North Carolina Health Information Exchange Authority
Advisory Board

Report to the
Joint Legislative Oversight Committee on Health and Human Services

Recommendations to Support Enforcement of the Statewide Health Information Exchange Act and a Summary Report on Provider Connectivity and Recent Outreach Efforts

Response to N.C. Session Law 2021-26

March 15, 2022

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Letter From the NC HIEA Advisory Board

The North Carolina Health Information Exchange Authority (NC HIEA) Advisory Board, comprised of eight legislatively appointed, voting representatives from the health care community and four representatives from government agencies serving the State of North Carolina, has performed in good faith its duties and obligations to "provide consultation to the [North Carolina Health Information Exchange] Authority with respect to the advancement, administration, and operation of the HIE Network and on matters pertaining to health information technology and exchange, generally." See the Statewide Health Information Exchange Act (HIE Act) N.C. Gen. Stat. § 90-414.8(g).

In response to the legislative directive in N.C. Session Law 2021-26, we submit this report, *Recommendations to Support Enforcement of the Statewide Health Information Exchange Act and a Summary Report on Provider Connectivity and Recent Outreach Efforts*, to the Joint Legislative Oversight Committee on Health and Human Services. We:

1. Report on efforts undertaken by the NC HIEA (i) to create from disparate sources a comprehensive list of all providers and entities subject to the HIE Act; and (ii) to conduct outreach to those who have not yet connected; and

2. Recommend "appropriate features or actions to support enforcement" of the HIE Act. See N.C. Session Law 2021-26.

The State has made considerable progress implementing and delivering the North Carolina General Assembly's vision for statewide health information exchange laid out in the HIE Act, but much work remains. The HIE Network, now called NC HealthConnex, has seen tremendous growth and is well positioned for continued maturity and widespread adoption. For the NC HIEA to remain on a successful trajectory, however, certain legislative changes are necessary, especially regarding enforcement of the HIE Act and the scope of its mandate. Moreover, the NC HIEA and its Advisory Board agree that continuous improvement of participating health care organizations' experience with NC HealthConnex, patient education on access to and use of patient health information, and defense against security incidents should remain among the highest priorities.

The specific recommendations described in this report have involved the NC HIEA and Advisory Board's collaboration with industry stakeholders, health care providers, and agency partners. Over the course of several months, Advisory Board members have considered multiple proposals and evaluated them based upon their own diverse professional experiences in health care and as representatives of a variety of critical constituencies. The three recommendations provided herein for the General Assembly's consideration are the product of these significant efforts.

The first two recommendations—which, respectively, seek the establishment of clear enforcement articles for the HIE Act and the revision of "mandatory" and "voluntary" status under the Act for certain providers—garnered unanimous support from the Advisory Board. These proposals recognize that an enforcement framework is critical to the success of the HIE Act and that, at the same time, the scope of

providers and entities subject to mandatory connection and data submission requirements should be adjusted. The third recommendation, which the Advisory Board approved by a vote of 8-1, proposes that two seats be added to Advisory Board: one to be filled by a State-funded payer and the other to be filled by a representative from a provider-led accountable care organization. Adding broader perspective to the transparent, public Advisory Board will enable the NC HIEA to effectively support provider participants and payers working collaboratively in their pursuit and implementation of value-based care.

During its thoughtful deliberations, the Advisory Board also considered (among other things) the merits of expanding the HIE Act's existing data submission requirements; for example, by requiring HIE participants who administer State-funded health care to submit data on all patients, regardless of payer. Many NC HealthConnex participants already submit these data to the State on a voluntary basis. Expanding the data available through NC HealthConnex network would close data gaps at the point of care and improve the State's public health and syndromic surveillance capabilities. Ultimately, however, the Advisory Board did not include a recommendation to this effect in the Report. Even so, the expansion of data available through NC HealthConnex remains a high priority for many Advisory Board members who, in the meantime, intend to explore and evaluate ways to enhance the utility of the NC HIEA's database while the NC HIEA focuses on more immediate priorities such as completing statewide connectivity, addressing enforcement of the HIE Act, and delivering even greater value to the State and the provider community.

In summary, our goals with the enclosed recommendations are to (1) protect patients and their access to care; (2) develop a compliance program that minimizes the cost to the State and which does not impose excessive burden on providers; (3) maintain the NC HIEA's momentum in building statewide connectivity; and (4) expand the utilization of valuable NC HealthConnex services.

We remain available to advise and support the NC HIEA and the General Assembly as the State seeks to fulfill the promise and potential of the HIE Act to deliver better health outcomes for North Carolina patients.

Respectfully submitted on behalf of the NC HIEA Advisory Board,

Dr. William G. Way, Chair

Executive Summary

In only six years, the North Carolina Health Information Exchange Authority (NC HIEA) has built NC HealthConnex, a powerful and meaningful tool that allows the State and participating health care organizations to access, use, and exchange patient data securely for uses approved under the federal Health Insurance Portability and Accountability of Act of 1996 (HIPAA). The North Carolina General Assembly directed the NC HIEA to build this tool to "improve care coordination within and across health systems, increase care quality for such beneficiaries, enable more effective population health management, reduce duplication of medical services, augment syndromic surveillance, allow more accurate measurement of care services and outcomes, increase strategic knowledge about the health of the population, and facilitate health care cost containment." See N.C. Gen. Stat. § 90-414.

As of January 2022, over 58,000 health care providers at more than 7,000 facilities have submitted to the NC HIEA records on more than 11 million unique patients, including both North Carolina residents and out-of-state patients. Notwithstanding the voluntary nature of the health information exchange (HIE) contemplated by the Statewide Health Information Exchange Act (the HIE Act), a key provision of the law is mandatory: Certain providers and entities that deliver health care to the beneficiaries of State-funded health care[1] must connect to NC HealthConnex and submit certain patient data as a condition of receiving State funds. See N.C. Gen. Stat. § 90-414.2 and N.C. Gen. Stat. § 90-414.4(b). This provision of the law, informally referred to as the "HIE mandate," works in tandem with statutory deadlines for individual providers and health care entities to connect and submit data to NC HealthConnex. These statutory deadlines have been revised and extended on multiple occasions.[2]

To date, however, no funds have been withheld from State-funded health care providers or entities pursuant to the HIE mandate for multiple reasons:

1. The connection deadline has been extended multiple times at the request of providers, State agencies, and other stakeholders. Now, the statutory deadline is January 1, 2023.
2. The law does not set out a clear enforcement framework. For example, (i) no specific actor is tasked with enforcement; (ii) no appropriation has been made for the specific purpose of

[1] State-funded health care includes, among other programs, Medicaid, the State Health Plan for Teachers and State Employees, certain grant-funded programs through the N.C. Office of Rural Health, adult corrections, and others. No single State agency maintains a list of all such programs and providers.

[2] Session laws that revised N.C. Gen. Stat. § 90-414.4 include:

- N.C. Session Law. 2019-23 (created a time-limited hardship exemption process; identified voluntary providers)
- N.C. Session Law 2019-81 (made a minor change regarding prepaid health plans required to connect to NC HealthConnex)
- N.C. Session Law 2020-3 (extended the connection deadline for certain providers from June 1, 2020, to October 1, 2021)
- N.C. Session Law 2021-26 (extended the connection deadline for all remaining providers to January 1, 2023)

enforcement; and (iii) no appeals process is set forth for individual providers or entities whose funds are withheld.

3. Even if these and other statutory ambiguities were resolved, no single source of truth identifies all the individual providers and health care entities covered by the HIE Act and associates them with the covered entity/actor responsible for their electronic health record (EHR) system. In short, the NC HIEA has information on the organizations (i.e., covered entities that maintain EHRs on behalf of individual providers) that have executed participation agreements, whereas NC Medicaid and the State Health Plan for Teachers and State Employees have information on *individual* providers and the *billing entities* with whom they are associated. Combining these different data sets to determine individual providers' and health care entities' connectivity to NC HealthConnex is an administratively burdensome, manual task that could invite legal challenge if used as a basis for enforcing the current law.

Against this backdrop, the NC HIEA Advisory Board submits this report, *Recommendations to Support Enforcement of the Statewide Health Information Exchange Act and a Summary Report on Provider Connectivity and Recent Outreach Efforts*, to the Joint Legislative Oversight Committee on Health and Human Services. We:

- Report on efforts undertaken by the NC HIEA (i) to create a comprehensive list of all providers and entities subject to the HIE Act; and (ii) to conduct outreach to those not yet connected; and
- Recommend "appropriate features or actions to support enforcement of the Statewide Health Information Exchange Act." See N.C. Session Law 2021-26.

As discussed in greater detail herein, the NC HIEA Advisory Board has identified three key recommendations for the NC HIEA and the General Assembly. Each recommendation requires revision to the HIE Act:

1. **Establish Clear Enforcement Articles in the HIE Act.**
   To continue encouraging participation in NC HealthConnex while also protecting provider networks (and thus patients' access to care), revise the HIE Act's enforcement framework to include the following statutory features:

   a. Assign responsibility for enforcement;

   b. Focus enforcement on the covered entities[3] that are the organizations responsible for maintaining EHR systems for providers and entities subject to the HIE Act;

   c. Replace the "condition of receiving State funds" statutory mandate with an annual "State Health Data Assessment Fee" assessed to covered entities responsible for EHRs but who choose not to connect to NC HealthConnex; and

[3] The NC HIEA builds interfaces with EHRs that are almost universally managed by organizational covered entities, rather than by individual providers. These are also readily identifiable using the organization national provider identifier (NPI) available in NC Medicaid and State Health Plan network rosters.

d. Exempt from the State Health Data Assessment Fee those covered entities that are acting in good faith to connect to NC HealthConnex and submit the required data.

2. **Change the Voluntary Designations for Certain Providers.**
   Add a voluntary designation for dental and chiropractic providers, and require ambulatory surgical centers to connect to NC HealthConnex and submit the required data.

3. **Include Representatives from Accountable Care Organizations and Payers on the Advisory Board.**
   To add perspectives critical to enhanced provider participation in and utilization of the HIE, the General Assembly should appoint representatives from the accountable care organization[4] and prepaid health plan payer communities to hold two new seats on the NC HIEA Advisory Board. After the appointment of these members, the NC HIEA, in concert with the full Advisory Board, should identify new strategies engaging providers and payers to (i) encourage more connection to and utilization of NC HealthConnex; (ii) improve the data quality of health care providers' submissions; and (iii) further utilize or develop NC HealthConnex to support value-based care[5] through enhanced, transparent collaboration between the payers and the providers that supply health care services to State-supported health care programs.

[4] Accountable care organizations (ACOs) are groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high-quality care to patients. The goal of coordinated care is to ensure that patients get the right care at the right time, while avoiding unnecessary duplication of services and preventing medical errors.

[5] Value-based care is "a healthcare delivery model in which providers, including hospitals and physicians, are paid based on patient health outcomes. Under value-based care agreements, providers are rewarded for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives in an evidence-based way." NEJM. *What is Value-Based Healthcare?* Available: https://catalyst.nejm.org/doi/full/10.1056/CAT.17.0558 Accessed: 2/28/2022

I. Introduction, Background, and Landscape

As a result of legislation passed in late 2015, the North Carolina Health Information Exchange Authority (NC HIEA) was operationalized under the North Carolina Department of Information Technology (NCDIT) and directed to build and oversee a statewide health information exchange (HIE) network, now known as NC HealthConnex. See N.C. Session Law 2015-241, § 12A.5. Among others, the goals of the enabling legislation and the HIE Act included improving health care and patient outcomes while controlling rising health care costs.

HIEs achieve these goals by aggregating up-to-date patient information from across the health care continuum and making it available at the point of care to providers with treatment relationships.[6] Access to and use of such data reduces duplicative tests and procedures, introduces efficiencies, and enables the most appropriate treatment and care decisions. The clinical data sets HIEs are capable of generating can be analyzed and leveraged to facilitate public health disease surveillance[7] and population health initiatives and ultimately improve the efficient deployment of quality health care where and when it is needed.

A. Brief History and Accomplishments

Since 2016, North Carolina has built a statewide HIE network that rivals the most successful HIEs nationwide. Most statewide and regional HIEs have focused on limited participant populations, such as hospitals, primary care, and long-term care and supports services. In contrast, with a clear vision set forth by the N.C. General Assembly, North Carolina chose to pursue a more ambitious and comprehensive model supported by a public-private partnership with SAS Institute. **North Carolina's State support and requirement for participation by nearly all health care providers[8]—from health systems and specialists to behavioral health providers and pharmacies—are unique and have spurred one of the most comprehensive, rapid integration initiatives among HIEs to date.** The resulting breadth of available clinical data has promoted more informed care and treatment decisions, reduced patients and families' documentation burdens, and provided value to payer and public health stakeholders seeking data to drive solutions. It also opens the door to additional clinical data use cases permissible under HIPAA, such as projects to improve health care delivery and outcomes and/or public health research projects.

The NC HIEA's brief existence has seen two distinct chapters. In its first three years, the State assumed governance of the former NC HIE infrastructure from Community Care of North Carolina, resulting in the rebuilding of personnel and infrastructure, rebranding, and broadscale statewide education and

[6] See *Appendix F: "About the NC HIEA" Enclosure* for a list of the NC HealthConnex services available to participating providers.

[7] Public health disease surveillance is the ongoing, systematic collection, analysis and interpretation of the who, what, where, when and how of disease case occurrence in a population. The N.C. Department of Health and Human Services' Division of Public Health undertakes these efforts in our State.

[8] N.C. Gen. Stat. 414.4. Available: https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_90/GS_90-414.4.pdf Accessed: 12/22/2021

awareness efforts. During the past three years, the NC HIEA built upon that foundation by expanding statewide connectivity, enhancing HIE services, enabling nationwide and interstate exchange of patient data, and augmenting public health services for providers and the State, including response efforts to the COVID-19 pandemic.

In its first 36 months under State governance (April 2016–March 2019), the NC HIEA built capacity, its brand, and state-of-the-art infrastructure while rapidly connecting provider electronic health records (EHR) at care sites statewide to enable exchange. Major accomplishments include:

- Built capacity to a team of 13;
- Partnered with SAS Institute to build and support technical connections;[9]
- Rebranded the statewide HIE from "NC HIE" to "NC HealthConnex;"
- Upgraded and modernized the HIE platform to the industry leading Intersystems HealthShare;
- Applied for and received an award of federal financial participation funds under the Health Information Technology for Economic and Clinical Health Act (HITECH[10]) in partnership with NC Medicaid to support data connections and operations for the Medicaid provider community;
- Launched initial education and outreach efforts, including:
    - Presented at over 165 conferences and events to more than 5,000 health care providers,
    - Established three stakeholder work groups focused on specific provider segments and use cases (Behavioral Health, Dental, and Use Case Work Groups), and
    - Sent frequent communications through payer and provider advocacy partners;
- Built significant technical capacity and infrastructure, including:
    - A statewide direct secure messaging (DSM) provider directory,
    - Clinical event notifications,
    - Automated reporting of immunizations and laboratory results to State public health systems,
    - A diabetes registry, and
    - Connection to the nationwide eHealthExchange, which enables query-based exchange[11] of patient health records with border state and interstate HIEs, including the joint federal

[9] *Technical connections* refers to the electronic interfaces that enable the flow of patient data between a provider's system and NC HealthConnex.

[10] HITECH was part of the American Recovery and Reinvestment Act signed into law in 2009. HITECH gave the U.S. Department of Health and Human Services authority to improve health care quality, safety, and efficiency through the promotion of health IT, including use of electronic health records by providers and the private and secure electronic health information exchange.

[11] Query-based exchange is the ability for HIE platform users, especially health care providers, to find and/or request information on a patient from other providers, often used for unplanned care.

HIE for the U.S. Department of Veterans Affairs and Department of Defense, to support patient care during disaster response and travel;

- Connected more than 5,500 facilities, including 110 acute care hospitals; and
- Developed the NC HIEA Roadmap 2021 to detail strategies and key initiatives for the next 36 months.

Over the past 36 months (April 2019–March 2022), the NC HIEA has continued to build connections to electronic systems that contain patient data while expanding its focus on value-added services, data quality, and public health support. Major accomplishments include:

- Increased staff to 22;
- Applied for and was awarded federal financial participation funds under the HITECH Act in partnership with NC Medicaid to support data connections and operations for the Medicaid provider community and enhance notification service and data quality efforts to support Medicaid transformation;
- Enhanced the clinical notification service, NC*Notify,[12] to include:
    - A self-service panel loader,
    - Auto-attribution,
    - Multiple notification delivery methods, and
    - Clinical intelligence alerts that include dental alerts, COVID-19 test results, 30-day readmission, chronic care management, pre-diabetes, diabetes, and care team changes.

  As of November 2021, NC*Notify distributes over 4 million alerts per month to more than 570 organizational subscribers;
- Connected to the Patient-Centered Data Home, a national network of HIEs that proactively alerts health care providers when their patients have a health event (e.g., an emergency department visit) away from home;
- Enabled Fast Health Interoperability Resources (FHIR), an emerging national standard for rapid health data exchange and access by providers, patients, and payers;
- Engaged in sustained, targeted outreach initiatives including:
    - Presentations to practice/provider groups,
    - Monthly How to Connect webinars,
    - Quarterly Teletown Hall training webinars, and

[12] NC*Notify is a subscription-based service that uses admission, discharge, and transfer data to notify enrolled providers when their patients receive care in other care settings (e.g., hospitals, primary care practices, specialty practices, county health departments, and behavioral health facilities). Presently, this service is provided free of charge to full participants in NC HealthConnex, who can tailor the service to fit their needs.

- Messages distributed through partner organizations;

- Deployed more than 30 N.C. Area Health Education Centers technical specialists across nine regional offices to assist practices with HIE training and workflow integration on site, and created seven on-demand video training modules for the NC HealthConnex Clinical Portal and value-added services;

- Received national awards, including the:
  - 2019 Strategic Health Information Exchange Collaborative's Community Partnership Achievement Award for Hurricane Florence response,
  - 2019 "StateScoop 50" State Leadership Award, and
  - Honorable mention as a finalist for the 2020 National Association of State Chief Information Officers Award in the category of Digital Services: Government to Business;

- Completed connections to more than 7,000 facilities, including 140 hospitals, 58,000 contributing providers, and 11 million unique patients, and to more than 20 border, interstate, multi-state, and national HIE networks;[13] and

- Deepened the partnership with the N.C. Department of Health and Human Services (NC DHHS) in support of critical Medicaid transformation and public health initiatives, including pandemic response, as discussed in the *Strengthening Partnership with NC DHHS* section.

In 2022–2025, the NC HIEA plans to (i) continue building out/supporting statewide connectivity with its available resources, including connectivity with EHRs, other data and claims systems maintained by health care entities, additional State systems at the direction of NC DHHS and other agencies (e.g., corrections facilities), and other state HIEs; (ii) prepare for and implement a new enforcement structure, if so directed by the General Assembly; and (iii) develop and enhance services in the following strategic areas:

- Build upon the strong HIE foundation to support data quality and emerging data standards championed by the U.S. Office of the National Coordinator for Health IT (ONC) and the U.S. Centers for Medicare & Medicaid Services (CMS);

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[13] - *Via nationwide eHealthExchange network*: Atrium Health CareConnect HIE (Charlotte, North Carolina), Carolina eHealth Network (South Carolina), Coastal Connect HIE (North Carolina), Cone Health (North Carolina), DaVita (national), eTHIN (East Tennessee), Florida HIE Services (Florida), GaHIN (Atlanta, Georgia), GRAChIE (Augusta, GA), healthconnect Alaska (Alaska), MedVirginia (Richmond, Virginia), OCHIN (Portland, Oregon), PULSE (Patient Unified Lookup System for Emergencies), SCHIEx (South Carolina), Sentara Health (Northern Virginia), VA HIE (Veterans Administration), DMIX (U.S. Department of Defense), and Vidant Health (North Carolina).

