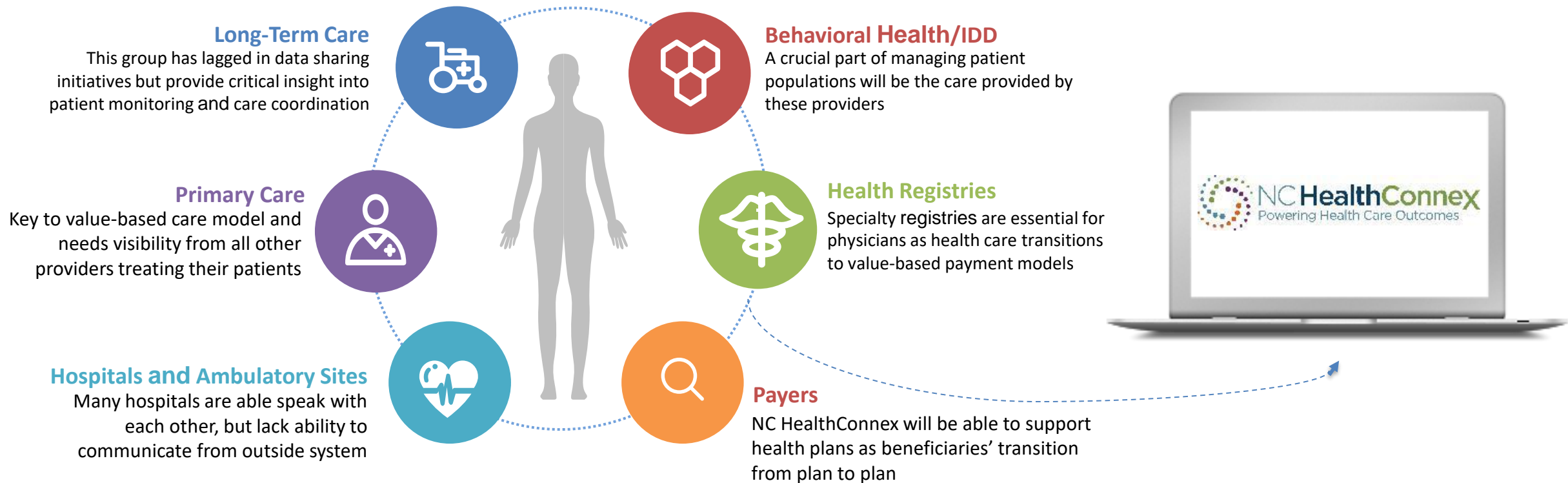
PARTNERSHIP

By the Numbers:

- **Over 55,000 providers** with contributed records
- **6,000+** health care facilities live submitting data, including **113 hospitals**
- 5,000 plus health care facilities in onboarding
- 100 million+ continuity of care documents (CCDs)
- **9M+ unique patient records**
- **700K messages flowing in daily**
- Over 225 unique EHRs engaged, over 80 live
- Over 20 border and interstate HIEs connected, plus connections to the VA and DoD via the eHealth Exchange and the national Patient Centered Data Home network

NC HealthConnex Health Information Exchange

An HIE is a secure, electronic network that gives authorized health care providers the ability to access and share health-related information across a statewide information highway.



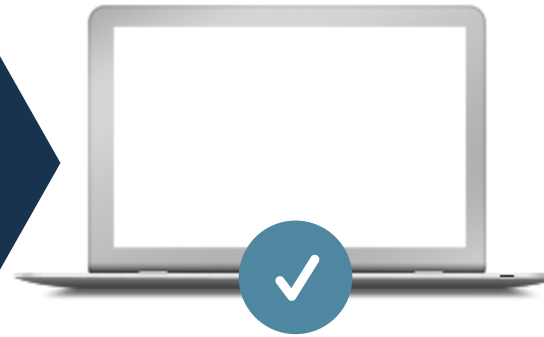
How Does Health Information Exchange Work?



Electronic Health Record
Clinicians enter data into EHR and
that data is pulled into HIE



Data Provided
Clinicians who have care
relationships with their patients
are able readily access that
data



1

Elements Available

- Demographics
- Allergies
- Encounters
- Vitals
- Immunizations
- Medications
- Problems
- Procedures
- Results
- Plan of Care

2

Security in Place

All data is protected, stored and accessed only for purposes permissible under federal and state law.



