NORTH CAROLINA HEALTH INFORMATION EXCHANGE AUTHORITY

Stroke Registry Demonstration
Stroke Advisory Council
February 15, 2023

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Kim Webster, HIE Business Development Specialist

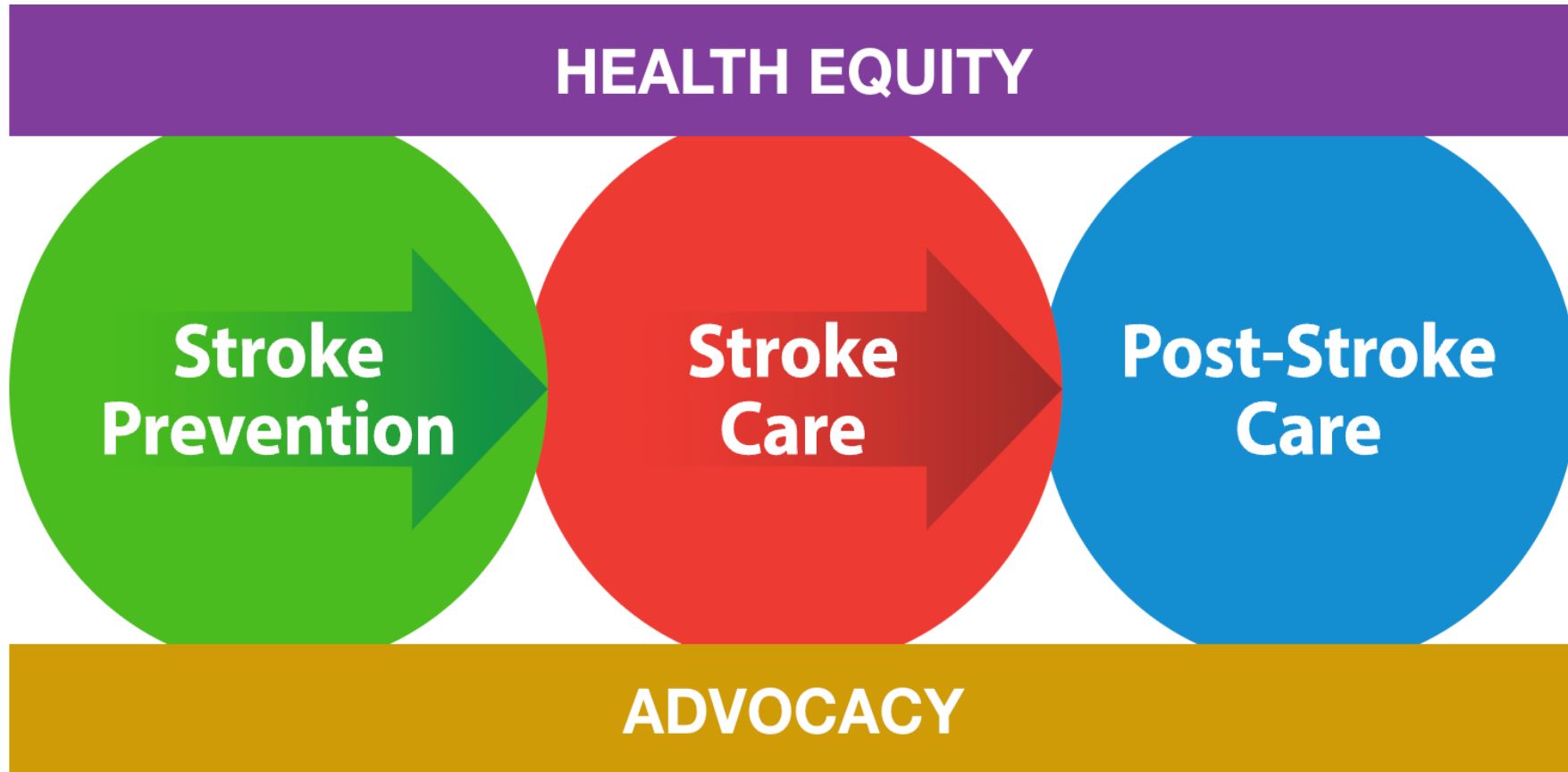Jonas Dusenberry, HIE Application Systems Specialist