- *Via national Patient Centered Data Home network*: Alabama One Health Record (Alabama), Big Sky Care Connect (Montana), CORHIO (Colorado),CRISP (Maryland), eTHIN (East Tennessee), Great Lakes Health Connect (Michigan), HASA (Texas), Health Current (Arizona), Idaho Health Data Exchange (Idaho), IHIE (Indiana), Iowa Information Network (Iowa), LaHIE (Louisiana), MHC (Missouri), MHIN (Michigan), My Health (Oklahoma), NDHIN (North Dakota), Reliance (Oregon), Santa Cruz (California), The Health Collaborative (Ohio), QHN (Colorado), WVHIN (West Virginia).

- Broaden exchange capabilities to promote data democratization[14] for participating provider organizations and innovation to support patient-centric whole-person care;
- Cultivate economic value and financial stability by providing a health data utility to support value-based care; and
- Support population health and public-health priorities through surveillance and analytics as a service.

More information on specific initiatives will soon be available in the NC HIEA's Roadmap 2025, which is targeted for June 2022.

B. State and National Trends

i. Strengthening Partnership with NC DHHS

As the NC HIEA has matured, it has strengthened its partnership with NC DHHS, particularly to support Medicaid transformation efforts and public health surveillance during the pandemic. With access to near real-time clinical data from across the North Carolina health care ecosystem, **both the NC HIEA and NC DHHS recognize the opportunity to positively impact patient outcomes and introduce efficiencies into value-based care and public health monitoring**.

The NC HIEA assists the NC DHHS Division of Public Health (NC DPH) with various electronic reporting and surveillance initiatives, including:

- Automated electronic reporting from provider EHRs to the N.C. Immunization Registry (NCIR);
- Automated electronic reporting of laboratory results from hospital EHRs to populate the N.C. Electronic Disease Surveillance System (NC EDSS);
- Automated reporting of COVID-19 test results from seven reference labs to the NC EDSS;
- Receipt of statewide COVID-19 testing results from NC DHHS' NCCOVID tracking system within NC HealthConnex for enhanced patient care and State reporting services;
- Patient matching services across sources to enhance data in the Covid Vaccine Management System (CVMS) and integration between health care providers' EHRs and pharmacy management systems with the CVMS database to reduce double data entry;
- Provision of additional clinical data on COVID-19/influenza-like illness to the State's NC DETECT syndromic surveillance[15] system; and

[14] Data democratization "means that everybody has access to data and there are no gatekeepers that create a bottleneck at the gateway to the data." Forbes.com. *What Is Data Democratization? A Super Simple Explanation And The Key Pros And Cons.* Available: https://www.forbes.com/sites/bernardmarr/2017/07/24/what-is-data-democratization-a-super-simple-explanation-and-the-key-pros-and-cons/?sh=190c9c5d6013
Accessed: 1/16/2022

[15] Syndromic surveillance is the monitoring of health indicators in individuals and populations to detect and track disease and its spread before diagnoses are made and outcome data is available.

- Build and support the N.C. Diabetes Registry, with an N.C. Stroke Registry in development for deployment 2022.

For the N.C. DHHS Division of Health Benefits (NC DHB), the NC HIEA provides specific clinical and demographic Medicaid beneficiary data for quality reporting and programs, including:

- Building and supporting a COVID-19 dashboard for near real-time tracking of COVID-19 tests and diagnoses, as well as reported symptoms and indicators that could signify potential COVID-19 cases.[16] The dashboard enables viewing and manipulating these indicators and their demographic attributes by geography so NC DHB can closely track and better manage disease progression in the Medicaid population;
- Provide an annual extract of the clinical data elements necessary to run hybrid quality measures (diabetes, hypertension, BMI measures, and depression screening supported in 2021), with ongoing discussions to expand the data set in future years;
- Partner with Medicaid and prepaid health plans to identify 20 clinical data elements representing the highest-priority data set required for monthly performance measurements to support value-based care, with plans to deliver those data extracts monthly beginning in March 2022 and expand the data set in future years;
- Provide contact information found in the HIE data as requested by Medicaid providers to assist with various outreach and communication efforts;
- Deliver geographic visualizations in partnership with NCDIT's Geographic Information System team to help NC DHB better understand network adequacy[17] to determine (i) where exceptions may need to be granted to prepaid health plans that are otherwise required to meet access standards; or (ii) where prepaid health plans may need to expand their networks to include available providers in areas where the standard should be able to be met;
- Conduct incremental implementation of the National Committee for Quality Assurance's (NCQA) Data Aggregator Validation program, with a pilot program planned for kick off in June 2022, which allows clinical measures produced from the HIE data to be NCQA-certified; and
- Implement a provider data quality incentive program in partnership with N.C. Area Health Education Centers that pays providers incentives to meet data completeness and quality benchmarks to ensure that the data submitted from EHRs to NC HealthConnex meets standards that enable interpretation and analysis by other providers, payers, and NC Medicaid.

[16] These include flu tests, influenza-like illness diagnoses, emergency department admissions (seeking care for COVID-19/influenza-like illness), inpatient admissions (seeking care for COVID-19/influenza-like illness), intensive care unit care (related to COVID/influenza-like illness), ambulatory visits (seeking care for COVID-19/influenza-like illness), provider outages, and statewide COVID-19 test results.

[17] Network adequacy measures the ability of each NC Medicaid Managed Care health plan to deliver covered benefits by providing adequate access for members to all covered health care services through a network of contracted health care providers. Network adequacy and accessibility standards help verify that members have access to providers and offer an important tool for NC Medicaid to monitor and measure that access.

For the NC DHHS Division of Mental Health, Developmental Disabilities, and Substance Abuse (NC DMH), NC HealthConnex supports integrated access to the N.C. Controlled Substance Reporting System. Additionally, for the NC DHHS enterprise, the NC HIEA uses demographic information from NC HealthConnex to match patients across NC DHHS systems to provide insights into individuals' needs and care across platforms.

The infrastructure, functionality, and data exist today to expand upon these capabilities to support additional NC DHHS programs and initiatives using dashboards, clinical intelligence, and notifications. For example, extending electronic syndromic surveillance of infectious diseases to acute and ambulatory care settings statewide is a low-cost, high-value proposition. Expanding automated electronic reporting of and access to State public health systems via NC HealthConnex would also present enormous efficiencies to both providers and public health officials.

ii. National Landscape

Nationally, HIEs—most of which have become fully functional within the past 10 years due to significant federal investment from the State Health Information Exchange Cooperative Agreement Program (part of the American Recovery and Reinvestment Act of 2009)[18,19]—function differently and offer different services, based on state and regional priorities. Many of the highest-functioning HIEs are rapidly evolving to meet the changing public health and health data exchange needs identified by their state agencies, stakeholders, and provider and patient constituents. The NC HIEA continues to evolve to meet North Carolina's needs, as evidenced in *Strengthening Partnership with NC DHHS*, and is dedicated to continuously improving to meet the needs of patients and providers. **As health records have become largely digitized, patients not only want—but *expect*—that health care providers are sharing their data in a secure way to improve the care they provide.** A nationwide survey conducted by the Pew Charitable Trusts in June and July of 2020 to guide the development of federal policies found that "[e]ighty-one percent of adults support increased access to health information for patients and providers."[20]

Current trends in HIE development include leveraging HIE infrastructure to simplify and improve public health reporting,[21] supporting accountable care and payer partners in the changing landscape of value-based care, and targeting analytics and interoperability with additional data systems to advance health

[18] HealthIT.gov. *State Health Information Exchange Cooperative Agreement Program*. Available: https://www.healthit.gov/topic/onc-hitech-programs/state-health-information-exchange Accessed: 12/29/2021

[19] HealthIT.gov. *The Evolution of the Stat Health Information Exchange Cooperative Agreement Program: State Plans to Enable Robust HIE.* Available: https://www.healthit.gov/sites/default/files/pdf/state-health-info-exchange-program-evolution.pdf Accessed: 2/14/2022

[20] Pew Charitable Trusts. *Most Americans Want to Share and Access More Digital Health Data*. Available: https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2021/07/most-americans-want-to-share-and-access-more-digital-health-data Accessed: 12/29/2021

[21] Healthcare Innovation. *The Ever-Shifting Outlook for HIEs Shifts Once Again*. Available: https://www.hcinnovationgroup.com/interoperability-hie/health-information-exchange-hie/article/21219488/the-evershifting-outlook-for-hies-shifts-once-again Accessed: 12/29/2021

equity.[22,23] The market is also experiencing the consolidation of state and regional HIEs with significant interstate health care transactions, with the goal to better serve their covered populations. For example, Arizona's Health Current and the Colorado Regional Health Information Organization (CORHIO) merged to form Contexture, and Maryland's Chesapeake Regional Information System for our Patients (CRISP) also serves the District of Columbia and has close partnerships and shared services with the West Virginia Health Information Network and Connecticut's HIE, Connie.

HIEs nationwide have recently been invited to engage in exchange with each other within a voluntary national technical framework released by the Office of the National Coordinator for Health IT (ONC) on January 18, 2022.[24] The framework and its terms and conditions of agreement for all participating health information networks is called the Trusted Exchange Framework and Common Agreement (TEFCA). The NC HIEA actively monitored the development of TEFCA, provided comments to federal partners from its inception to final draft, and intends to participate within the framework.

iii. Civitas and the Emerging Health Data Utility

Among the foremost national organizations for state HIE collaboration and innovation is Civitas Networks for Health, formerly the Strategic Health Information Exchange Collaborative (SHIEC). Civitas is a collaborative comprised of HIE member organizations representing 95% of the United States, along with regional health collaboratives. Civitas has the aim to educate, promote, and influence both the private sector and policymakers on matters of interoperability, quality, coordination, health equity, and cost effectiveness in health care. The NC HIEA serves as an active member on the Civitas Government Relations and Advocacy Council and co-chaired SHIEC's Payer Quality Committee from 2019-2021.

The NC HIEA also supported this organization's efforts to remove a ban on federal funding for the development of a universal patient identifier (UPI) through a letter to Senators Richard Burr and Thom Tillis in September 2020. A federal-level UPI would introduce significant efficiencies for HIEs and State-funded health care programs and support patient safety by allowing the health care ecosystem to ensure that the correct clinical data and patient medical history are accurately matched with the correct patient.

A major initiative for Civitas is supporting bipartisan work at the federal level to address current challenges related to COVID-19 and preparation for the next pandemic. This work has been driven by observation of HIEs that have proven themselves able to rapidly deploy solutions to share data on the spread of COVID-19 and to offer data-driven surveillance insights for public health agencies. Civitas recognized and

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[22] Healthcare IT News. *ONC chief Micky Tripathi Talks Public Health Data Systems and 'Health Equity By Design.'* Available: https://www.healthcareitnews.com/news/onc-chief-micky-tripathi-talks-public-health-data-systems-and-health-equity-design Accessed: 12/29/2021

[23] California Initiative for Health Equity & Action. *Expanding Health Information Exchange to Advance Health Equity in California*. Available: https://healthequity.berkeley.edu/sites/default/files/5.2021_hie_policy_report_-_tanie_chantara.pdf Accessed: 12/29/2021

[24] HHS.gov. *ONC Completes Critical 21st Century Cures Act Requirement, Publishes the Trusted Exchange Framework and the Common Agreement for Health Information Networks*. Available: https://www.hhs.gov/about/news/2022/01/18/onc-completes-critical-21st-century-cures-act-requirement-publishes-trusted-exchange-framework-common-agreement-health-information-networks.html Accessed: 1/24/2022

explained to policymakers that the experience and knowledge gained by its member organizations during the COVID-19 crisis helped support public health departments and provider organizations in a more comprehensive and consistent manner nationwide during the present pandemic and that these organizations have the capacity to do the same in the event of future public health emergencies.

To this end, Civitas is encouraging federal policymakers to leverage the significant existing health information network infrastructure to build a more comprehensive, anticipatory national testing and response strategy through the creation or designation and subsequent funding of *health data utilities*. **Civitas' proposed working definition of a *health data utility* is "an entity established for the public or social good, organized as a non-profit, public benefit or B corporation, or state run public entity, and operating in a state, region or collection of regions with broad stakeholder representation on its governing board and broad participation from public health, governmental agencies, hospitals, physicians, health plans, long term and post-acute care (LTPAC), behavioral health, social service organizations, pharmacies and other health care providers."**

The goal of formalizing this new type of entity is to empower non-profit or state agency-run HIEs and networks across the country to support and facilitate the flow of information between public health and clinical health information technology systems while protecting privacy and ensuring security. Health data utilities would do this by bringing together health data from many sources—including ambulatory providers, laboratories, post-acute providers, hospitals, and health plans—and offering the data to support state public health efforts and policymaking in accordance with all applicable state and federal data privacy laws. Civitas notes that health data utilities should also support bidirectional exchange (i.e., two-way sharing of patient data), so patients' providers have near real-time access to immunization and other public health data necessary to provide the best care.

By the proposed definition and use cases, NC HealthConnex meets the organizational and governance criteria and is already serving as a health data utility for North Carolina in many ways outlined above. Should the concept be formalized in federal policy, additional federal funding could become available to NC HealthConnex to further develop and support improved public health infrastructure in North Carolina.

Part II and *Part III* of this report discuss additional needs and considerations for completing statewide connectivity to clinical data systems and optimizing the HIE's utility to best serve patients, providers, and State leaders.

II. Challenges, Connectivity, and Engagement

Per the HIE Act, providers of State-funded health care services are currently required to connect to the HIE network and share data as a condition of receiving State funds, with the exceptions of those designated as voluntary in N.C. Gen. Stat. § 90-414.4.(e) and of ambulatory surgical centers, per an exemption recently implemented in N.C. Session Law 2021-26. The State's focus on individual providers and entities across all practice areas, coupled with the condition-of-payment statutory provision, makes the HIE Act one of the most extensive connectivity mandates among HIEs in the United States.[25] It has effectively spurred significant engagement with the NC HIEA (with more than 58,000 providers and entities contributing), led to the development of a robust data base (representing 11 million unique patients), and conveyed the State's comprehensive approach to and investment in information sharing. See the HIE Act (N.C. Gen. Stat. § 143B-139.4D). The vision set forth in the HIE Act has even set an example for other states, including Connecticut and California. For example, in July 2021, California used North Carolina as a case study and passed similar legislation[26] mandating participation by specified health care entities in a new statewide HIE framework.

Notwithstanding this strong start, **the nature of the HIE Act as currently written poses significant challenges to its enforcement.** This section details those challenges and others, provides an overview of the state of statewide connectivity and engagement, and reviews providers' barriers to HIE adoption.

A. Challenges and Opportunities

NC HealthConnex participants and stakeholders have noted several challenges and opportunities related to enforcement and fulfillment of the HIE Act. To consider appropriate recommendations, the Advisory Board, through an informal work group convened by the NC HIEA (see *Appendix B* for membership), examined:

- Survey and focus group data on North Carolina providers' barriers to HIE connection;
- The state of connectivity across provider types and payer populations;
- Internal reports and white papers on opportunities to improve HIE services;
- Incentive/penalty approaches and payer–HIE relationships in other states; and
- Benefits that might be brought to bear by innovative models such as all-payer claims databases, health data utilities, and aligned payer-driven clinical quality initiatives.

[25] In the marketplace, most HIEs are independent non-profits and not enabled by statute. A handful are state-owned (Alabama, Florida, Maryland, Kentucky, and New Jersey, among others), and fewer have legislation requiring connectivity (either generally or for specific uses/users). Massachusetts requires connection by specified entities, CRISP in Maryland requires use of CRISP to register for and access the MD Prescription Drug Monitoring Program, and New Jersey requires participation in its HIE for anyone receiving charity care funding.

[26] California Assembly Bill 133. Available: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB133 Accessed: 1/20/2022

The NC HIEA collected and summarized the informal work group's efforts and made a formal presentation on them at the Advisory Board's January 2022 public meeting. Additionally, Advisory Board members, by statutory design, draw upon their diverse professional experience in health care representing various critical constituencies.[27]

Ultimately, with the assistance of NC HIEA staff and the informal work group it convened, the Advisory Board has coalesced on three broad areas to examine relevant challenges and potential features and actions to support enforcement of the HIE Act and optimization and maturity of the HIE in North Carolina: i) adjusting the HIE Act to support its enforcement; ii) payer alignment on HIE strategy; and iii) enhancing and promoting the statewide HIE as a tool.

i. Adjusting the HIE Act to Support its Enforcement

The mandate for certain providers and entities to connect to NC HealthConnex appears in the Statewide HIE Act at N.C. Gen. Stat. § 90-414.4. This statute has been modified multiple times, most recently with N.C. Session Law 2021-26,[28] whereby the General Assembly acknowledged the need for adjustments to support enforcement. The NC HIEA has identified the following major statutory features that merit reconsideration for clarity and feasible enforcement:

1. *Condition of Receiving State Funds and Subject Entities*. As currently written, the HIE mandate requires subject "entities," including *individual* providers, to connect to NC HealthConnex and submit the required data as a "condition of receiving State funds."

   Challenges:

   a. **Actor(s) Responsible for Enforcement**. The HIE Act does not assign responsibility to a particular actor or actors to ensure that a provider or entity fulfills all necessary requirements of the HIE Act "as a condition of receiving State funds."

      i. No single state actor—whether the NC DHB, State Health Plan, NCDIT, or NC HIEA—has a complete picture of all State-funded health care providers and entities;

      ii. Even if a particular State agency had a complete census of individual providers and entities subject to the HIE Act, it would not have access to all the information necessary for

[27] The NC HIEA Advisory Board consists of 12 members, including eight appointed by the General Assembly to specific seats to ensure the inclusion of diverse perspectives and key constituents' expertise. The appointed positions are to be filled by: a licensed, actively practicing physician; a patient representative; an individual with technical experience in health data analytics; a representative of a behavioral health provider; a representative of a critical access hospital; a representative of a federally qualified health center; an individual with technical expertise in health information technology; and a representative of a health system or integrated delivery network. N.C. Gen. Stat.§ 90-414.8(a).