NC HIEA Advisory Board

Dr. Jeffrey M. Ferranti, Chairman
Chief Information Officer
Duke Medicine

Representative of Health System or IDN Representative
Representative of a Critical Access Hospital

Dr. William G. Way, Vice Chairman
Director of Diagnostic Imaging
Radiologist, Wake Radiology

Representative of a Licensed Physician Representative
Representative of a Behavioral Health Provider

Dr. Harriet Burns
Associate Medical Director
Director of Informatics
Piedmont Health Services

Representative of Federally Qualified Health Center

Timothy N. Ferreira
Director of Quality & Compliance Autism
Society of North Carolina
Patient Representative

Donette Herring
Chief Information Officer
Vidant Health

Carolyn D. Spence
Chief Information Officer
Alexander Youth Network
Representative of a Behavioral Health Provider

Dr. Donald Spencer
Chief Medical Informatics Officer
UNC Health System
Individual with Technical Expertise in Health IT

Ex-Officio Members:

Secretary Tracy Doaks (non-voting)
North Carolina Department of
Information Technology

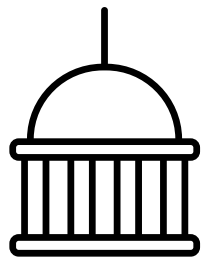
Secretary Mandy Cohen (non-voting)
North Carolina Department of Health
and Human Services

John Correllus (non-voting)
GDAC Director, Chief Data Officer
North Carolina Department of
Information Technology

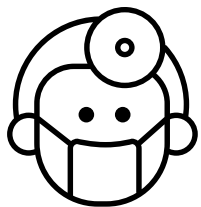
Dee Jones (voting)
Executive Director
North Carolina State Health Plan

COVID-19 Data Collection & Data Sharing Challenges

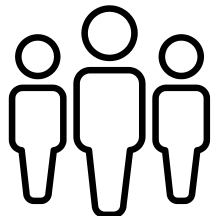
The pandemic has highlighted the systemic issues across the U.S. with clinical data sharing and the need for a comprehensive data sharing ecosystem.



- Bridging patient records across multiple silos
- Patients seeking care outside of traditional (emergency) surveillance scope; using telemedicine, urgent care, primary care, health departments



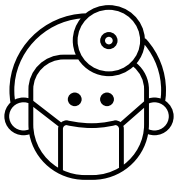
- Siloed and limited frameworks for delivery of results back to care teams
- Central repository of patient histories for segmenting high-risk populations



- Balancing patient privacy concerns against public health need to know

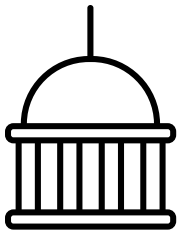
NC HealthConnex Response Against COVID-19

HIE is a clinical data collection and data sharing service to provide comprehensive, longitudinal patient health records at the point of care and surface insights about who is impacted, where is the virus spreading, who should be tested, and which communities are at greatest risk.



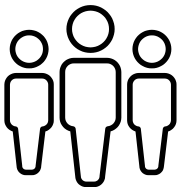
Providers:

Timely, longitudinal patient records & awareness of new cases via NC*Notify and population health dashboards to improve care coordination, patient care decisions and operational needs.



DHHS:

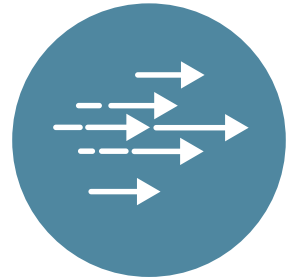
Support the State's syndromic surveillance efforts via NC EDSS and NC DETECT with clinical repository to identify Covid-like illness across health care settings and patient matching services.



Public Health/Citizen Safety:

Identify COVID-like illness across health care settings as they seek to identify and isolate potentially exposed individuals.

NC HealthConnex Cohort Monitor



Inbound Messaging

HL7 and CCDs
received by the HIE



Evaluate Criteria

Compare to CDC/coding
guidelines (ILI/CLI)



Assign to Cohort

Categorize patients
accordingly

Symptoms
Cough
Shortness of Breath
Fever

Suspected

Tested

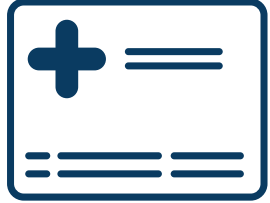
Positive



Workflow Actions

Extract clinical history
Add to list
Send to end point*

Current Outbound NC HealthConnex Services



- **Access to patient data from point of care**
 - EHR Integrations
 - Web-based Clinical Portal
- **NC*Notify**
 - Providers receive alerts as their patients seek care
- **Cohort Monitor**
 - View patient lists via web-based clinical portal (*available to providers early June*)
- **Data extracts for public health response (*gathering requirements*)**
 - Key data points for segmenting population and mobilizing response