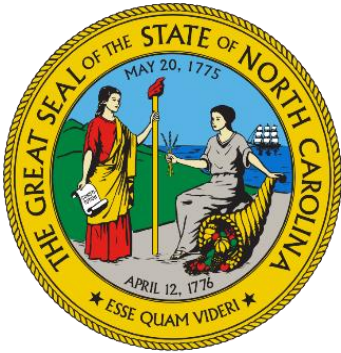Matt Schirmer, SAS Senior Manager, Health Informatics & Consulting

Topics

- Background on the Stroke Registry

- NC HealthConnex Overview

- Summary of Stroke Registry Development

- Demonstration

- Future Work Planned

- Questions and Discussion

NC Stroke System of Care

Partnerships

Goals of NC Coverdell Stroke Program

- Build a Stroke Registry within the NC HIE

- Leverage EHR and HIT to Monitor and Address Disparities

- Strengthen the Stroke System of Care

- Provide Workforce Development Training

- Build and Strengthen Partnerships

- Fund QI Projects

NC HealthConnex
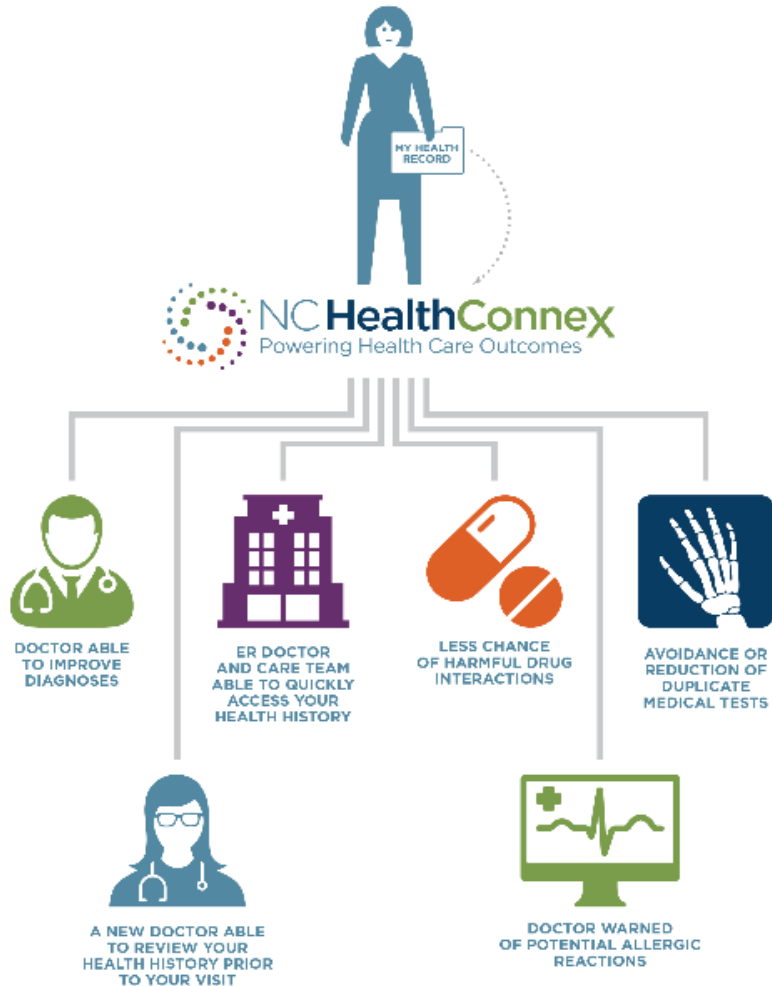Powering Health Care Outcomes

NC HealthConnex Overview

What is Health Information Exchange?

A health information exchange (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.

Health Information Exchange

Benefits

- A full "picture" of a person's health, including ambulatory visits, hospitalizations and medications

- Reduction in valuable staff time spent phoning and faxing other providers involved in a patient's care to track down health information

- Timely access to important health events as they happen to patients (near, real-time notifications)

- Improved, more accurate and timely medication reconciliation that reduces errors and avoids unnecessary tests

- Access to test results, reducing costly duplicative tests and gaps in treatment

Who We Are

STATE DESIGNATED

SECURE

PARTNERSHIP

- The North Carolina General Assembly created the North Carolina Health Information Exchange Authority (NC HIEA) in 2015 to facilitate the creation of a modernized HIE to better serve North Carolina's health care providers and their patients. *(NCGS 90-414.7)*

- Housed within the Department of Information Technology's Government Data Analytics Center (GDAC).

- Technology partner is SAS Institute.

- Twelve-member Advisory Board made up of various health care representatives that includes the DHHS Secretary, DIT Secretary and GDAC Director.