[28] Previous session laws that revised N.C. Gen. Stat. § 90-414.4 include:
- N.C. Session Law 2019-23 (created a time-limited hardship exemption process, identifying voluntary providers)
- N.C. Session Law 2019-81 (made a minor change regarding prepaid health plans required to connect to NC HealthConnex)
- N.C. Session Law 2020-3 (extended the connection deadline for certain providers from June 1, 2020, to October 1, 2021)

enforcement: claims data, complex billing arrangements between individual providers and the organizations with whom they associate, and billing and contractual arrangements between prepaid health plans and network providers and between State Health Plan's third-party administrator and the members of the State Health Plan provider network, among other examples;

iii. The statute does not give a particular State actor (e.g., Attorney General's Office, NCDIT, State Health Plan, NC DHHS) the authority to enforce the mandate;

iv. Multiple State actors seeking to enforce the HIE Act could lead to uneven or inconsistent enforcement;

v. No particular actor is identified to address appeals from providers or entities or to remediate errors that might occur; and

vi. The current statute implies that payers (i.e., prepaid health plans and the third-party administrator for State Health Plan) are to withhold State funds—that is to say, to not process claims payments—from individuals and entities identified as out of compliance with the HIE Act. Doing so would be problematic because:

- Neither the prepaid health plans nor the State Health Plan's contracted third-party administrator has all the data needed to enforce this provision and, as outlined, the State's ability to provide such data is limited;
- Delegating enforcement to multiple private actors could lead to uneven or inconsistent enforcement;
- Ambiguity about enforcement of the mandate has limited Medicaid and the State Health Plan's ability to negotiate detailed contract provisions with prepaid health plans and Blue Cross and Blue Shield NC, respectively, concerning the implementation of the mandate by those private actors; and
- Ultimately, patients will be harmed if providers choose not to participate in providing State-funded programs. Simply put, diminished provider networks will diminish patients' ability to obtain care.

b. **Condition of Payment.** The condition-of-payment component of the HIE mandate could result in an interruption and/or loss of income to vulnerable providers and entities subject to the HIE Act. While the mandate has spurred significant adoption of NC HealthConnex, it could also cause State-funded health care programs to lose providers. Their departure could result in reduced access to health care services for patients and negatively contribute to existing health inequities, including disparities in health outcomes and access to care. Patients stand to be harmed by the condition-of-payment mandate.

c. **Entities**. Potentially enforcing the HIE Act against individual providers subject to the mandate[29] does not align with the reality that organizations—not individual practitioners—maintain patient health records and connect to the HIE. This mismatch renders HIE Act enforcement challenging for two reasons:

   i. Provider employment/affiliation arrangements are dynamic, and there is no single source of truth tying individual providers to the EHR systems they use to store patient data (see *Assessing Individual-Level Connectivity Without an Existing Source of Truth*), rendering consistent, accurate enforcement improbable and unnecessarily costly; and

   ii. Individual health care providers stand to be penalized for EHR-related business decisions potentially outside their expertise or control.

2. *Statutory Exemption Process.* NC DHHS has the statutory "authority to grant exemptions to classes of providers of Medicaid and other State-funded health care services for whom acquiring and implementing an electronic health record system and connecting to the HIE Network as required by this section would constitute an undue hardship." See N.C. Gen. Stat. § 90-414.4.4(a3). The exemption is an extension of time to connect and submit data no later than December 31, 2022. The revision of the statutory deadline to January 1, 2023, for individual providers and entities to connect and submit data through NC HealthConnex effectively renders this exemption provision moot.

   Previously, NC DHHS, in collaboration with the NC HIEA and the State Health Plan, implemented this provision by identifying "classes of providers" eligible for additional time to connect. As outlined in the Medicaid Bulletin from November 17, 2020 (see *Appendix C*), NC DHHS automatically granted a temporary extension to certain provider types it identified via taxonomy codes: chiropractors, behavioral health residential treatment facilities, psychiatric residential treatment facilities, behavioral health providers other than psychiatrists, and children's developmental service agencies. Additionally, NC DHHS authorized a temporary extension of time to providers and entities who provided an attestation that their circumstances or practice fit in one of six hardship categories.[30]

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[29] Among others, the following entities are required to connect to the NC HIEA and submit data pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries:

(i) Each *hospital*, as defined in N.C. Gen. Stat. 131E-176(13) that has an EHR system.

(ii) Each Medicaid *provider*, unless the provider is an ambulatory surgical center as defined in N.C. Gen. Stat. 131E-146. However, a physician who performs a procedure at the ambulatory surgical center must be connected to the HIE network.

(iii) Each *provider* that receives State funds for the provision of health services, unless the provider is an ambulatory surgical center as defined in N.C. Gen. Stat. 131E-146. However, a physician who performs a procedure at the ambulatory surgical center must be connected to the HIE Network.

(iv) Each *local management entity/managed care organization*, as defined in N.C. Gen. Stat. 122C-3.

See N.C. Gen. Stat. § 90-414.4(b), as modified by N.C. Session Law 2021-26 (emphasis added).

[30] These six hardship categories are: chiropractic organizations with a single or multi-specialty taxonomy; rehabilitative, restorative, and assistive technology service providers for the North Carolina Assistive Technology Program; providers nearing retirement on or before Dec. 31, 2022; providers closing their practices on or before Dec. 31, 2022; providers operating in rural areas with a lack of access to affordable internet/broadband capacity

Challenges: With the exception of providers nearing retirement or closing their practices ahead of the January 1, 2023, deadline:

a. Many providers and entities eligible for the exemption under NC DHHS' established process will continue to face barriers to compliance with HIE Act requirements beyond January 1, 2023;

b. Many of these providers will likely still be mitigating the two-yearlong COVID-19 pandemic's effects on their ability to sustain operations and provide services in resource-limited areas; and

c. Certain additional groups are likely to need special accommodations as they work toward compliance with HIE requirements.

The expiration of the time-limited exemption does not eliminate the fact that certain providers, regardless of their taxonomy or practice area, may wish to connect to NC HealthConnex but continue to face hardships that prevent them from doing so (e.g., a lack of broadband, pending retirement or practice closure).

3. *Voluntary Connection for Certain Providers.* The HIE Act identifies "providers of Medicaid services or other State-funded health care services [that] are not required to connect to the HIE Network or submit data but may connect to the HIE Network and submit data voluntarily." See N.C. Gen. Stat. § 90-414.4.4(e), Voluntary Connection for Certain Providers. In other words, these identified providers need not participate in the HIE Network as a "condition of receiving State funds."

Challenges:

a. Until this report, the General Assembly has not had data on unconnected entities to determine whether the list of voluntary providers is sufficiently comprehensive in light of multiple policy considerations (e.g., the cost of connection to the State, the utility of data for the State and NC HealthConnex participants, the burden on providers).

b. Members of certain provider communities (e.g., dentists, chiropractors) suggest that their patient information in their EHRs is, at present, less vital to the health care ecosystem and the State. Their unwillingness or inability to connect, coupled with the condition-of-payment mandate, could cause them to leave State-funded health care networks. Reduced network size would harm patients by creating health care access challenges, which would potentially reinforce existing health inequities.

c. Certain segments of the broader health care community in North Carolina—in particular, those other than physical health—do not have significant previous experience participating in the kind information exchange facilitated by the NC HIEA. Neither have they invested in EHRs that easily interface with other systems.

adequate to support implementation of EHR technology and connection to the HIE network; and providers in a community with few or no alternatives that not granting a hardship extension to a provider or practice may lead to the loss of or a material reduction in access to care.

ii. Payer Alignment on HIE Strategy

State-funded payers and provider-led accountable care organizations play a vital role in promoting the aims of the HIE Act because—particularly under value-based care constructs—they are the entities primarily tasked with delivering many of the goals therein: "improve care coordination within and across health systems, increase care quality for … beneficiaries, enable more effective population health management, reduce duplication of medical services, … allow more accurate measurement of care services and outcomes, increase strategic knowledge about the health of the population, and facilitate health care cost containment."[31]

Challenges: NC HealthConnex, during its six years of operation, has engaged in significant efforts to educate providers and connect them to NC HealthConnex. While it has achieved a level of adoption and a critical mass of clinical data, payers—especially Medicaid prepaid health plans and the State Health Plan's contracted third-party administrator, Blue Cross and Blue Shield of North Carolina—have not yet been fully enlisted and deployed to help advance the State's HIE mission. In particular, the State has not yet utilized payers and accountable care organizations to identify strategies to engage with providers and encourage them to adopt the HIE or to inform the direction and utilization of HIE services in support of value-based care. The challenges to doing so are three-fold:

1. Discussion about payers' role in spurring provider engagement, encouraging provider connectivity, and effecting improvements in data quality are in their infancy. The NC HIEA has been engaging in such informal conversations with payers outside the context of the Advisory Board. Meanwhile, additional resources and strategies are needed in 2022 and beyond to enable more providers to meet the January 1, 2023, deadline to connect and submit data.
2. Payer use cases for HIE abound,[32] but payers in North Carolina have only scratched the surface of utilizing HIE services to drive improved clinical outcomes. NC HealthConnex has and continues to play a role in COVID-19 reporting and surveillance, but other data quality initiatives with NC DHB are just beginning. Payers could play an important role in improving data quality, for the benefit of not only themselves but also the State and providers.
3. Value-based care models are advancing rapidly, and payers and accountable care organizations should be enabled to leverage NC HealthConnex as a tool to (i) streamline clinical data needs with/for their providers and members; and (ii) drive improvements in care and reductions in cost as these arrangements carry shared risk for providers and payer partners.[33] Provider-led accountable care organizations and payers engaged in collaborative coordination with providers also have a role in providing usable information to providers through the NC HIEA and in positively impacting providers' operational efficiencies. Discussions regarding the appropriate uses of HIEA data sets to support

[31] NC GS 90 414.4(a)(3). *Statewide Health Information Exchange Act*. Available: https://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByArticle/Chapter_90/Article_29B.pdf Accessed: 1/2/2022

[32] New York eHealth Collaborative. *The Case for Payer Participation in Health Information Exchange.* Available: http://www.nyehealth.org/nyec16/wp-content/uploads/2018/04/The-Case-for-Payer-Participation-in-Health-Information-Exchange_April-2018.pdf Accessed: 1/17/2022

[33] One example of leveraging the HIE for operational efficiencies, cost reduction, and care improvements is using it to support automatic prior authorizations.

value-based care, payers' and accountable care organizations' engagement with the NC HIEA, and the NC HIEA's delivery of quantifiable value to the providers submitting the clinical data would benefit from an open, transparent forum with representatives from all interested parties.

iii. Enhancing and Promoting Statewide HIE as a Tool

To fully realize the HIE's power to improve care and reduce the cost of care, comprehensive data must be available, and health care providers must be enabled to conveniently use it as a tool at the point of care. Among provider organizations already connected and sharing data, the NC HIEA has seen evidence that the pandemic and the launch of Medicaid managed care in July 2021 prompted large numbers of providers to increase their utilization of NC HealthConnex's exchange and notification services.[34] However, additional education and support for providers, as well as HIE enhancements and workflow tools, are needed to effectuate broader use of NC HealthConnex within the clinical workflow.

Challenges:

1. The NC HIEA lacks the resources to conduct comprehensive, high-value outreach and training that would help the State more fully realize its investment in NC HealthConnex. The NC HIEA outreach and provider relations team is the same size with 7,000+ connected sites in 2022 as it was with 800+ connected sites in 2017. To reach more providers and move the toward widespread adoption, the NC HIEA needs to clearly articulate and share additional value propositions that resonate with specific clinical practice areas, as well as develop the capacity to provide attentive practice support.
2. Integrating patient data from NC HealthConnex into the clinical workflow looks different for every provider and every EHR. Additional workflow support tools, including guides and video training clips developed in coordination with clinicians, are needed to encourage practices to use NC HealthConnex as a daily tool to provide better care and meet quality- and value-based care benchmarks.
3. As patients move in and out of State-funded plans and programs, critical data gaps exist as large HIE-participating organizations filter data to only State-funded populations. These gaps have been brought to the attention of the NC HIEA by participating providers seeking (unavailable) patient history data at the point of care and by NC DHHS as it uses HIE data in statewide public health surveillance efforts.

Despite a focus on outreach and adoption over its short history, **the NC HIEA is approaching a new level of maturation that requires scaling up existing awareness, outreach, and communication efforts to i) effectively and continually communicate with all the State's health care providers and receive their feedback; ii) encourage its participants to increase use of the HIE and its value-added features, and iii) target the still unconnected populations with increased urgency and tailored messaging.** As the effects of the pandemic eventually wane, the NC HIEA aims to be able to engage more fully in conferences, practice support groups, and other opportunities that bring its staff face-to-face with providers.

[34] In August 2021, NC HealthConnex saw 4,000 logins to its web-based clinical portal, 1.2 million documents sent to provider EHRs, and 140,000 documents pulled by the joint federal HIE serving the U.S. Veterans Affairs Health Care System and U.S. Department of Defense.

B. Connectivity Analysis

i. Assessing Individual-Level Connectivity Without an Existing Source of Truth

The analysis to produce the following NC HealthConnex connectivity report was the first of its kind ever undertaken. Previously, no single list of individual providers and health care entities subject to the HIE Act existed, nor did individual-to-organization affiliation information related to governance of electronic patient health records. For further context:

- **The NC HIEA builds interfaces with EHRs that are almost universally managed by organizations, or entities, rather than by individual providers**. The reality of health information technology today is that organizations, both large and small—and not individual providers—maintain the EHRs that connect to NC HealthConnex. Thus, typically, an individual provider's employer(s)/organization(s) contracts with the NC HIEA, connects to NC HealthConnex, and shares patient data on the individual provider's behalf.
- NC DHB and the State Health Plan both manage dynamic provider rosters and individual-to-organization affiliation information for billing purposes. These lists were used as a starting point in the analysis because they offered the best available affiliation information for large-scale analytics. However, **billing relationships do not always mirror the relationship between an individual provider and the entity or entities that maintain the EHR containing the individual provider's patient records**, which is the pertinent relationship for determining HIE connectivity—and thus HIE Act compliance status. Furthermore, claims are paid at the individual level, whereas connection to NC HealthConnex is performed at the facility level.
- Some State-funded health care programs (e.g., grant-funded programs through the N.C. Office of Rural Health and adult corrections) exist outside the NC DHB and State Health Plan and do not have readily available provider rosters.
- **Employment arrangements and organizational affiliations change over time**, and this information is not always reported to or updated with payers or licensing boards. The dynamic nature of clinician employment and the absence of data on those relationships further complicate the question of HIE Act compliance at an individual level. For example, a physician may work for a connected organization in 2022 but move to (or provide some care at) an unconnected organization in 2023.

For these reasons, pairing individual providers with their connected and/or unconnected organization(s) is administratively burdensome, expensive, and imperfect. The task requires multiple data sets, which are of varying quality and change over time. No single State agency or program currently holds all the data necessary to accurately make these associations.[35] In short, **there is no combination of currently available**

[35] To support the NC HIEA's connectivity analysis and outreach efforts, N.C. Session Law 2021-26 directed that "[a]ll licensing boards within the State overseeing the providers and entities required to connect to the HIE shall assist by providing contact information and addresses of licensees when that information is not readily available to the HIE Authority, Department of State Treasurer, and the Department of Health and Human Services." The NC HIEA

datasets that accurately ties individual providers to the (sometimes multiple) organizations that manage their patients' health records.

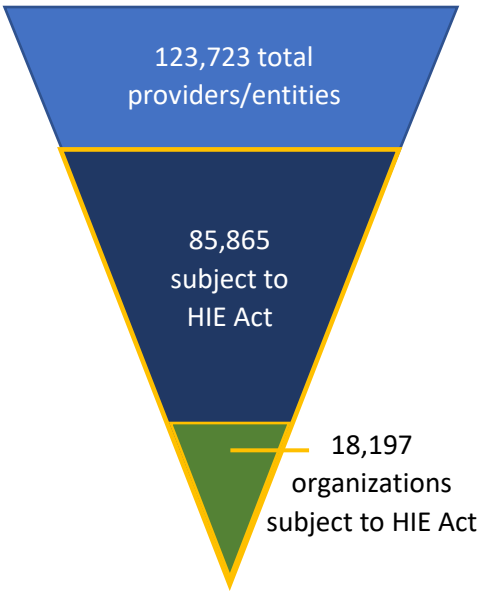
The resulting analysis was an attempt to discover every individual provider and entity subject to the HIE Act *and* their various organizational affiliations in order to determine their NC HealthConnex connection status. The analysis could not be automated and required manual resolution of data to create and apply business rules to associate individual health care providers with related entities.

Note: Replication or future automation of this analysis would be administratively burdensome and require significant expenditure of State funds. See *Appendix D* for information on the methods and cost of the analysis.

ii. Summary of Provider and Entity Connectivity, November 2021

From August to November 2021, the NC HIEA, with support from its technical partner SAS, collected and analyzed data provided by NC DHB and State Health Plan in an attempt to identify all individual and entity-level providers subject to the HIE Act and the status of their connection to or engagement with NC HealthConnex. This analysis revealed that:

- 123,723 unique individual providers and entities[36] are actively involved in providing State-funded health care services in North Carolina. Of these:
    - 94,464 are individuals, and
    - 29,259 are organizations.
- Of these 123,723 total providers and entities, **85,865 unique providers and entities are subject to the requirement to connect and submit data to the HIE** (i.e., not "Voluntary for Connection") and include:
    - 67,668 individuals, and
    - 18,197 organizations.[37]



contacted the N.C. Medical Board and the N.C. Board of Nursing to collect additional provider contact information but ultimately determined that information already available from NC DHHS and State Health Plan was sufficient and that the introduction of additional data sets would complicate, rather than clarify, the connectivity analysis and subsequent outreach efforts.

[36] Unique individuals and entities were based on unique National Provider Identifiers (NPIs) that the NC DHB and State Health Plan independently provided to the NC HIEA.

[37] Note that this analysis focused exclusively on private individual providers and entities and excluded Medicaid prepaid health plans and local management entities/managed care organizations (LME-MCOs), as well as some of the State health care facilities operated under NC DHHS. All prepaid health plans and LME-MCOs are under contract with the NC HIEA and in the process of connecting to submit claims data, as required.

- Of these 85,865 unique providers and entities found to be subject to the requirement to connect and submit data:
    - **68% (58,452: 52,035 individuals and 6,417 organizations) are connected** as of this report,
    - 10% (8,798: 6,256 individuals and 2,542 organizations) are under contract with the NC HIEA with connections in process, and
    - 22% (18,615: 9,377 individuals; 9,238 organizations) remain unengaged with the NC HIEA.

These groups of providers are depicted in **Figure 1**. These subject individuals and entities are represented geographically with their connected (green) or unconnected (orange) status in **Figure 2**.