Procedures/Results



Awaiting results from: eHx-GAHIN [Click to Refresh](#)

DEMO1, COVID1

Male • 65 Years (1955-01-01) • 10000 NOT REAL STREET, FAIRLY BIG TOWN, NC 27519 • (555) 222-1111

view timeline

- Summary
- Allergies & Alerts
- Encounters
- Medications
- History
- Conditions

PROCEDURES					
PROCEDURE	PROCEDURE DATE	CARE PROVIDER	PROCEDURE CODE	LAST UPDATED	
CORONAVIRUS (COVID-19) SARS-COV-2 PCR PREOPERATIVE SCREEN	04/13/2020	Sample Provider	LAB9990	,Duke University Health System,	
COMPLETE BLOOD COUNT (CBC) WITH DIFFERENTIAL	04/08/2020	Sample Provider	85025	,Duke University Health System,	
MAGNESIUM	04/08/2020	Sample Provider	83735	,Duke University Health System,	
COMPREHENSIVE METABOLIC PANEL (CMP)	04/08/2020	Sample Provider	80053	,Duke University Health System,	
COMPLETE BLOOD COUNT (CBC) WITH DIFFERENTIAL	04/01/2020	Sample Provider	85008	,Duke University Health System,	
MANUAL WHITE BLOOD CELL (WBC) DIFFERENTIAL	04/01/2020	Sample Provider	85027	,Duke University Health System,	
MAGNESIUM	04/01/2020	Sample Provider	83735	,Duke University Health System,	
COMPREHENSIVE METABOLIC PANEL (CMP)	04/01/2020	Sample Provider	80053	,Duke University Health System,	

Procedures/Results

GENERAL LAB RESULTS

- Vaccinations
- Documents
- AI Prompt

ORDER ITEM	CUMULATIVE	RESULT 1	RESULT 2
CORONAVIRUS (COVID-19) SARS-COV-2 PCR PREOPERATIVE SCREEN (LAB9990_t178:1)		04/13/2020 17:46 [F]	
Complete Blood Count (CBC) with Differential (90001_t138:1)			
Comprehensive Metabolic Panel (CMP) (682_t138:1)			
Magnesium (854_t138:1)			
Manual White Blood Cell (WBC) Differential (9000_t138:1)			

OTHER RESULTS AND NOTES

DETAILS	DESCRIPTION	STATUS	RESULTS	RESULT DATE
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HealthShare - Google Chrome

ncq66au/csp/healthshare/hsaccess/w...csp/websys.csp?TUID=1058&TUID=24533

DEMO1, COVID1

Male • 65 Years (1955-01-01) • 10000 NOT REAL STREET, FAIRLY BIG TOWN, NC 27519 • (555) 222-1111

CORONAVIRUS (COVID-19) SARS-COV-2 PCR PREOPERATIVE SCREEN

Previous Result Next Result

Order Start Date & Time 04/13/2020 17:46 Result Date & Time 04/14/2020 00:49

Ordering Clinician Specimen Result Status Final

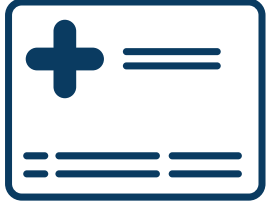
Specimen Collection Date & Time 00:00 Placer ID 164921478242316164921

Specimen Received Date & Time 00:00 Last Updated At Duke University Health System

Age at Time of Test 65 Years

TEST ITEM	FLAG	VALUE	UNITS	REFERENCE RANGE	TEST ITEM STATUS	COMMENTS	SENSITIVITIES	MESSAGE FLAG
Results narrative would be documented here		Not Detected			Final			
NAR					Final			
Lab Interpretation		Normal			Final			

Expansion Opportunities to Support the Health Care Community



- **COVID results delivery via NC*Notify**
 - Opportunity to improve access to data to care teams for follow-up and increased care
- **Patient matching**
 - Use of the HIE master patient repository for matching patients across data silos
- **Advanced cohort monitor**
 - Enhance logic for finding more cases and symptoms; integrate with statewide surveillance systems
- **NC HealthConnex population health dashboard**
 - Publish current dashboard to provide real-time feedback loop of policy decisions and enhance predictive modeling algorithms

Questions?

For more information visit:
www.nchealthconnex.gov

Please contact Leigh Jackson, NCDIT legislative liaison, at Leigh.Jackson@nc.gov.