NC HealthConnex
Powering Health Care Outcomes

NC HealthConnex by the Numbers

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.

NC HealthConnex, By the Numbers:

- 60,000+ providers with contributed records
- 9,000+ health care facilities live submitting data, including 140 hospitals
- 5,000+ health care facilities in onboarding
- 150 million+ continuity of care documents (CCDs)
- 11 million+ unique patient records with clinical documents
- 80 Electronic Health Record (EHR) vendors live
- 22+ border and interstate HIEs connected via the eHealth Exchange and the Patient Centered Data Home, including connections to the VA and DoD

See Who's Connected

Status	Description
Development underway	Connection build
Intake	On hold
Live in production	Sending data to NC HealthConnex
Live not receiving	Live connection but not sending data or sending limited data

Showing 1 to 4 of 4 entries

Export to Excel

Show 50 entries   Search:

Participant Name	Participant Type	City	Status
AUDIOLOGY AND HEARING AID CENTER	SPEECH, LANGUAGE, AND HEARING	GREENSBORO	LIVE IN PRODUCTION
CHILDREN'S HEALTH CENTER SPEECH PATHOLOGY	SPEECH, LANGUAGE, AND HEARING	DURHAM	LIVE IN PRODUCTION

Hospital   Laboratory   Multi   Other

Outpatient   Pharmacy   Unknown

Pick a Provider Type
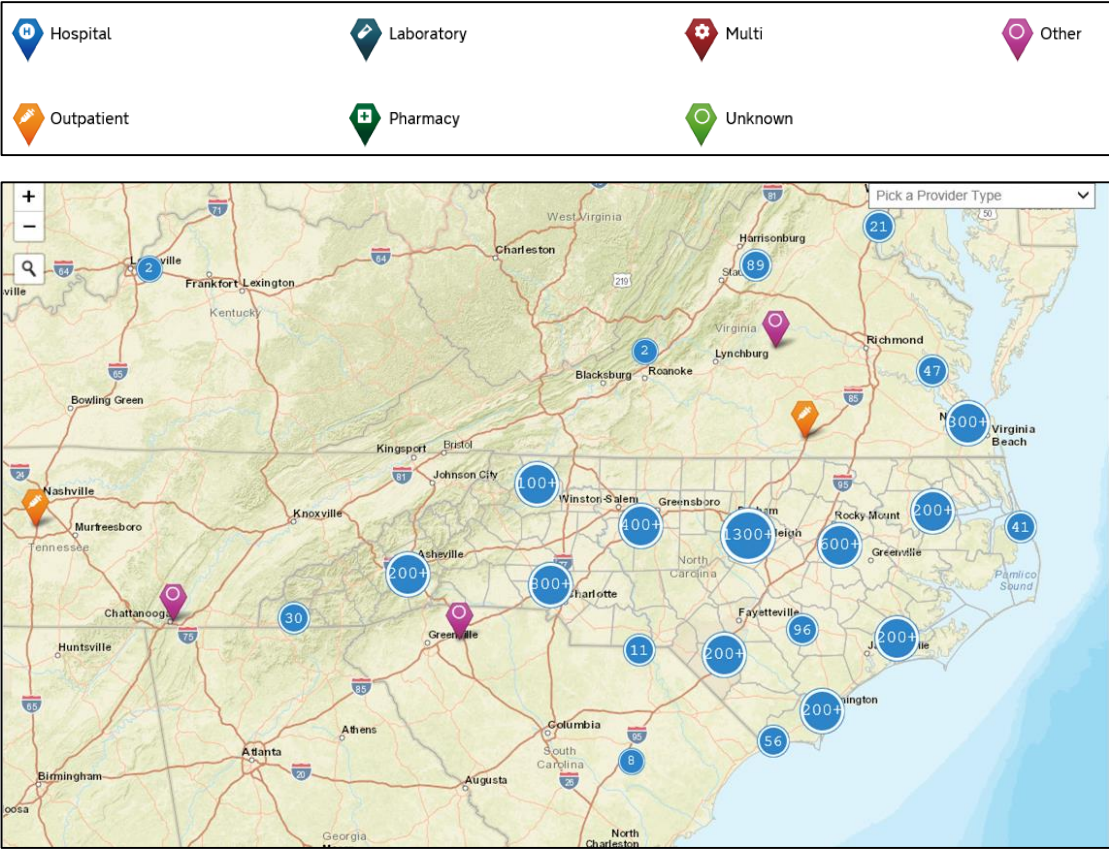
NC HealthConnex Services

NC HealthConnex Suite of Services

Exchange

Discover new opportunities to exchange patient records and improve patient outcomes through the NC HealthConnex Clinical Portal.