Figure 1: Overall HIE Connection/ Engagement Status, November 2021

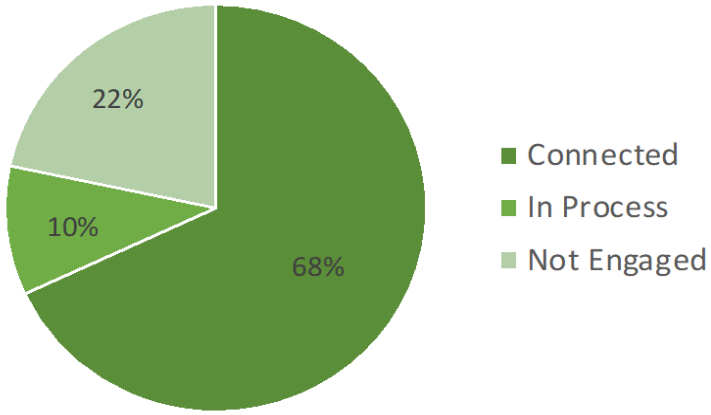
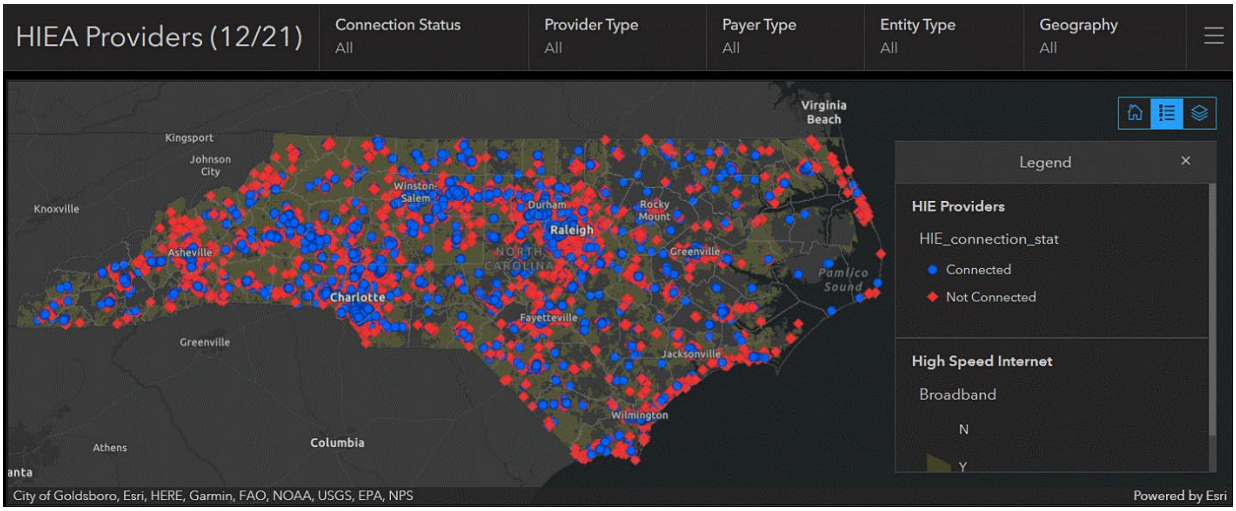


Figure 2: Geographic Representation of Overall Individual and Entity Connectivity, November 2021



Legend: *Blue circle—connected HIE provider; Red diamond—non-connected HIE provider; gray areas - broadband coverage*

The work remaining to connect all outstanding subject providers and entities is quantifiably distinct from the work that has occurred to date. See **Table 1**.

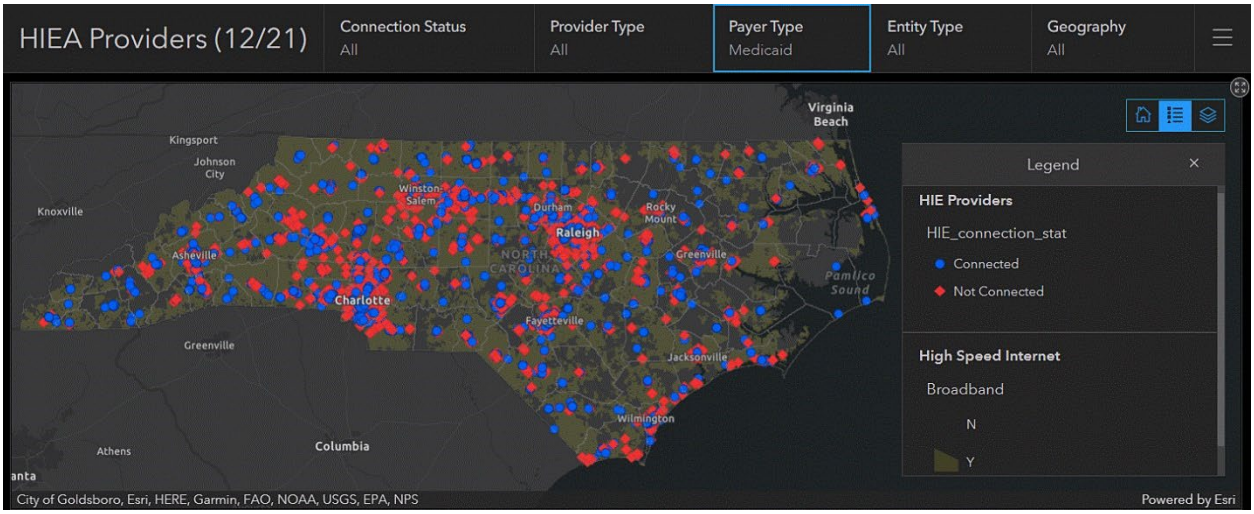
Table 1: Summary Comparison of Connected and Unconnected Providers and Entities

	CONNECTED	UNCONNECTED
NUMBER OF CONNECTED PROVIDERS AND ENTITIES SUBJECT TO THE ACT	58,452 (including 6,417 organizations)	8,798 providers and organizations under contract with NC HIEA and with connections in progress 18,615 unengaged with NC HIEA (including 9,238 organizations)
TYPES OF PROVIDERS	140 hospitals Practice areas commonly represented in connected group, e.g.: • Pediatrics • OB/GYN • Primary Care • Specialty Providers	Practice areas overrepresented in unconnected group: • Dental • Chiropractic • Behavioral health • Residential facilities • Pharmacies Providers previously eligible for a NC DHHS hardship exception Shift focus to connecting smaller practices
DATA SUBMISSION TARGETS / DATA ELEMENTS	NC HIEA's standard Clinical and Demographic Data Target	NC HIEA's standard Clinical and Demographic Data Target Pharmacy Claims Data Target Case-by-case customization of the standard Clinical and Demographic Data Target for certain populations (e.g., behavioral health providers)
PROVIDERS' EHR VENDORS	Connected to EHR products across approximately 80 vendors, including major vendors with significant market share and some smaller, specialized vendors	Continued engagement with approximately 80 EHR vendors that have previously worked with NC HIEA Aware of 180 additional EHR vendors that serve unconnected participants

To continue accelerating onboarding efforts in the absence of federal HITECH funds, which expired in late 2021, additional resources will be needed. The NC HIEA expects that it will be several years until statewide connectivity is complete.

It is important to note that the NC HIEA has documented that 82% of Medicaid *patients* and 95% of State Health Plan *patients* have records in NC HealthConnex. Analysis by payer revealed interesting features of HIE participation by Medicaid and State Health Plan *providers*. Providers that participate in both health plans were found to be connected at a rate of 81%, but connection rates by payer revealed a disparity: Medicaid-only providers connected at a rate of 75%, and State Health Plan-only providers connected at a rate of only 34%, as depicted in the maps in **Figure 3** and **Figure 4**. This result could be partly explained by NC HIEA's prioritization of connecting Medicaid providers due to federal funding.[38]

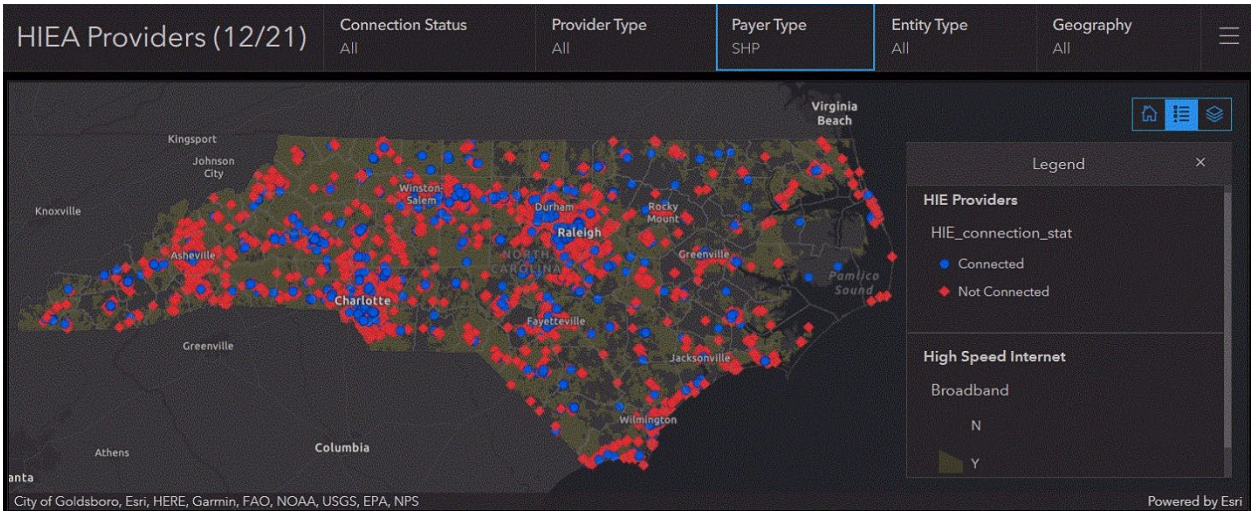
Figure 3: Overall Connectivity of Medicaid-Only Providers/Entities



Legend: *Blue circle—connected Medicaid-only provider; Red diamond—non-connected Medicaid-only provider; gray areas - broadband coverage*

[38] Providers and organizations that are part of the State Health Plan's network but do not participate Medicaid likely impact the State Health Plan's overall connectivity rate. Certain State Health Plan-only providers—in particular, those that provide behavioral health services, physical therapy, occupational therapy, and the like—receive higher reimbursements from the State Health Plan. State Health Plan-only providers and entities, because of their unique position, may view the costs and benefits of participation in the NC HIEA differently than others that are subject to the Act; some may choose to leave the SHP network rather than connect to NC HealthConnex and submit data.

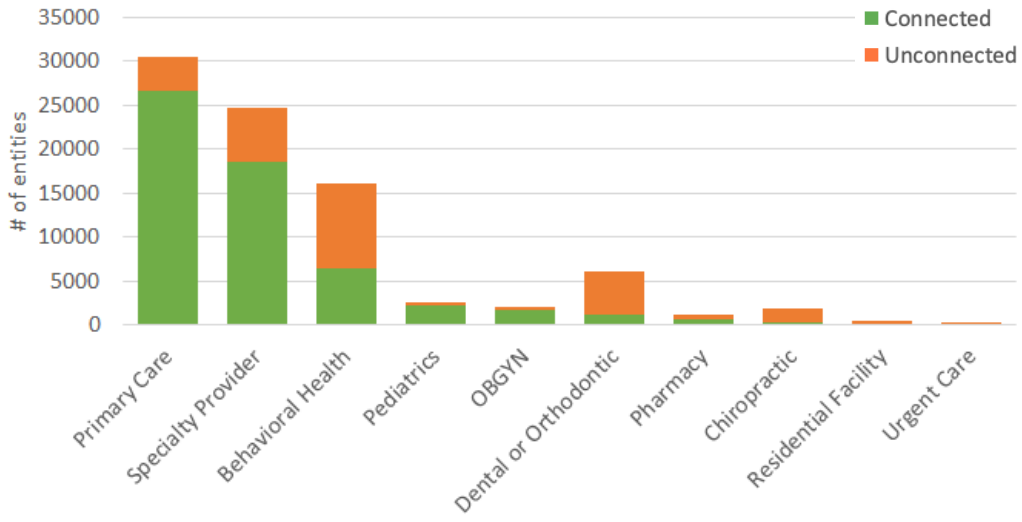
Figure 4: Overall Connectivity of State Health Plan-Only Providers/Entities



Legend: *Blue circle—connected State Health Plan-only provider; Red diamond—non-connected State Health Plan-only provider; gray areas - broadband coverage*

Analysis of connection rates by provider type indicates where additional outreach and adoption efforts must be focused in 2022. While all hospitals and numerous labs, including LabCorp and Quest, are connected and submitting data today, connection rates between clinical areas of practice differ, as depicted in **Figure 5**.

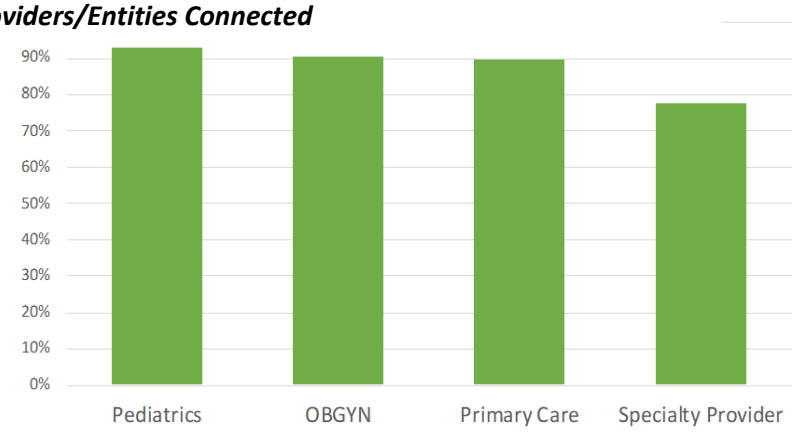
Figure 5: Connections by Provider Type



iii. Practice Areas with Higher Connectivity Rates

In addition to complete connectivity across 140 hospitals in North Carolina, four clinical practice areas saw steady progress toward statewide connectivity, especially among the Medicaid provider population: pediatrics, OB/GYN, primary care, and specialists, as depicted in **Figure 6**. Over the past five years, the NC HIEA conducted large-scale, targeted outreach to primary care, pediatrics, and OB/GYN providers in partnership with Medicaid to support its Advanced Medical Home model, a tiered program for the provision of care management, under Medicaid transformation. Other external factors likely contributed to high adoption among these provider types, including a decade of federal HITECH Act incentive funds to adopt, implement, and upgrade EHRs (and the subsequent CMS Meaningful Use requirements that encouraged HIE use); emerging accountable care organizations, clinical integration networks, and value-based care models that require data sharing for participation or enhanced payments; and a plethora of high-value use cases.

Figure 6: % Medicaid Providers/Entities Connected



iv. Practice Areas with Lower Connectivity Rates

Five clinical practice areas exhibited low HIE connection rates: behavioral health, dental, chiropractic, residential facilities (skilled nursing facilities), and pharmacies. These are described as follows.

Behavioral health providers represent one of the largest practice areas with one of the lowest HIE connection rates. Only 40% of the providers and entities identified as behavioral health in the analysis are connected as of this writing, and the rate varies widely by payer participation, as depicted in **Figure 7**. This lag exists despite years of **targeted outreach efforts by the NC HIEA including**:

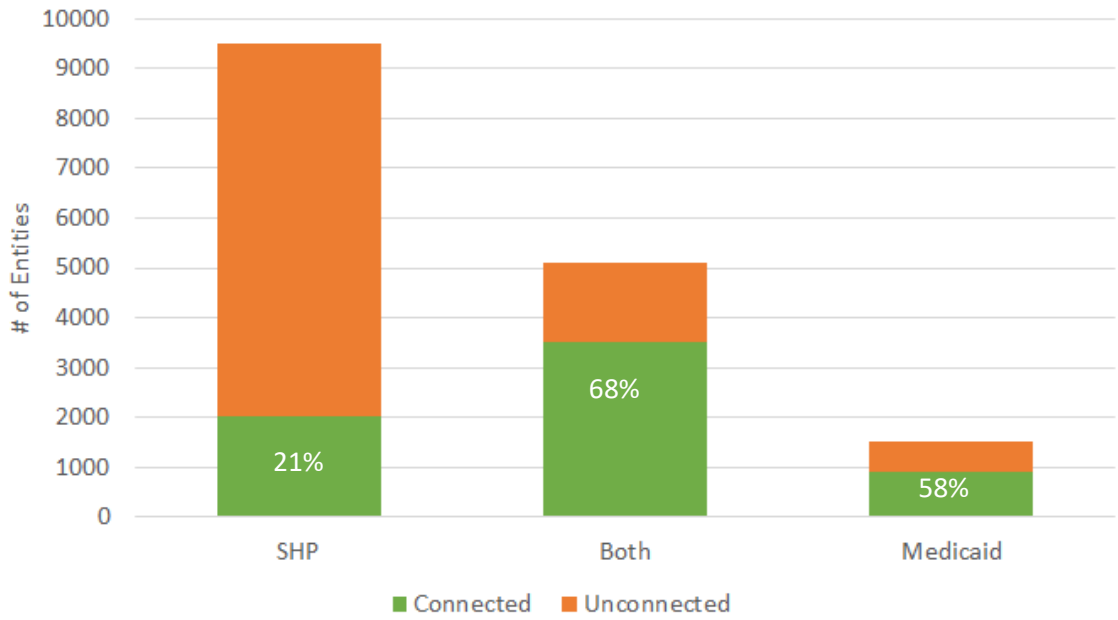
- The formation of a Behavioral Health/Intellectual and Developmental Disabilities Work Group;
- A specific and more achievable NC HIEA Behavioral health data target;
- A sensitive data policy to address provider concerns; and
- Promotion of an EHR incentive program through the NC DHHS Office of Rural Health and NC DIT that reimbursed expenses for new EHR adoption by 127 qualifying N.C. practices.

The challenges for this segment are many. In a September 2021 nationwide public meeting of the Medicaid and CHIP Payment and Access Commission (MACPAC), experts shared data showing that

psychiatric hospitals and office-based settings that provide psychiatric care lag behind most other specialty fields in their adoption of EHR technology. This report described the myriad reasons for the lag: exclusion from federal HITECH incentives, lack of inclusion in HIEs or as a focus of HIE recruiting and incentives, financial hurdles due to low operating margins, and complex federal data-sharing regulations.[39] Adoption of EHR technology is a prerequisite for submitting data to an HIE.

Compounding these barriers, the behavioral health field has only recently seen widespread efforts at integration with physical health care, clearly answering the "why" of data sharing. This physical–behavioral health integration work is ongoing in the payer space in North Carolina, as evidenced by the upcoming launch of the Medicaid Behavioral Health/IDD Tailored Plans in December 2022, aimed at providing whole-person physical and mental health care under a single plan.[40]

Figure 7: Behavioral Health Connected Facilities by Payer

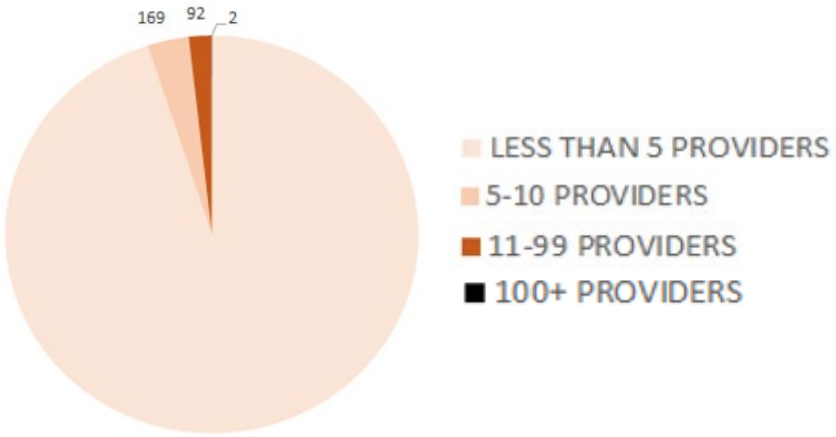


Note: The differences in behavioral health connectivity among health plans may be better understood when considering that (i) among this provider population, the State Health Plan has enrolled more than twice the number of providers enrolled by Medicaid, which, in part, is likely due to higher reimbursements available to providers from SHP's contracted third-party payer, and (ii) providers serving only the State Health Plan network were not included in HITECH Act federal financial incentives, which paved the way for EHR adoption and HIE connection for many Medicaid providers over the past decade.

[39] Behavioral Health Business. *Behavioral Health Providers Falling Behind in EHR Adoption, Critical to Participate in Value-Based Care*. Available: https://bhbusiness.com/2021/11/13/behavioral-health-providers-falling-behind-in-ehr-adoption-critical-to-participate-in-value-based-care/ Accessed: 1/1/2022

[40] N.C. Department of Health and Human Services. *Behavioral Health I/DD Tailored Plan*. Available: https://medicaid.ncdhhs.gov/providers/programs-and-services/behavioral-health-idd/behavioral-health-idd-tailored-plan Accessed: 1/1/2022

Figure 8: Size of Unconnected Behavioral Health Organizations



Dentists and orthodontists have been slow to engage with the HIE. Only 21% of identified providers/entities (1,295 of 6,087) are connected and sharing data with NC HealthConnex, as depicted in **Figure 9**. Like the behavioral health field, this group has historically operated separately from physical health providers in the areas of reimbursement and data sharing. **Health information exchange with the broader health care community is largely new for dental and orthodontic providers, who use specialized dental health data information systems that are distinct from systems used by physical health providers.** Additionally, most HIEs nationwide have not targeted dental data. Consequently, even some of the primary dental EHR vendors have minimal experience integrating with other systems (or require upgrading to a high-tier, more expensive product offering in order to integrate).[41] A 2020 study published by the American Medical Informatics Association notes that "dental providers' use of the HIE is not well understood. Given the relative paucity of evidence, it is important to determine the extent to which dental providers use HIE and what types of outside clinical information are valuable to a dental provider."[42]

Dental providers providing treatment to State employees may have difficulty assessing their obligations under the HIE Act. This is especially true for dental providers who accept one of the NC Flex dental plans (high option, classic option, and low option) available to State employees, who are the primary source of funds for this cafeteria benefit administered by the N.C. Office of State Human Resources. Presently, the State of North Carolina only subsidizes *one* of the NC Flex dental plans (the "Classic Option"). This makes it difficult for dentists to know if they are providing care to a patient whose care is paid for (at least partly) by State funds and to identify data to submit to NC HealthConnex. Additional factors only compound this compliance challenge. State employees may periodically choose to switch between NC Flex dental plans, and direct State funding to the NC Flex dental plan offerings may change in the future.

Furthermore, there is significant concern regarding the existing dental networks' ability to serve all State-funded patients across North Carolina, especially in some rural areas, including the eastern corridor and

[41] Noted by an October 2021 focus group dental provider participant using an industry-leading dental-specific EHR.
[42] Taylor, Heather L., Nate C. Apathy, Joshua R. Vest. *Health Information Exchange Use During Dental Visits*. American Medical Informatics Association Annual Symposium Proceedings 2020; 2020: 1210–1219. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8075496/ Accessed: 1/25/2022.

several western counties. See **Figure 10** (this image represents those entities identified as primarily dental and might not include integrated systems or clinics offering multiple services). Of the more than 6,000 dental providers serving State-funded patients, fewer than 3,000 serve Medicaid patients. Any loss of providers within these networks could result in harm to patients.

Chiropractors also exhibit low connection rates: Only 16% of identified chiropractic providers/entities (334 of 1,985) are connected and sharing data with NC HealthConnex, as of this analysis, as depicted in **Figure 9**. Notably, NC DHHS previously granted all chiropractors a hardship exemption to connect to NC HealthConnex, which extended their deadline to connect through December 31, 2022.

Figure 9: Dental and Chiropractic Providers/Entities Connection Status

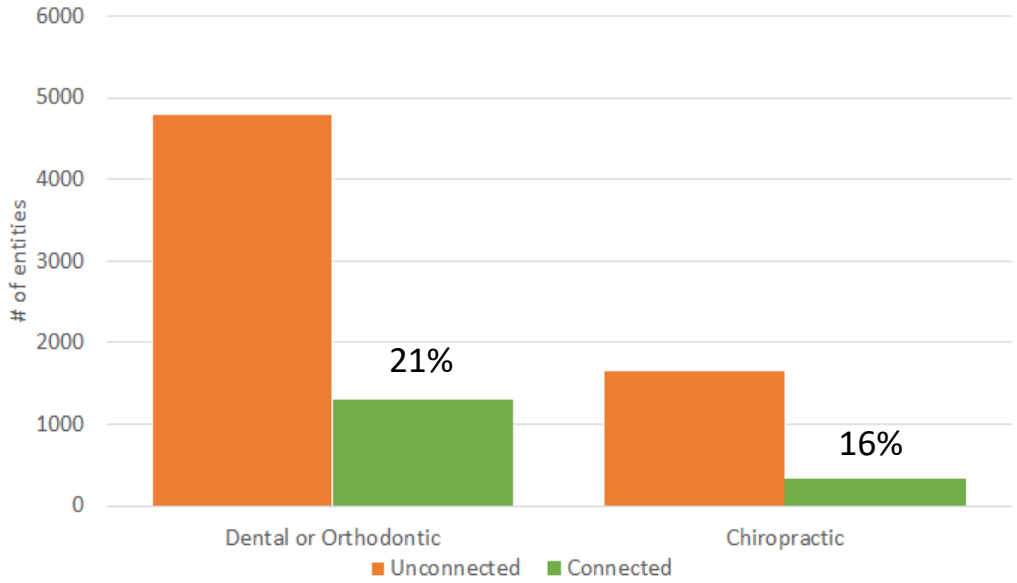
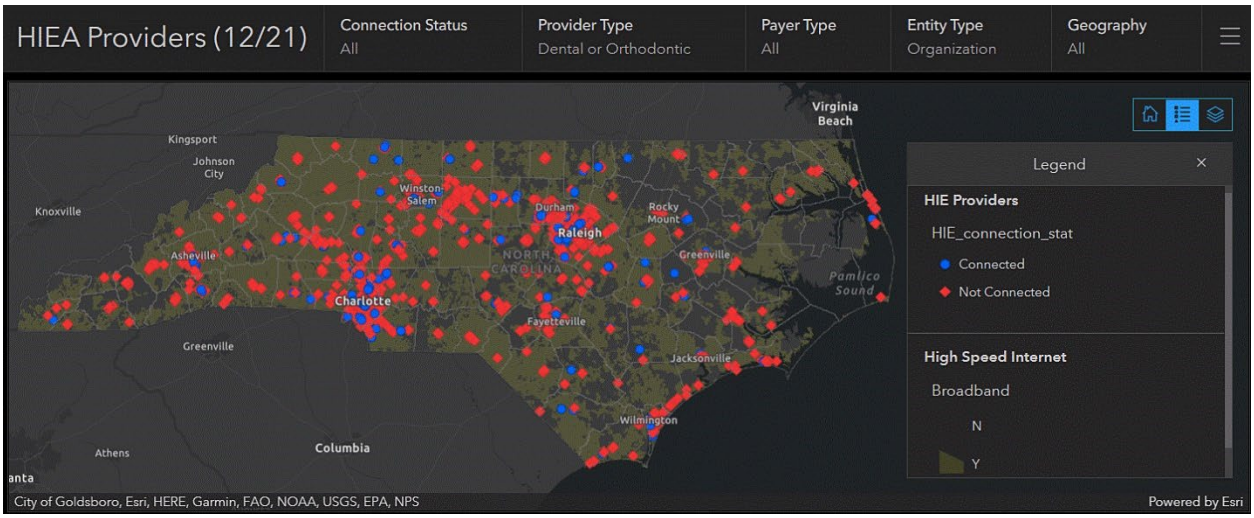


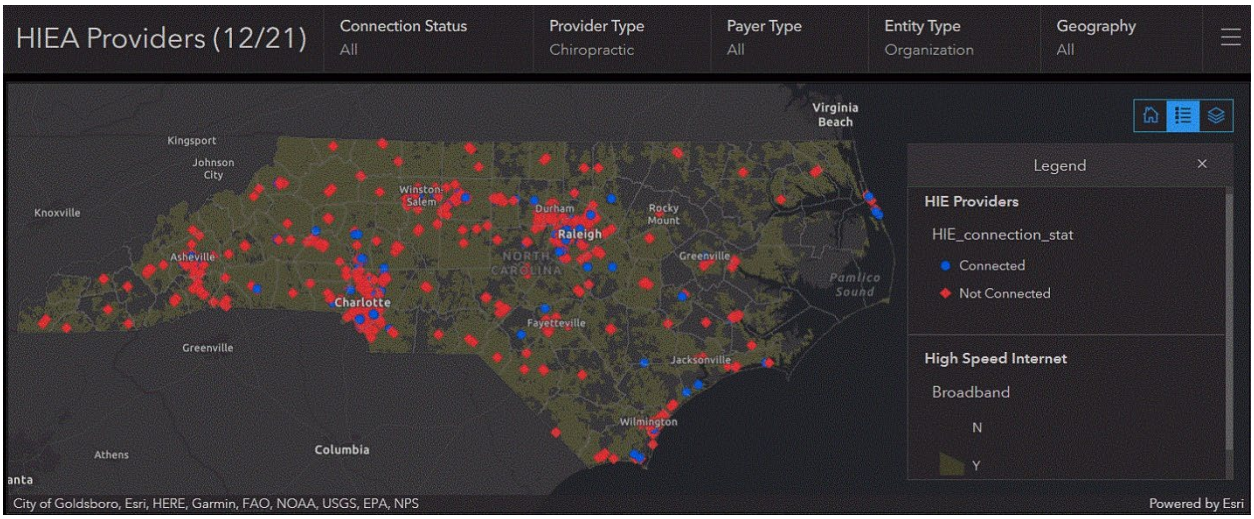
Figure 10: Geographic View of Connectivity of Identified Dental Entities



Legend: *Blue circle—connected dental entity; Red diamond—non-connected dental entity;*

Like dental providers, information on the identified providers/entities comprising the chiropractic network is sparse, as depicted in **Figure 11**. (The image represents those entities identified as primarily chiropractic and might not include integrated systems or clinics offering chiropractic and other services.)

Figure 11: Geographic View of Connectivity of Identified Chiropractic Entities

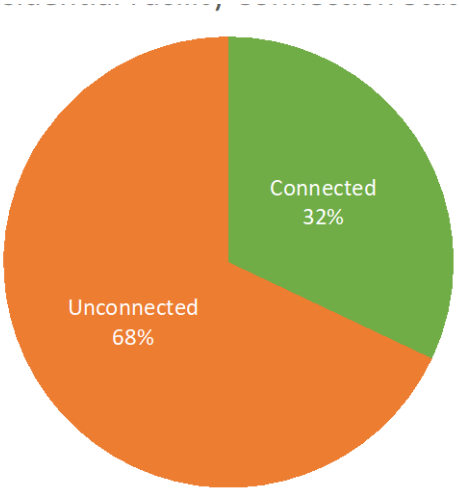


Legend: *Blue circle—connected chiropractic entity; Red diamond—non-connected chiropractic entity; gray areas - broadband coverage*

Residential facilities, a category comprised entirely of skilled nursing facilities, stood out in the analysis as an area of impending opportunity. Of 481 skilled nursing facilities in North Carolina, 32% (154) are connected and sharing data, as depicted in **Figure 12**. **Of the remaining 327 skilled nursing facilities, more than 80% use the same EHR vendor that is actively engaged with the NC HIEA.** The addition of data from residential facilities is significant. For example, the American Journal of Managed Care notes that "HIE tools are currently underused to support postacute care transitions."[43] Skilled nursing facilities generate important patient data as they provide care for patients transitioning between hospital and home and home care. The NC HIEA anticipates enabling full exchange capabilities for most post-acute care transitions statewide in 2022.

[43] Cross, Dori A., McCollough, Jeffrey S. *Drivers of Health Information Exchange Use During Postacute Care Transitions.* American Journal of Managed Care 2019;25(1):e7-e13. Available: https://www.ajmc.com/view/drivers-of-health-information-exchange-use-during-postacute-care-transitions Accessed: 1/17/2022

Figure 12: Residential Facility (Skilled Nursing Facility) Connection Status



Pharmacies represent another area of progress and opportunity. Although the NC HIEA has not yet enabled pharmacies to begin sharing claims data per the HIE Act requirement, 94 pharmacies have executed full participation agreements, and an integration pilot is underway. In addition, the NC HIEA has gained valuable experience working with large retail chain pharmacies and their data vendors during the pandemic to facilitate transmission of COVID-19 vaccine administration data to the NC DPH. These collaborations have resulted in a better understanding of the level of effort required to onboard this sector to NC HealthConnex as pharmacies work through a limited number of billing partners. The NC HIEA has also been engaged with a Pharmacy Work Group and the National Council for Prescription Drug Programs (NCPDP) since 2018, working toward a technical standard that could be used to build out this exchange of data. **The NC HIEA acknowledges the opportunity to pursue pharmacy claims data and plans to prioritize this limited set of connections during 2022, completing the pilot integration and engaging with relevant parties to expand upon it.** The available pharmacy data across the health care enterprise offers high value to make prescription fill data and additional clinical details accessible for treating physicians at the point of care and to inform targeted population health initiatives or interventions, such as using medication data to identify clinical conditions and risk factors or patients who appear to be having trouble filling prescriptions due to access, cost, or other barriers.

C. Barriers to Connection

As noted in the July 25, 2018, report to the General Assembly, *NC Health Information Exchange Connectivity Feasibility Study*, barriers prevent widespread adoption of NC HealthConnex. To better understand the current state of the barriers to participation with NC HealthConnex and to educate its Advisory Board, the NC HIEA and its informal work group examined provider feedback to NC DHHS and other surveys from the past two years, considered the results of a 2020 survey of EHR vendors engaged

with NC HealthConnex, and **conducted four health care provider focus groups in October 2021** (see *Appendix E* for relevant survey excerpts).[44] The primary barriers identified by providers include:

- EHR vendor costs related to integration and interface maintenance;
- Needs for training and resources for implementation and use;
- Upheaval and burnout[45] from the pandemic, shifting focus to office protocols and patient safety;
- Difficulty identifying high-value use cases for certain practice areas;
- Misgivings about sharing patient data (due to liability reasons or the nature of the data itself, such as sensitive behavioral health data);
- Lack of an EHR;
- Adoption of tailored data standards (e.g., for behavioral health, pharmacies) slowing the process;
- Confusion around shifting connection deadlines and how and when to begin the process; and
- Lack of reliable access to high-speed internet.

Note that providers have historically been able to claim a hardship extension with NC DHHS if they operate in rural areas that lack access to affordable internet/broadband capacity. That barrier will likely persist for some providers even after January 1, 2023.

i. Provider Surveys

A NC DHHS survey of Medicaid primary care providers in fall 2020 found that of those respondents not connected to NC HealthConnex (90/291), 43.3% cited a need for training, 22.2% noted a need for additional staff, and 10% required financial support for EHR operations and maintenance. Only 8.9% reported no need for additional resources to participate. Thirty-one percent of those not yet connected reported that COVID-19 challenged their ability to meet connection deadlines.

Compounding these expressed needs, most EHR vendors charge providers for implementation and maintenance of an HIE interface. A NC HIEA survey of EHR vendors in spring 2020 found that of the 21 vendor respondents, 67% charged integration fees, with about half of those vendors' fees equal to or more than $5,000. Sixty-seven percent of the respondents also charged additional monthly maintenance fees, often a flat rate to a supported site or a per-provider monthly charge. Feedback from the N.C. Area Health Education Centers corroborates those findings; the Centers report that the cost to build a data-sharing interface for a single practice site can range widely but typically runs $2,000–$5,000 and, in some cases, may exceed $10,000, depending on the EHR vendor. Ongoing maintenance fees can total several hundred dollars per month. Although a completed interface introduces efficiencies in the practice

[44] Additional individual constituent feedback is archived and available upon request.
[45] Workforce shortages have increased and are expected to worsen. See N.C. Area Health Education Centers (AHEC). 2021 *Report to the North Carolina General Assembly: Pandemic Health Care Workforce Study*. Available: https://cdn.ymaws.com/www.nationalahec.org/resource/resmgr/content_areas/covid_response_page_-_links/nc_ahec_pandemic_health_care.pdf Accessed: 2/14/2022; University of North Carolina's NC Nursecast. *Supply & Demand Model*. Available: https://ncnursecast.unc.edu/model/ Accessed: 2/14/2022

workflow, implementing the initial connection requires staff capacity to manage the build, ongoing maintenance, data quality efforts, and staff training.

A December 2020 survey of NC HealthConnex participants who had completed technical connections but had not taken the final steps to start sharing data revealed that many providers were negotiating with or awaiting more information from their EHR vendors. Some simply noted cost as a barrier to "going live" with their data feeds. In the analysis completed for this report, over 2,800 providers and entities were sitting in this status.

ii. Focus Groups

In October 2021, as part of the preparation for this legislative report, the NC HIEA recruited health care providers to participate in focus groups. Four virtual, voluntary 60-minute focus groups were conducted. The groups consisted of 30 largely not-yet-connected participants recruited via the monthly Medicaid Bulletin and the NC HIEA monthly e-newsletter. The practice areas represented were family practice, health departments, rural health centers, urgent care, dental and orthodontic, and behavioral health, as well as administrators of medical/dental schools, State health directors, N.C. Area Health Education Centers EHR/HIE coaches, and provider advocacy organization representatives.

The focus group participants were asked eight questions:

1. Why did you decide to join us today?
2. What comes to mind when you think of NC HealthConnex, North Carolina's statewide HIE?
3. What is the single greatest barrier to your or your organization's participation with NC HealthConnex?
4. If you could change one thing about NC HealthConnex, what would it be?
5. What would motivate you or your organization to engage more fully in connecting to NC HealthConnex? (Follow-up questions concerned, for example, incentives for connection, data quality improvement.)
6. What would you most like to improve about NC HealthConnex?
7. Does your organization have specific needs related to accessing or sharing patient information that NC HealthConnex may be able to fill?
8. Is there anything we haven't touched on today that you'd like us to know?

The participants' responses strongly reinforced the survey data showing that cost and staff/resources remain the largest barriers to HIE participation. Many noted that since the onset of COVID-19, high levels of burnout and frustration have forced prioritization of patient care and related tasks over practice optimization initiatives, such as connection to the HIE. Many participants expressed a desire for the State to further engage with EHR vendors to regulate or absorb connection costs and to promote price transparency to increase providers' bargaining power and inform decisions related to adoption of new technologies. The providers were very receptive to the idea of financial incentives or grants to help offset the EHR vendor costs of integration and interface maintenance fees.

Some providers asked for more stakeholder involvement and refined guidance and expectations from NC HIEA, State Health Plan, and Medicaid. Many conveyed confusion and frustration at the shifting statutory deadlines and the lack of clarity on consequences for non-compliance. One comment stated the broad consensus: "Tell us exactly what we need to do and by when." The focus group participants—especially those representing the dental, orthodontic, and behavioral health areas—expressed concern about provider attrition from State Health Plan and Medicaid networks in their geographic areas. Many noted the already limited dental and behavioral health provider networks serving (particularly Medicaid) patients today. The public health department participants echoed the concern about how enforcement of the HIE Act could negatively impact network adequacy, and they emphasized health departments' reliance on a few referral sources critical to the care of their patient populations. The participants agreed that maintaining adequate networks of access to care should be of utmost importance in consideration of any recommended changes to the HIE Act.

The focus group participants requested that more information and educational resources be made widely available on how the infrastructure, data flow, and security work to ensure patient privacy and the appropriate use of health data. The behavioral health representatives expressed concerns about the possible unintended consequences of the availability of sensitive patient data, even with statutory and governance controls in place.