NC*Notify

Gain significant insights into patients' health care activity across North Carolina. NC*Notify is a subscription-based service that notifies providers as their patients receive services across the care continuum.

Controlled Substance Reporting System

NC HealthConnex is working with the N.C. Department of Health and Human Services and Appriss Health to combat the opioid epidemic in North Carolina.

Promoting Interoperability & Meaningful Use

NC HealthConnex helps providers meet specific requirements and measures set by the Centers for Medicare and Medicaid Services.

Public Health Reporting

Access reporting through the N.C. Immunization Registry, Diabetes Registry and Electronic Lab Reporting.

Direct Secure Messaging

This encrypted email tool allows clinicians to send patients' protected health information through a secure network.

Data Quality

The NC HIEA places strong emphasis on NC HealthConnex's data quality.

Training

NC HIEA offers training for using the clinical portal, direct secure messaging and other HIE features.

Foundation

Exchange

Notifications

Pop Health & Analytics

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Development of the Stroke Registry

Stroke Registry – Workgroup Approach

- Convene workgroup of clinical and data experts

- Understand data available in NC HealthConnex & other similar NC HealthConnex Services

- Develop broad requirements across all functions of the Stroke Registry:

  ➢ Define code lists (e.g., ICD-10, SNOMED) to classify stroke patients and identify clinical indicators

  ➢ Identify key data fields for grouping and organizing the data (e.g., age group and gender of the patient)

  ➢ Determine how to best visualize the information

Stroke Registry – Development Timeline & Milestones

Q4 '21 – Q1 '22
- Convene and Educate Workgroup
- Develop and Prioritize Requirements

Q1 – Q2 '22
- Data Exploration
- Dashboard Development
- Refined List of Requirements

Q3 '22
- User Access and Testing
- Prioritized Requirements for Next Update

Q4 '22 – Q1 '23
- Added Prevalence Measures to Account for the Size of the HIE Population
- Incorporated Input from Users to Improve Visualizations
- Developed Year 3 Workplan to Guide Future Work

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NC HealthConnex as a Population Health Tool

- Chronic Disease Registries

- Tracking Cohorts of Patients, e.g., COVID
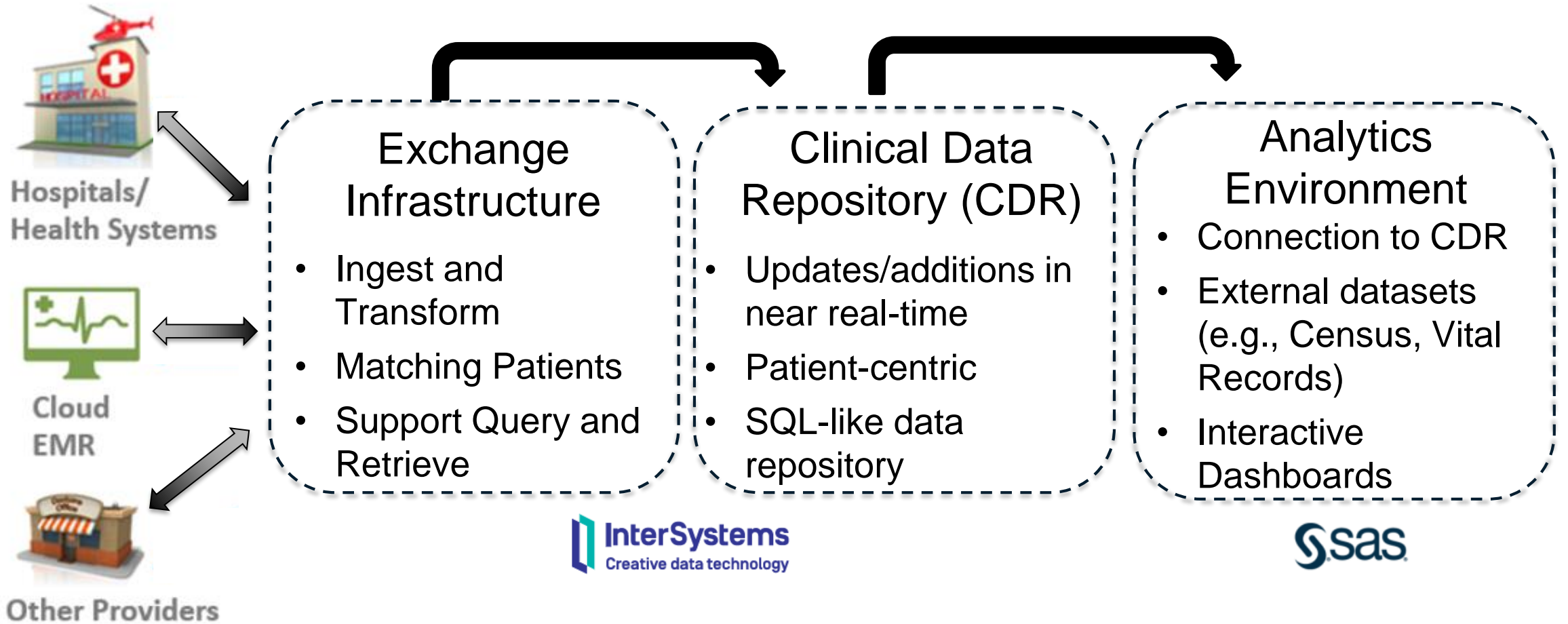
- Data Extracts for Permitted Use Cases