Some focus group participants were also NC HealthConnex participants. This sub-group stated that the functionality is exciting, but the workflow with many EHR systems could be improved. Additional feedback included the needs for:

- more specialists in their regions to connect;
- more complete data from some hospital systems; and
- more out-of-state data—particularly to better serve their "snowbird" patient population that resides in North Carolina for only part of the year.

Finally, many participants noted that they or their colleagues use other media to access electronic patient records from other care sites. For example, some independent providers use Epic logins provided by local health systems, and others use Coastal Connect HIE (CCHIE) to access data. (**Note**: The NC HIEA has enabled point-of-care query exchange with CCHIE and large N.C.-based health systems via the eHealth Exchange.)

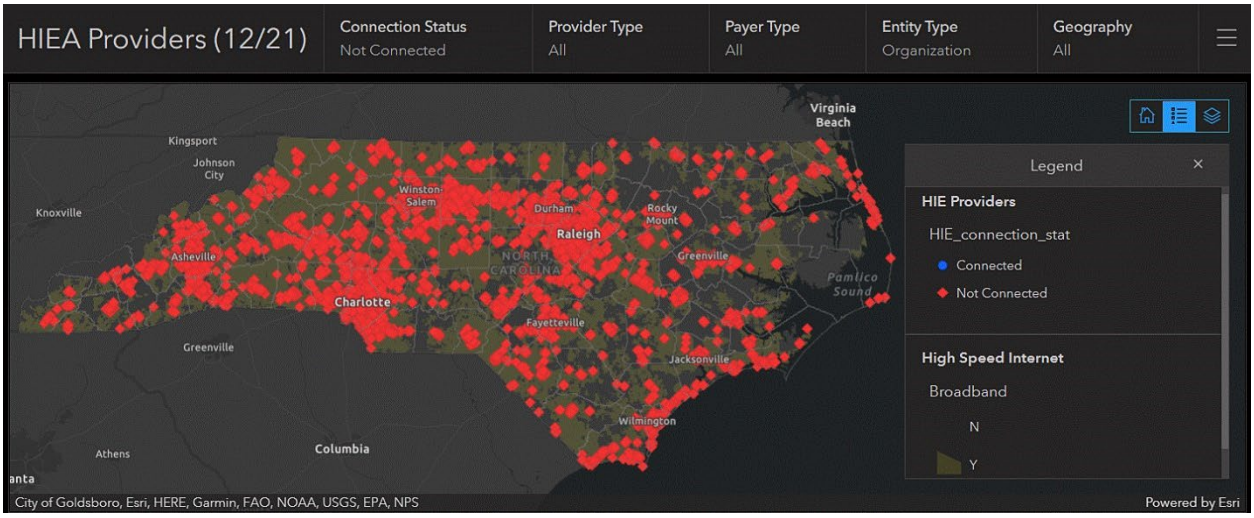
The dental providers comprised over a quarter of all the focus group participants. Their feedback echoed messages the NC HIEA outreach staff has received during the past several years. Generally, dentists and orthodontists were uncertain about why they were included in the requirement to connect to the HIE and how the dental community would benefit from connection. The participants expressed concern that they did not have adequate representation when the connection requirement and voluntary provider designations were written into law. They expressed their view that dental data may not be particularly relevant or useful to patients' other care providers and that most physicians with whom dentists interact are simply concerned with whether or not a patient has a dental home. They acknowledged that other providers might rarely want to know about past dental procedures, which may be much more cost-

effectively gleaned from claims data, but there is virtually no demand for dental notes from other health care providers. The dental focus group participants were skeptical about the utility of use cases for sharing orthodontia data. In their view, the work of "placing braces and brackets" is independent of other health factors or conditions. The dental participants perceived as prohibitive the cost and time/resources to connect to NC HealthConnex, even through less-expensive data aggregators. The focus group participants expressed a concern that critical dental providers, particularly specialists and general dentists who see a high volume of State-funded patients, would exit the Medicaid and State Health Plan networks instead of pursuing HIE connection.

iii. Lack of Access to Affordable, High-Speed Internet

Although access to high-speed internet is improving across the State, according to NCDIT's Division of Broadband and Digital Equity, "at least 1.1 million North Carolina households lack access to high-speed internet, cannot afford it, or do not have the skills needed to take advantage of the digital economy."[46] To approximate the scope of broadband issues and their impact on health care providers' ability to meet HIE connection requirements, the NC HIEA matched provider/entity primary contact addresses to available broadband maps and identified 816 providers/entities without high-speed internet access at the address on file (those areas are marked with a dark gray background in **Figure 13**). However, this may be an underestimate because contact information was obtained from payers and, in some cases, may represent more centrally located payment agents rather than the more dispersed, physical clinical practice (and EHR) locations. In any case, accommodations for those providers unable to maintain a near-real time clinical data interface due to a lack of reliable broadband access will still be necessary in 2022 and beyond.

Figure 13: Unconnected Providers/Entities and Access to High-Speed Internet



Legend: *Red diamond—providers not connected to NC HealthConnex; gray areas - broadband coverage*

[46] NCDIT Division of Broadband and Digital Equity. Available: https://www.ncbroadband.gov/ Accessed: 1/10/2022

D. Outreach Campaign Summary

In February 2022, the NC HIEA undertook a large-scale outreach campaign to share information with the approximately 15,000 identified individual health care providers and 12,000 entities not yet connected, as per NC HIEA records,[47] along with the stakeholder organizations of which those providers are constituents. The goals of the campaign were to:

1. Share information about the HIEA, NC HealthConnex network, and HIE Act;
2. Provide targeted resources and next steps on how to connect and share data;
3. Encourage each recipient or the appropriate business contact at the organization(s) with which they work to act promptly to move forward in the participation and/or connection process;
4. Request each recipient's response in the form of executing a participation agreement or proceeding with their EHR vendor partner and the NC HIEA in a good-faith effort to connect; and,
5. Highlight the NC HIEA's contact information for questions, concerns, or assistance.

All the campaign recipients received a "What to Expect" infographic enclosure detailing the steps to connect to NC HealthConnex. Providers and entities without a participation agreement on file with the NC HIEA received an additional enclosure with background information about the NC HIEA and NC HealthConnex. Copies of the letters, emails, and informational attachments can be found in *Appendix F*.

Note: With the end of HITECH Act funding, ongoing onboarding efforts will require significant resources. As explained in *Summary of Provider and Entity Connectivity, November 2021*, the challenges and complexities of connecting those still unconnected as of this analysis prompt the NC HIEA to expect that it will be several years until statewide connectivity is complete.

[47] As noted in *Appendix D: Analysis Datasets, Methods, and Cost*, the outreach campaign did not include providers with the primary contact address of a U.S. Department of Defense or U.S. Veterans Health Administration health care facility.

III. Recommendations and Discussion

In collaboration with stakeholders and partners and with the aims to: (i) protect patients and their access to care; (ii) minimize compliance costs for the State and those subject to the HIE Act; (iii) maintain the NC HIEA's momentum in building statewide connectivity; (iv) address critical data quality issues; and (v) expand utilization of valuable NC HealthConnex services, the NC HIEA Advisory Board makes the following recommendations for the General Assembly's consideration.

Recommendation 1: Establish Clear Enforcement Articles of the HIE Act.

For the State to achieve the statutory purposes of NC HealthConnex, the "condition of receiving State funds" mandate in the HIE Act must be revised to include an enforcement mechanism that can be fairly administered while balancing two key policy priorities: (i) driving (and maintaining) entities' submission of patient data to NC HealthConnex; and (ii) causing no harm to patients or their ability to access care if an entity chooses not to connect and submit data to NC HealthConnex.

Enforcement of the HIE Act could be improved with the following statutory features:

- **Assign Responsibility for Enforcement.** The HIE Act should expressly assign enforcement responsibility to a particular actor or actors and provide a recurring appropriation to fund those efforts. If the following recommendations are implemented and funding is made available, NCDIT—through the NC HIEA and with limited assistance from State Health Plan and Medicaid partners to provide the necessary data—may be well positioned to undertake this responsibility.
- **Focus Enforcement on the Covered Entities Responsible for Maintaining EHR Systems.** The HIE Act should redefine the actor subject to enforcement. The NC HIEA enters into governance agreements with covered entities that maintain EHR systems on behalf of the individual medical providers and entities required to connect and submit patient data to the State. The NC HIEA builds technical connections to these covered entities' EHRs, which then submit patient data on behalf of individual providers and entities. Thus, these covered entities—which can be identified via *organization National Provider Identifiers (NPI) available from State Health Plan and Medicaid network rosters*—are the appropriate target for enforcement (rather than individual providers, as the statute is currently written).
- **Institute a "State Health Data Assessment Fee" for Non-Compliant Actors.**

  The "condition of receiving State funds" mandate is too severe a consequence for failure to connect to NC HealthConnex. Rather than connecting to NC HealthConnex, many providers and entities may simply choose to stop providing State-funded health care services, which would directly harm patients. Uneven enforcement of the mandate by multiple State and private actors would also likely invite legal challenges. Nevertheless, a measured, meaningful consequence for *not* connecting to NC HealthConnex remains necessary. The Advisory Board recommends an annual "State Health Data Assessment Fee" that would target the *unconnected* covered entities responsible for maintaining the

EHR systems utilized by providers and entities subject to the HIE mandate. Practical and policy considerations support this recommended approach:

- It provides a consequence for failing to connect and submit data to NC HealthConnex without causing harm to patients;
- It focuses enforcement on the covered entities (readily identified by organization NPI numbers) that are responsible for maintaining EHR systems;
- It recognizes that the overall utility of the State's database is diminished by the data gaps created by those unconnected; and
- One State actor can administer enforcement so long as it has the necessary data and appropriate supporting resources.

Importantly, an annual State Health Data Assessment Fee can be tailored to suit particular actors and achieve specific policy goals. For example, different fee amounts could be assessed based upon an organization's size or the amount of payments it receives from the State for providing State-funded health care. The assessment fee could also be set to mirror typical costs for building and maintaining a connection to NC HealthConnex. Thus, an unconnected covered entity would decide whether to pay a State Health Date Assessment fee or spend a similar amount to comply with the HIE Act and realize the value from participating with NC HealthConnex.

- **Avoid Assessing Fees to Those Acting in Good Faith.** After the January 1, 2023, connection deadline passes, any provider or entity that is subject to the HIE Act but is not submitting patient data—regardless of its good-faith efforts or its exceptional circumstances—will be subject to enforcement. The HIE Act should be updated so that enforcement mechanisms targeted at the unconnected do not negatively impact:
  - Those in the connection queue that (i) have executed a participation agreement with the NC HIEA; and (ii) demonstrate an ongoing good-faith effort in the connection process; or
  - Organizations that are in the process of adopting or implementing an EHR for the first time or are transitioning between EHR systems.

Consideration: The threat of withholding all State funds from providers who are not able to meet the deadline for connection and data submission presents a high risk of negatively impacting network adequacy and ultimately patients. Harm to patients caused by diminished access to care could disproportionally affect those in resource-limited areas who are already likely facing health care access and equity issues. Further, the existing framework is administratively infeasible. An enforcement approach must balance the objective of maintaining and growing statewide connectivity while right sizing any penalty associated with non-compliance. To reflect current practice, it must also shift the focus from individual providers to organizations that have decision-making authority over the management of patient health records.

Consideration: The enforcement framework must continue to take into consideration special circumstances and hardships to ensure that vulnerable health care providers and patients are protected.

Consistent with existing safeguards, certain groups of actors should be considered for special accommodations and not be assessed a State Health Data Assessment Fee, including:

- Those who claim an exception on an annual basis through an attestation to the NC HIEA that demonstrates that the actor meets certain hardship criteria, similar to those previously made available by NC DHHS pursuant to N.C. Gen. Stat. § 90-414.4.4(a3).
- Organizations that provide services to historically marginalized patient populations and for whom connection would present significant financial hardship;
- Organizations facing closure or retirement in the next 36 months.

Consideration: The availability of resources to build connections—for both the State and the practices that serve Medicaid beneficiaries and State Health Plan members—merits consideration from the General Assembly as it examines enforcement of the HIE Act. The Advisory Board firmly believes that eliminating data gaps and having as robust a database as possible will serve the HIEA and its stakeholders well; however, it recognizes that the last-mile costs to connect health care practices that have few providers and/or handle only a small volume of State-funded health care claims may be cost prohibitive. Accordingly, the General Assembly may choose to exempt from enforcement certain entities that maintain EHRs on behalf of mandatory providers based on the size of the organization and/or the amount of funds the organization receives for providing State-funded health care. Setting "thresholds" for exempting actors from the proposed State Health Data Assessment Fee would require additional analysis of the amounts paid to State Health Plan and Medicaid providers and covered entities. Further, the actor responsible for administering the proposed State Health Data Assessment Fee would need ready access to any data necessary to establish thresholds and verify that a covered entity claiming an exemption is indeed entitled to one.

Consideration: To manage a compliance program, NCDIT will need additional funding and positions (both NC HIEA provider relations and NCDIT accounts receivables/payables). This approach is not without challenges, but the sentiment of the NC HIEA Advisory Board and its informal work group is that the denial of claims payments is misguided and unnecessarily punitive due to the nature of the way providers are paid and how technical connections are built. However, without a mechanism to hold providers and entities accountable for connection and data submission, the valuable momentum and progress made so far could be threatened. For these reasons, the NC HIEA may be best positioned to administer the proposed compliance program, with support from Medicaid and the State Health Plan to provide all needed data to support administration.

Recommendation 2: Change Voluntary Designations for Certain Providers.

The NC HIEA Advisory Board recommends that **dental providers and chiropractors be classified as providers who may voluntarily connect and submit data** to the HIE Network at N.C. Gen. Stat. § 90-414.4.4(e).

As confirmed by constituent feedback, the current use cases for data sharing tilt largely in the direction of dental and chiropractic providers *accessing* patient history via the NC HealthConnex web-based Clinical

Portal rather than *sharing* their complete, specialized patient records with other physical health providers. This behavior, combined with concerns about negative impacts on network adequacy and patient access should these providers decide to no longer participate in State-funded health care, led to the conclusion that a voluntary designation for dental providers and chiropractors is most appropriate.

A 2020 study published by the American Medical Informatics Association on HIE use by dentists suggests that query-based use of HIEs (i.e., use of a web-based HIE tool separate and distinct from the provider's EHR) is "particularly well-suited to meet missing information needs, as it does not generally require providers to implement new software within practice settings."[48] The NC HIEA urges dental and chiropractic providers to participate with NC HealthConnex as access-only participants, at no cost, allowing them to use the web-based NC HealthConnex Clinical Portal and other HIE services, such as event notifications, to improve patient care experience and outcomes.

Ambulatory surgical centers currently have a voluntary designation. Nevertheless, licensed providers, facility staff, and members of a patient's larger care team have a critical need for the EHRs generated at these surgery centers. Without this information, there may be gaps in patient records. It, therefore, is recommended that the **voluntary designation for ambulatory surgical centers be removed and that these entities be required to connect to NC HealthConnex and submit data**.

See *Practice Areas with Lower Connectivity* and *Barriers to Connection* for additional discussion.

Recommendation 3: Add Seats to the Advisory Board to Represent Accountable Care and Payer Partners.

The NC HIEA Advisory Board recommends that two new seats be added to the Advisory Board: one to be filled by a state-funded payer and the other to be filled by a representative from a provider-led accountable care organization. Accountable care organizations and prepaid health plan payers are important members of the health care ecosystem. Greater engagement of these partners with the NC HIEA and its Advisory Board should positively impact patients and help the State and its providers deliver value-based care. Their perspectives on data needs will be useful for the NC HIEA as it continues to refine the operations and goals of NC HealthConnex for the State, the health care community, and patients. The public, transparent meetings of the Advisory Board will provide a formal, neutral forum for collaboration between Advisory Board members on matters such as shared data needs, goals, and measures.

Payers and accountable care organizations are in a unique position to encourage connection to and adoption of NC HealthConnex, help craft quality/value-based care programs, and assist with grant opportunities. They also directly influence the behavior of network providers through their existing lines of regular communication and their shared, direct stake in improving patient outcomes. After the General Assembly appoints representatives to the proposed accountable care organizations and payer seats, the NC HIEA, in concert with the full Advisory Board, should identify new strategies and opportunities to

[48] Taylor, Heather L., Nate C. Apathy, Joshua R. Vest. *Health Information Exchange Use During Dental Visits*. American Medical Informatics Association Annual Symposium Proceedings 2020; 2020: 1210–1219. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8075496/ Accessed: 1/25/2022

leverage accountable care organizations and payers to support the NC HIEA's statutory mission and benefit patients.

Discussions regarding this recommendation yielded a preliminary list of topics—some of which the NC HIEA has already explored informally with accountable care organizations and payers—that merit broader, public consideration as the NC HIEA works to create an aligned payer/provider strategy:

1. Accountable care organizations and payers' role in encouraging connection: While the HIE has seen significant connectivity from several key provider groups, accountable care organizations and payers could help identify additional strategies to incentivize unconnected providers—including behavioral health providers, long-term care providers, and others—to join NC HealthConnex through equitably-available positive financial incentives. As a related matter, the Advisory Board could examine previous and existing incentive structures to identify relevant lessons on how to operationalize and deploy any new initiatives (e.g., the federal HITECH Medicare and Medicaid EHR Incentive Programs, NC DHHS Office of Rural Health's behavioral health EHR incentive program). Providers that were early adopters of NC HealthConnex should not be omitted from any positive incentive programs offered by payer stakeholders.
2. Accountable care organizations and payers' role in ensuring data quality: Accountable care organizations and payers can help ensure the submission of high-quality data to NC HealthConnex. Developing additional data quality strategies that leverage accountable care organizations' and payers' relationships with providers will help ensure that downstream use cases involving HIE data are viable. For example, such strategies could include accountable care organizations and payers by (i) providing positive financial incentives to providers that meet standards for specific data elements (e.g., demographic fields—race/ethnicity, gender, sexual orientation, age, and language—that are emerging as state and federal reporting priorities due to an increased focus on health equity); and/or (ii) targeting specific groups for both connection and data quality incentives (e.g., examining equitably-available positive financial incentives for connecting behavioral health providers to improve accurate data collection for depression screening and treatment, and/or improving the quality of HIE data feeds for other providers who conduct screenings). Such activities should be a useful complement to other data quality initiatives undertaken by the NC HIEA in direct collaboration with clinicians and the provider community.
3. Identification, examination, and promotion of potential accountable care organization and/or payer use cases for NC HealthConnex data: Accountable care organizations' and payers' use of HIE data and functionalities could improve clinical outcomes for patients and help the State realize greater value from its investment in NC HealthConnex. The expansion of the HIEA Advisory Board to include accountable care organization and payer representatives should provide guidance for accountable care organizations, payers, and providers' use of and access to HIE data for value-based care programs. Existing and potential examples include specific uses for:

    a. NC*Notify event notification service (hospital admission, discharge, and transfer alerts or using other data sources or elements to trigger notifications of specific events for defined patient populations);

    b. Clinical data extracts;

c. FHIR API (Fast Healthcare Interoperability Resource application programming interface) connectivity for use in data sharing with patients or simply as a primary delivery mode of data to health plans;

d. Lab values for hybrid clinical quality measures;

e. Use of updated patient contact information to coordinate care;

f. Automated or expedited prior approvals; and

g. Payers' claims data.

To expedite these efforts, the Advisory Board should participate in or leverage work products by others examining similar issues. Candidates include the NC DHB Advanced Medical Home Technical Advisory Group (TAG), comprised of 15 members, including all of NC DHB's prepaid health plan partners and Medicaid providers, and the Duke-Margolis Center for Health Policy's Health Care Transformation Work Group. Other examples may be gleaned from work in other states with a history of payer involvement in statewide HIE development and services; see, for example, such as Michigan or Kansas.

Regardless of whether payers and accountable care organizations are provided representative seats on the Advisory Board, further exploration of these matters will occur. Expanding representation on the Advisory Board will allow for greater transparency and input from the public and NC HealthConnex participants and stakeholders.

D. Conclusion

The NC HIEA and its Advisory Board remain committed to delivering the requirements of the HIE Act and executing the vision of a statewide infrastructure to safely and securely share health information through a trusted network to improve health care quality and outcomes for North Carolinians. If found favorable by the General Assembly, the recommendations outlined herein will ease the challenges to and promote the value of achieving this mission.

Appendix A: Advisory Board Membership

Appointed by the N.C. General Assembly

Dr. William G. Way, Chair
Director of Diagnostic Imaging Radiologist, Wake Radiology
Representative of Licensed Physicians

Donette Herring, Vice Chair
Chief Information Officer, Vidant Health
Representative of Critical Access Hospitals

Dr. Harriett Burns
Physician, Piedmont Health Services
Representative of Federally Qualified Health Centers

Dr. Neal Chawla
Chief Medical Information Officer, WakeMed
Health System Representative

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

Dr. Richard Pro
Chief Data and Analytics Officer, Cone Health
Representative of Technical Expertise in Data Analytics

Carolyn D. Spence
Chief Information Officer, Alexander Youth Network
Representative of Behavioral Health Providers

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

Ex-Officio Members

Secretary James A. Weaver (non-voting member)
N.C. Department of Information Technology

Secretary Kody Kinsley (non-voting member)
N.C. Department of Health and Human Services

Carol Burroughs (non-voting member)
Director, Government Data Analytics Center, N.C. Department of Information Technology

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

Appendix B: N.C. Session Law 2021-26 HIEA Informal Work Group Membership

Carolyn Spence, Work Group Chair – Chief Information Officer, Alexander Youth Network

Christy Revels, Work Group Lead NC HIEA Staff – Strategic Solutions, NC HIEA

Joe Bastante – Chief Technology Officer, Blue Cross and Blue Shield of North Carolina

Gerald Belton – Business Intelligence Developer, State Health Plan

Kendall Bourdon – Director of Contracting and Compliance, State Health Plan

Jennifer Braley – Manager, Projects, State Health Plan

Christie Burris – Executive Director, NC HIEA

Melanie Bush – Chief Administration Officer, NC DHHS Division of Health Benefits

Kelly Crosbie – Chief Quality Officer, NC DHHS Division of Health Benefits

Barry Hillman – Director of eSolutions, Blue Cross and Blue Shield of North Carolina

Leigh Jackson – Legislative Director, NC Department of Information Technology

Dr. Aaron Leininger – Network Medical Director, Triangle East, UNC Health

Eric Myers – Principal Consultant and Lead HIE Strategic Consultant, SAS

Michelle Ries – Associate Director, NC Institute of Medicine

Layne Roberts – Data Analytics Manager, State Health Plan

Eric Snider – Deputy General Counsel, NC Department of Information Technology and NC HIEA Legal Counsel

Dr. William G. Way – Chief Medical Officer, Wake Radiology and Chair, NC HIEA Advisory Board

Chris Weathington – Director, NC Area Health Education Centers (NC AHEC) Practice Support

Appendix C: Medicaid Bulletin from November 17, 2020

Legislation Gives Certain Providers More Time to Connect to NC HealthConnex

November 17, 2020

This bulletin provides important information regarding changes in the law concerning connection deadlines to NC HealthConnex, the state-designated health information exchange. It also describes a "Hardship Extension Process" coordinated by the North Carolina Department of Health and Human Services (NCDHHS) pursuant N.C. Gen. Stat. § 90-414.4(a3). The Hardship Extension Process is available to certain Medicaid, NC Health Choice, NC State Health Plan and BCNC Blue Option network providers and will provide them additional time to connect to NC HealthConnex.

Background Information: NC HealthConnex and Mandatory Connections

The North Carolina Health Information Exchange Authority (NC HIEA) is the state agency that manages NC HealthConnex, a statewide health information exchange designed to enable health care information to flow securely and privately between providers throughout the health care system. You can read more about NC HealthConnex online and in the Statewide Health Information Exchange Act, N.C. Gen. Stat. §§ 90-414.1 et seq.

Providers were previously notified that state law (N.C. Gen. Stat. § 90-414.4) requires all health care providers who receive any state funds for the provision of health care services (e.g., Medicaid, NC Health Choice, State Health Plan, etc.) to connect and submit patient demographic and clinical data to NC HealthConnex by certain dates in order to continue to receive payment for services.

Recent Legislative Changes Impacting Connection Requirements

October 1, 2021, Deadline

On May 4, 2020, Governor Cooper signed into law Session Law 2020-3 (COVID-19 Recovery Act). Among other things, this Session Law extends the deadline for providers required to connect and submit data to NC HealthConnex from June 1, 2020, until **Oct. 1, 2021. This extension provides additional time for providers to move through the technical process to complete onboarding.**

Important Note: Those who are required to connect to NC HealthConnex, but who have not yet taken steps to do so, should contact the NC HIEA at 919-754-6912 or hiea@nc.gov, as there is a large queue of provider organizations in the current onboarding status. In order to meet the State's required deadlines for connectivity, the NC HIEA is prioritizing onboarding by provider types. Health care providers will be contacted by NC HIEA soon to receive their onboarding timeframe. Providers who choose not to move forward during their assigned timeframe will be placed at the end of the queue and may risk not being connected by the required deadlines.

Mandatory and Voluntary Participation

On June 6, 2019, Governor Cooper signed into law Session Law 2019-23, This law identified certain providers and made their participation in NC HealthConnex voluntary instead of mandatory.

Specifically, the law states that the following provider types are no longer required to connect and submit data to NC HealthConnex, but may choose to do so on a **voluntary basis**:

- Community-based long-term services and supports providers, including personal care services, private duty nursing, home health, hospice and palliative care;
- Intellectual and development disability services and supports providers, such as day supports and supported living providers;
- Community Alternatives Program waiver services (including Community Alternatives Program for Disabled Adults (CAP/DA), Community Alternatives Program for Children (CAP/C), Innovations, Program of All-Inclusive Care for the Elderly (PACE) and Respite) providers;
- Eye and vision services providers;
- Speech, language, and hearing services providers;
- Occupational and physical therapy providers;
- Durable medical equipment providers;
- Nonemergency medical transportation service providers;
- Ambulance (emergency medical transportation service) providers; and
- Local education agencies and school-based health providers

Voluntary providers that wish to participate should contact NC HIEA at 919-754-6912 or hiea@nc.gov.

Department of Health and Human Services Hardship Extension Process

Session Law 2019-23 also modified the Statewide Health Information Exchange Act and gave NCDHHS the authority to grant a temporary Hardship Extension to classes of providers for whom acquiring and implementing an electronic health record (EHR) system and connecting to the HIE Network would constitute an undue hardship. A Hardship Extension delays the connection deadline until as late as Dec. 31, 2022. All providers that receive a hardship extension must be able to meet their statutory obligations by Jan. 1, 2023.

To reduce the administrative burden and maintain accessibility to services, NCDHHS is automatically granting a Hardship Extension for provider types that can be identified by a qualifying taxonomy. If a provider falls within one of the types outlined below, the temporary extension is automatically granted.

- Chiropractors;
- Behavioral Health Residential Treatment Facilities;
- Therapeutic Foster Care Treatment Facilities;
- Psychiatric Residential Treatment Facilities;
- Behavioral Health Providers Other Than Psychiatrists;
- Children's Developmental Services Agencies

For other providers, meeting criteria for a Hardship Extension cannot be automatically determined and will require the provider to contact NCDHHS to attest to their qualifying circumstance(s). If a provider falls within one of the circumstances outlined below, a temporary Hardship Extension may be requested.

- Chiropractic organizations with a single or multi-specialty taxonomy
- Rehabilitative, Restorative and Assistive Technology Service Providers for the North Carolina Assistive Technology Program;
- Providers nearing retirement on or before Dec. 31, 2022;
- Providers who are closing their practices on or before Dec. 31, 2022;
- Providers operating in rural areas with lack of access to affordable internet / broadband capacity adequate to support implementation of EHR technology and connection to the HIE Network; and
- Providers in a community with few or no alternatives that not granting a Hardship Extension for a provider or practice may lead to the loss of or a material reduction in access to care.

To request a temporary Hardship Extension, providers must submit the NC DHHS HIE Hardship Extension Request Form electronically to the DHB Provider Ombudsman at Medicaid.ProviderOmbudsman@dhhs.nc.gov. The form is available at https://medicaid.ncdhhs.gov/providers/forms under Category "HIE Hardship Extension." Inquiries must be submitted by the enrolled provider, the office administrator (OA), or a managing employee of record. This process applies to Medicaid, NC Health Choice, NC State Health Plan and BCNC Blue Option participating providers.

Providers receiving the Hardship Extension are still required to comply with the HIEA participation agreement, the technical onboarding requirements documented in the NC HIEA contract, and must be connected and submitting data by the Hardship Extension deadline date of Dec. 31, 2022. Connecting to NC HealthConnex can take up to 12 months depending on the provider's EHR status, so providers are strongly encouraged to begin technical development **no later** than Jan. 1, 2022.

Providers with this extended deadline will be responsible for ensuring they have a valid participation agreement on file with the NC HIEA and communicating their readiness to the HIEA to begin development. Any provider with questions regarding their status on the List of NC HealthConnex Participants should contact the NC HIEA.

Appendix D: Analysis Datasets, Methods, and Cost

Datasets and Methods

To determine all individual providers and entities subject to the HIE Act, the N.C. Health Information Exchange Authority acquired information on all active Medicaid and State Health Plan providers directly from the N.C. Department of Health and Human Services' Division of Health Benefits (NC DHB) and the North Carolina State Health Plan for Teachers and State Employees. This data included:

- Provider names;
- Internal (NC DHB and State Health Plan) and National Provider Identifiers (NPIs);
- Provider type and specialty information;
- Individual-to-organization affiliation data;
- Contact information (addresses, email, and phone information, where available); and,
- From NC DHB, a "Medicaid HIE Indicator," where present, identifying providers and entities Medicaid has flagged as connected based on existing weekly work process by the NC HIEA and NC DHB.

These datasets were merged to produce a report of unique individual and entity-level NPIs, a corresponding primary provider type and contact information.[49] Leveraging the "Medicaid HIE Indicator," connectivity data from the HIE's internal systems, and affiliation data from both health plans, all individuals and entities were assigned a status of engagement with the HIE: connected, not connected, or voluntary for connection. The latter group was identified by whether a provider's practice area fell into those called out in N.C. Gen. Stat. 414.4(e) as voluntary for connection.[50]

After examining the initial data, the NC HIEA performed a secondary analysis using street address information from HIE-connected facility sites to identify an additional 17,000+ provider/entity-to-(connected) organization affiliations, reducing the unconnected pool of providers significantly. The NC HIEA also removed from its list of unconnected providers/entities subject to HIE Act requirements:

1. All individual pharmacists, as the provisions of the HIE Act are focused on the submission of claims data from pharmacies rather than data submission of any kind by individual pharmacists;[51] and,

[49] Primary contact information was derived by logic guided by the NC DHB and State Health Plan.

[50] The NC HIEA completed crosswalks of statutory voluntary designations with Medicaid taxonomy codes and State Health Plan provider types/descriptions. NC DHB validated the NC Medicaid crosswalk.

[51] "*Pharmacies* registered with the North Carolina Board of Pharmacy under Article 4A of the Chapter 90 of the General Statutes" are required to connect and submit claims data. *Pharmacist* and *pharmacy* have unique definitions in Article 4A Chapter 90, with *pharmacy* focused on "any place where prescription drugs are dispensed and compounded." Further, the "Pharmacy permit" statute in 90-85.21 discusses requirements for "each pharmacy" to take steps to register. Based on these statutory provisions, the NC HIEA has determined a focus on connecting pharmacy *organizations* rather than individual pharmacists.

2. All providers/entities with a primary address matching a U.S. Department of Defense or Veterans' Administration Health Care facility, as these facilities are connected via the bidirectional nationwide eHealth Exchange network, and the care provided within them is almost universally federally funded.[52]

Note that the NC HIEA continues to work toward a source of truth by manually validating its address-based analysis with health systems to ensure accurate provider attribution and expects to continue its outreach initiative throughout the spring, reaching out to individuals no longer affiliated per health system records as those discoveries are made.

Cost of Analysis

RESOURCE	HOURS	TOTAL
CONTRACT RESOURCES	851.25	$187,275
NC HIEA CONTRACT STAFF	120	$8,760
TOTAL	**1,210.75**	**$196,035**

[52] U.S. Department of Veterans Affairs. *VA health care and other insurance.* Available: https://www.va.gov/health-care/about-va-health-benefits/va-health-care-and-other-insurance/ Accessed 1/10/2022.

Appendix E: Health Care Provider Surveys

N.C. Department of Health and Human Services Provider Preparedness Survey, Fall 2020

(HIE Excerpt)

Primary Care Preparedness Survey Analysis: Draft 1

Data was cleaned to remove any responses that were fully blank beyond practice name and ID prior to analysis. At this time, partial responses were kept. In some cases, not all percentages add to 100% due to the option to select multiple answers.

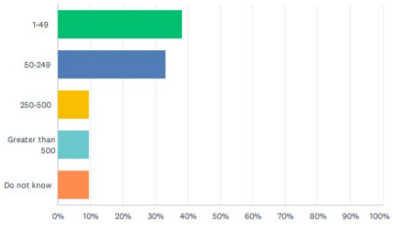
HIE

- **61.2%** (178/291) of practices reported that they are currently submitting data to the HIE.
- **30.9%** (90/291) of practices reported that they are not currently submitting data to the HIE.
    - Status of submitting data to the HIE
        - Of those not submitting to the HIE, **33.3%** (30/90) reported that they are currently onboarding.
        - **31.1%** (28/90) reported that COVID has challenged their ability to meet connection deadlines.
        - **15.6%** (14/90) reported that connecting to the HIE is not a priority for their practice.
        - **11.1%** (10/90) reported that they plan to connect in the future and will seek a hardship extension.
        - One practice reported they are close to retirement or are closing their practice in the near future.
    - HIE related needs
        - Of those not submitting to the HIE, **43.3%** (39/90) reported that they need training on features and implementation into workflow.
        - **37.8%** (34/90) reported that they needed technical assistance.
        - **22.2%** (20/90) reported that they need additional staff or contract resources for ongoing maintenance and training related to the electronic health record.
        - **10.0%** (9/90) reported that they need financial support to pay ongoing expenses related to electronic health record software.
        - **8.9%** (8/90) reported that they do not need additional resources to participate.
        - **5.6%** (5/90) reported that they needed financial support to purchase an electronic health record.
        - **5.6%** (5/90) reported that they need computers, desk, wiring and other physical requirements.
        - **11.1%** (10/90) reported other reasons including needing an opt out option for minors, needing additional time for paperwork, and needing additional staff.
    - Of those not submitting to the HIE, **57,8%** (52.90) were independent practices, **14.4%** (13/90) were FQHCs, **8.9%** (8/90) were local health departments **2.2%** (2/90) were hospital or health system owned practices, **1.1%** (1/90) were RHCs, and **6.7%** (10/90) were other settings including free clinics, nonprofit pharmacies, FQHC and local health department, and primary care.
- **7.9%** (23/291) of practices did not report whether or not they are currently submitting data to the HIE.

NC HIEA Electronic Health Record Vendor Survey, Spring 2020

Q2 What is your approximate North Carolina customer-base?

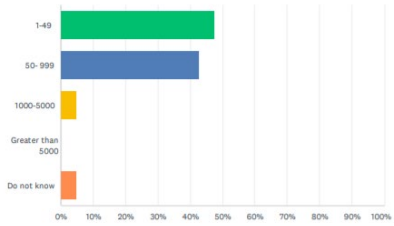
Answered: 21 Skipped: 0



ANSWER CHOICES	RESPONSES	
1-49	38.10%	8
50-249	33.33%	7
250-500	9.52%	2
Greater than 500	9.52%	2
Do not know	9.52%	2
TOTAL		21

Q3 What is the average practice size of your customers?

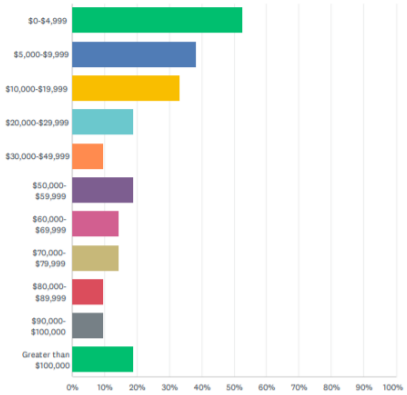
Answered: 21 Skipped: 0



ANSWER CHOICES	RESPONSES	
1-49	47.62%	10
50- 999	42.86%	9
1000-5000	4.76%	1
Greater than 5000	0.00%	0
Do not know	4.76%	1
TOTAL		21

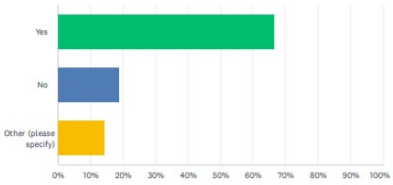
Q4 What is the average cost to prospective customers interested in implementing your EHR? For the purposes of this survey implementation is defined as technical infrastructure only. Training costs should be excluded. Please check all that apply if you have varying cost structures.

Answered: 21 Skipped: 0



Q5 Does your EHR charge customers a cost to integrate to NC HealthConnex?

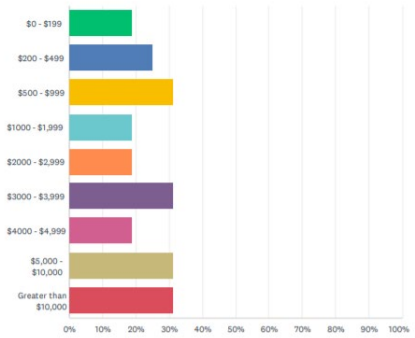
Answered: 21 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	66.67%	14
No	19.05%	4
Other (please specify)	14.29%	3
TOTAL		21

Q6 If yes, what is the average cost for integrating to NC HealthConnex. Please check all that apply if you have varying cost structures.

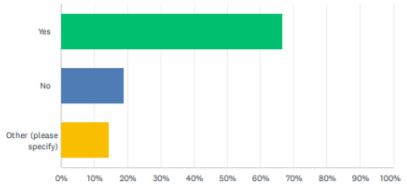
Answered: 16 Skipped: 5



ANSWER CHOICES	RESPONSES	
$0 - $199	18.75%	3
$200 - $499	25.00%	4
$500 - $999	31.25%	5
$1000 - $1,999	18.75%	3
$2000 - $2,999	18.75%	3
$3000 - $3,999	31.25%	5
$4000 - $4,999	18.75%	3
$5,000 - $10,000	31.25%	5
Greater than $10,000	31.25%	5
Total Respondents: 16		

Q7 Does your EHR charge a maintenance cost to your customers after integration to NC HealthConnex is complete?