Diabetes Registry
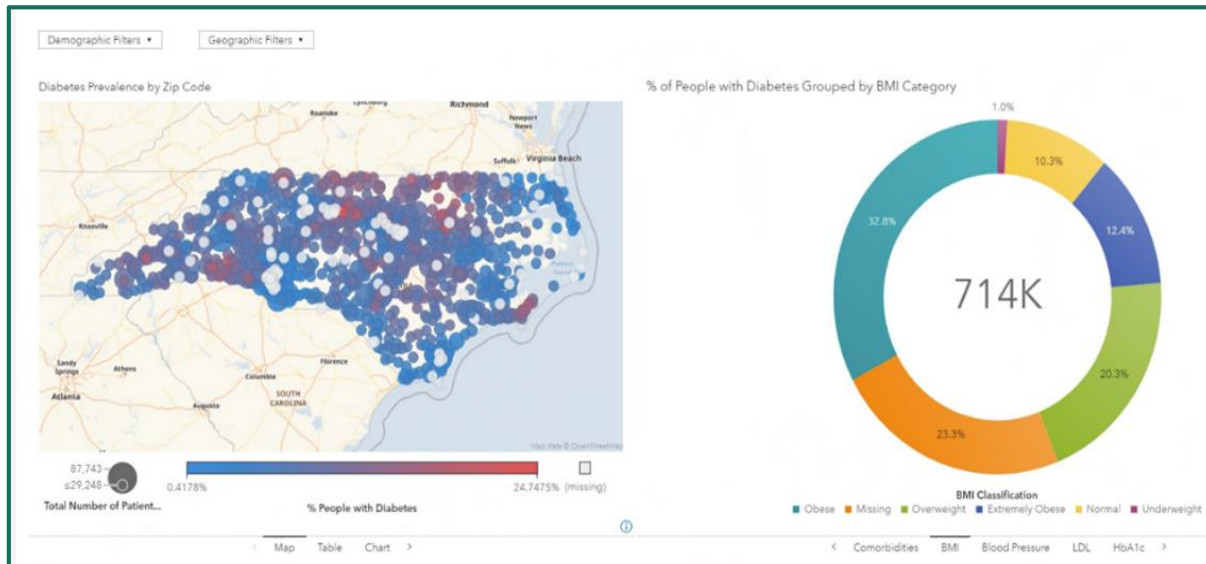
Medicaid COVID Dashboard

Stroke Registry – High Level Data Flow

Hospitals/Health Systems

Cloud EMR

Other Providers

Exchange Infrastructure

- Ingest and Transform
- Matching Patients
- Support Query and Retrieve

InterSystems
Creative data technology

Clinical Data Repository (CDR)

- Updates/additions in near real-time
- Patient-centric
- SQL-like data repository

Analytics Environment

- Connection to CDR
- External datasets (e.g., Census, Vital Records)
- Interactive Dashboards

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Demonstration

Stroke Registry – Future Work

➢ Enhance the Stroke Registry Dashboard to include patients at risk for stroke

➢ Collaborate with the Stroke Workgroup to develop reporting capabilities to share patient level information from the Stroke Registry Dashboard to support quality improvement and performance reporting activities

➢ Integrate EMS data within the Stroke Registry Dashboard

Questions and Discussion

For more information visit,

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