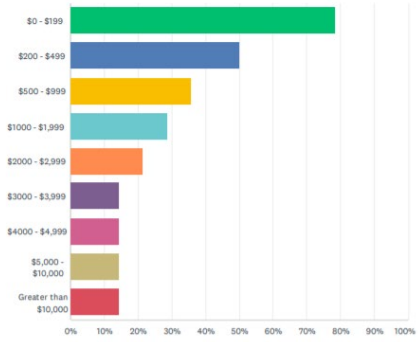
Answered: 21 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	66.67%	14
No	19.05%	4
Other (please specify)	14.29%	3
TOTAL		21

Q8 If yes, what is the approximate monthly maintenance cost for customers who have integrated to NC HealthConnex. Please check all that apply if you have varying cost structures.

Answered: 14 Skipped: 7



ANSWER CHOICES	RESPONSES	
$0 - $199	78.57%	11
$200 - $499	50.00%	7
$500 - $999	35.71%	5
$1000 - $1,999	28.57%	4
$2000 - $2,999	21.43%	3
$3000 - $3,999	14.29%	2
$4000 - $4,999	14.29%	2
$5,000 - $10,000	14.29%	2
Greater than $10,000	14.29%	2
Total Respondents: 14		

Appendix F: Outreach Campaign Communications

Email Communication to NC HIEA Stakeholders

Sent in February 2022

Subject Line: NC HealthConnex: Upcoming Outreach to North Carolina Health Care Providers

Dear valued stakeholders,

Since it became operational in 2016, the North Carolina Health Information Exchange Authority (NC HIEA) has been on a mission to connect health care providers and enable them to safely and securely share health information through a trusted network to improve health care quality and outcomes for North Carolinians.

Last summer we worked with the NC General Assembly to extend connection deadlines due to the enormity of the pandemic and the challenges faced by frontline health care workers. However, the same legislation that extended the connectivity timeline to January 1, 2023, also required a large-scale effort to report to legislators on the status of statewide connectivity.

In mid-February 2022, the NC HIEA will continue its outreach efforts to *unconnected* members of the health care community by mailing letters to providers and organizations with whom your organization interacts. Consistent with directions from the North Carolina General Assembly, these letters "share information with each provider or entity about the Statewide Health Information Exchange Act and how to connect to the HIE Network," and encourage a response in the form of engagement in the legal agreement and/or connection process. Copies of the letters and enclosures are attached for your reference. Providers and organizations are encouraged to take action immediately to meet the January 1, 2023 deadline.

While the letters explicitly direct health care providers and entities to contact the NC HIEA with any questions, we anticipate that your organization may receive calls and emails from your stakeholders about NC HealthConnex and our forthcoming communication. We ask that you please make the appropriate personnel in your organization aware of the circumstances surrounding any such inquiries and redirect those questions to the NC HIEA at HIEA@nc.gov or (919) 754-6912.

Additionally, the NC HIEA's Advisory Board was directed to "Recommend" appropriate features or actions to support enforcement of the Statewide Health Information Exchange Act." See N.C. Session Law 2021-26. That report will be submitted to the Joint Legislative Oversight Committee for Health and Human Services on or before April 15.

Meanwhile, the NC HIEA welcomes any questions about this initiative, and would also like to invite you to assist us in educating your members by including information in your member newsletters or other communications about the state-designated HIE and the HIE Act. To support any educational efforts, you may decide to undertake, we've attached the NC HIEA Comms Toolkit.

The NC HIEA is successful in large part due to your support and partnership during our first six years of operation. **Please do not hesitate to reach out with any questions, concerns, or to request a meeting with me to learn more about our work.**

Sincerely,

Christie

Christie Burris
Executive Director
Health Information Exchange Authority (HIEA)
North Carolina Department of Information Technology

Office: (919) 754-6956
Mobile: (919) 480-0067
www.nchealthconnex.gov

Mailing Address:
Mail Service Center 4101
Raleigh, NC 27699-4101

Letter/Email to Health Care Providers Not Yet Engaged with NC HealthConnex

Sent in February 2022

NCDIT NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

Roy Cooper
Governor

James A. Weaver
Secretary and State Chief Information Officer

[February X, 2022]

RE: Take Action Now to Participate with NC HealthConnex

Dear Health Care Provider/Practice Manager:

Our records at the North Carolina Health Information Exchange Authority (HIEA) indicate that you or the organization(s) with which you are employed have not taken steps to participate with NC HealthConnex, the State-designated health information exchange (HIE). The purpose of this letter is to:

- provide you with information about the NC HIEA and the NC HealthConnex platform, including how it can improve patient care;
- encourage you to review laws relevant to you and your practice if you render health care services to beneficiaries of State-funded health care;
- inform you that pursuant to N.C. Session Law 2021-26 passed in May 2021, we are compiling a report due to the General Assembly in March 2022 containing information on this outreach initiative and the status of each provider and entity's effort to connect to NC HealthConnex;
- alert you to the January 1, 2023, deadline to connect and submit clinical and demographic data to NC HealthConnex, as an enrolled provider of a state-funded health care plan; and
- direct you to resources to help you or your organization(s) join NC HealthConnex and learn more about the secure exchange of patient information.

The HIEA and NC HealthConnex
In 2015, the General Assembly of North Carolina established the State-managed Health Information Exchange Authority (NC HIEA) to oversee and administer the N.C. Health Information Exchange Network (NCGS 90-414.7), NC HealthConnex. The NC HIEA is housed within the N.C. Department of Information Technology's Government Data Analytics Center.

NC HealthConnex is a tool to link disparate systems and existing HIE networks together to deliver a holistic view of patient records. It allows you to access your patients' comprehensive records across multiple providers, as well as review labs, diagnostics, history, allergies, medications and more. This results in less duplicative testing, more efficient and accurate diagnoses, recommendations and treatment and improved coordination across all levels of care.

For more information about the NC HIEA and NC HealthConnex, please see the enclosed fact sheet or visit our website at https://hiea.nc.gov/providers/about-nc-healthconnex. You can also use your mobile device to scan the QR code at right to access this website.

Legal Considerations
NC HealthConnex is governed by the Statewide Health Information Exchange Act. We encourage you to review the Act and to consult with your attorney or compliance officer if you have questions about how the Act applies to you. The law dictates specific providers and entities must connect to NC HealthConnex and submit certain patient data as a condition of receiving State funds related to the provision of

1

services rendered to Medicaid and other State-funded health care program beneficiaries (see N.C. Gen. Stat. § 90-414.4(b)).

Be advised that subject health care providers now have a legislated deadline of **January 1, 2023,** to participate with NC HealthConnex and submit specified patient data. Building this connection can take up to six months, and demand for new connections is expected to increase throughout 2022. Providers that do not take timely action to connect are not guaranteed to meet the legislated deadline. We encourage you to take steps now to connect and avoid any potential disruption of state funds.

Note that the NC HIEA builds connections between NC HealthConnex and entity- or facility-level electronic health record systems (EHRs). If the EHR you use is managed by your employer(s), please share this letter with the appropriate personnel in your organization(s) to take action.

Next Steps
We strongly encourage you or the appropriate contact(s) at your organization(s) to review the enclosure, "What to Expect," and take the steps therein and below to explore informational resources, get in touch, and begin the process of participating with NC HealthConnex. To begin:

1. **Learn More**:
    - To register for the next monthly informational call on the onboarding process, visit https://hiea.nc.gov/providers/how-connect
    - To view our library of answers to frequently asked questions on a variety of topics, visit https://hiea.nc.gov/frequently-asked-questions

2. **Complete a NC HealthConnex Participation Agreement**. The NC HIEA typically engages in Participation Agreements with organizations, and employed providers are covered under those agreements. The appropriate contact(s) at your organization(s) should visit https://hiea.nc.gov/participate to select the agreement suitable to the organization, and then carefully read, review, and complete the agreement. It may be returned either by mail to the mailing address in the signature of this letter, or preferably, by email to hiea@nc.gov.
3. **Contact Us**. If you or your organization(s) have questions or concerns about participation with NC HealthConnex, or if you believe our records regarding your participation status are incorrect, please contact us at hiea@nc.gov or (919) 754-6912.

Having access to a patient's complete medical record is now more important than ever. Once connected, you and other providers treating your patients statewide will benefit from seeing more complete health information from all facilities where patients receive care.

We look forward to welcoming you and your organization(s) to the NC HealthConnex network.

Sincerely,

N.C. Health Information Exchange Authority
Mail Service Center 4101
Raleigh, NC 27699-4101
(919) 754-6912
hiea@nc.gov

Letter/Email to Health Care Providers Not Yet Connected to NC HealthConnex

Sent in February and March 2022

NCDIT NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

Roy Cooper
Governor

James A. Weaver
Secretary and State Chief Information Officer

[February X, 2022]

RE: Take Action Now to Complete Your Connection to NC HealthConnex

Dear Health Care Provider/Practice Manager:

Our records at the North Carolina Health Information Exchange Authority (NC HIEA) indicate that you or your organization have previously executed an agreement to facilitate your connection to NC HealthConnex, the State-designated health information exchange. However, we note that your technical connection to NC HealthConnex is not complete and/or your organization is not yet sharing patient data.

With over 5,000 facilities currently in process, demand for onboarding services is high and expected to increase significantly in advance of the new, final connection and data submission deadline of **January 1, 2023**. Providers that do not stay engaged in the connection process are not guaranteed to meet the legislated deadline.

We at the NC HIEA strongly encourage you, or the appropriate contact at your organization, to:

1. **Determine Your Next Steps**. Review the enclosure, "What to Expect," for an overview of the process and what lies ahead. If you are not actively engaged in the technical connection process at this time, connect with our technical partner, SAS at HIESupport@SAS.com or (919) 531-2700, and/or your EHR vendor.

2. **Explore Our Resources**:
   - To register for the next monthly informational call on the onboarding process, visit https://hiea.nc.gov/providers/how-connect
   - To access online training modules or learn more about our virtual and onsite training opportunities, visit https://hiea.nc.gov/providers/training-resources
   - To view our library of answers to frequently asked questions on a variety of topics, visit https://hiea.nc.gov/frequently-asked-questions

   **To quickly and easily access the NC HIEA website where the information above is located, scan the QR code to the right using your mobile device.*

3. **Contact Us**. If you have questions or concerns about your participation with NC HealthConnex, or if you believe our records regarding your participation status are incorrect, please contact us at hiea@nc.gov or (919) 754-6912.

Be advised that failure to satisfy the connection and submission deadline may have consequences for you or your healthcare organization. By law, specific providers and entities must connect to NC HealthConnex and submit certain patient data as a condition of receiving State funds related to the provision of services rendered to Medicaid and other State-funded health care program beneficiaries (see N.C. Gen. Stat. § 90-414.4(b)). Additionally, pursuant to N.C. Session Law 2021-26 passed in May 2021, the NC HIEA is compiling a report due to the General Assembly in March 2022 containing

information on this outreach initiative and the status of each provider and entity's effort to connect to NC HealthConnex.

Having access to a patient's complete medical record is now more important than ever. Once connected, you and other providers treating your patients statewide will benefit from seeing more complete health information from connected facilities where patients receive care.

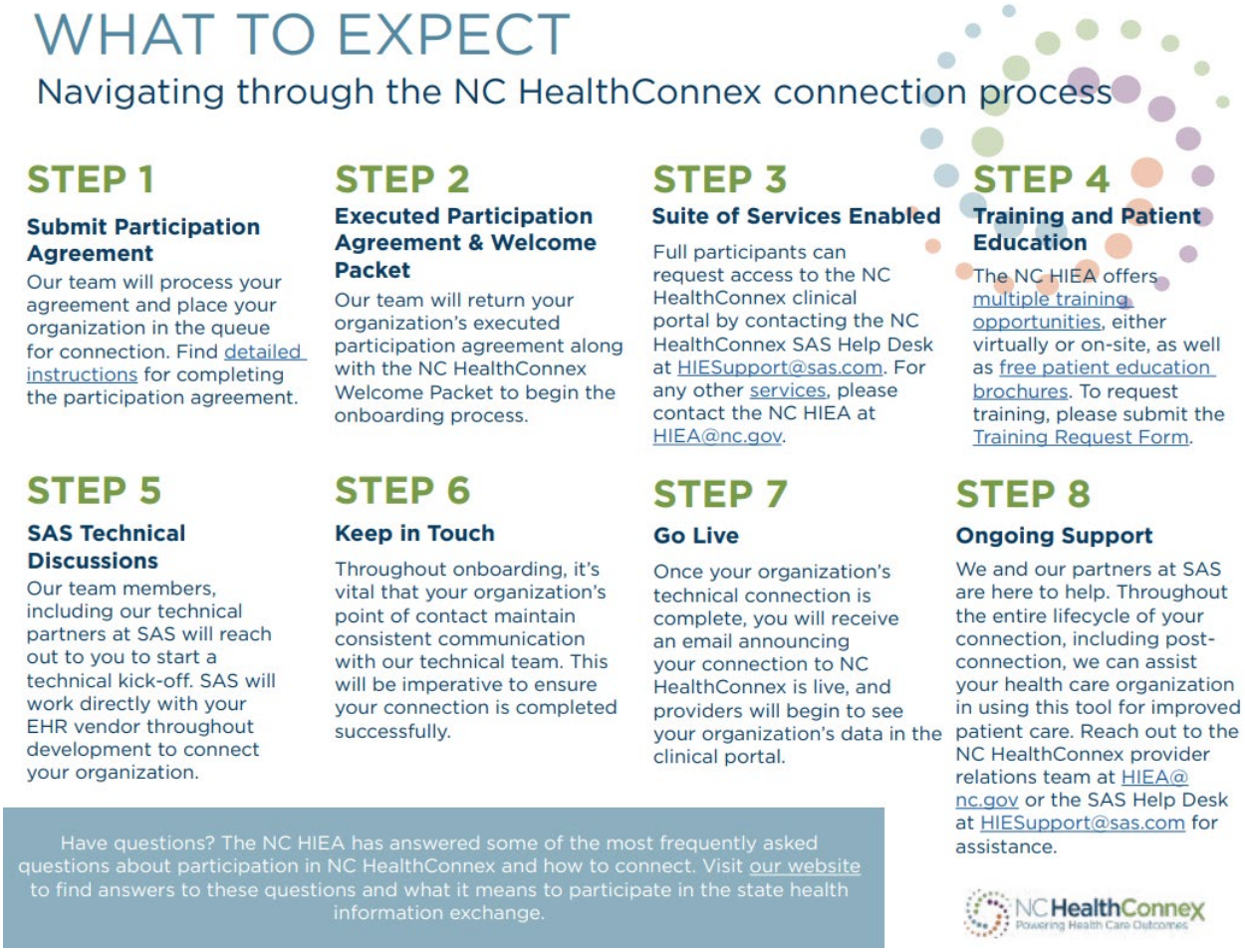
We look forward to bringing your organization live with the NC HealthConnex network.

Sincerely,

N.C. Health Information Exchange Authority
Mail Service Center 4101
Raleigh, NC 27699-4101
(919) 754-6912
hiea@nc.gov

"What to Expect: Navigating through the NC HealthConnex Connection Process" Enclosure

Sent to All Letter/Email Recipients



"About the NC HIEA" Enclosure

Sent to Unengaged Letter/Email Recipients

North Carolina Health Information Exchange Authority (NC HIEA)

About the NC HIEA

Health Information Exchange (HIE) systems have been in development nationwide since a federal law was passed in 2009 to promote the use of electronic movement and use of health information among health care providers. HIEs exist to improve health care quality, enhance patient safety, improve health outcomes, and reduce overall health care costs by enabling health information to be available securely whenever doctors, nurses, and specialists need it.

In 2015 the North Carolina General Assembly established the state-managed Health Information Exchange Authority (NC HIEA) to oversee and administer the NC Health Information Exchange Network, now called NC HealthConnex (NCGS 90-414.7). The NC HIEA is housed within the NC Department of Information Technology's (DIT) Government Data Analytics Center (GDAC).

NC HealthConnex is a secure, standardized electronic system in which providers can share important patient health information. The use of this system promotes the access, exchange and analysis of health information.

While NC HealthConnex participation is voluntary, the law identifies certain entities and providers who must connect and submit patient data to receive payment for services rendered under state-funded programs, such as Medicaid and the State Health Plan (NCGS 90-414.4.) For those who must connect to receive state-funded payments, a new law gives them until Jan. 1, 2023 (SL 2021-26).

Why is the HIE - NC HealthConnex - Important?

NC HealthConnex
Powering Health Care Outcomes

North Carolina's state-designated HIE, NC HealthConnex, connects providers to a secure information network that will help doctors, hospitals and other health care providers deliver the best possible care for patients.

This electronic conversation enables providers to see their patients' most up-to-date health information including medications, lab results, allergies, image reports, conditions, diagnoses, and vaccinations. For example, when a patient is seen by an ER physician while on vacation, that physician may only be able to rely on the patient's statement of medications, allergies, etc. With an HIE connection, the ER physician is able to view that patient's medical record in the system and avoid unnecessary tests or medications.

Enhanced analytics will offer providers and policymakers insight into health care best practices and outcomes as well as assist the state in achieving better budget stability and predictability for the future of Medicaid and the State Health Plan.

As payers increasingly move to alternative payment arrangements that focus on value, NC HealthConnex gives health care providers the tools necessary to improve care coordination and ensure the best care at the best price.

NC HealthConnex Suite of Services

Exchange Services:

- Access a patient's longitudinal health record
- Communicate PHI securely via Direct messaging
- Query neighboring state HIEs, and the VA via eHealth Exchange network
- Check prescription history for controlled substances per the STOP Act

Notification Services:

- Notifies providers as patients receive care in other care settings
- Promotes timely follow-up on medications prescribed or other discharge instructions from ED or inpatient stay
- Supports continuity in care to reduce avoidable readmissions and achieve financial goals under value-based care contracts

Population Health/ Analytics Services:

Classify and Measure Patient Population

- via Registries & Integrations
  - Diabetes
  - Immunization
  - Controlled Substances
  - Future Possibility: Stroke, Asthma
- via Measurement
  - Heart Health Now/Cardiovascular
  - Future Possibility: eCQM

N.C. Gen. Stat. § 90-414.1

Current through Session Laws 2021-162 of the 2021 Regular Session

NC - General Statutes of North Carolina Annotated > CHAPTER 90. MEDICINE AND ALLIED OCCUPATIONS > ARTICLE 29B. STATEWIDE HEALTH INFORMATION EXCHANGE ACT

§ 90-414.1. Title

This act shall be known and may be cited as the "Statewide Health Information Exchange Act."

History

2015-241, s. 12A.5(d)

Annotations

Notes

HEALTH INFORMATION TECHNOLOGY. --Session Laws *2015-241, s. 12A.4(a)* -(c), provides: "(a) The Department of Health and Human Services (Department), in cooperation with the State Chief Information Officer (State CIO), shall coordinate health information technology (HIT) policies and programs within the State of North Carolina. The goal of the DHHS CIO in coordinating State HIT policy and programs shall be to avoid duplication of efforts and to ensure that each State agency, public entity, and private entity that undertakes health information technology activities does so within the area of its greatest expertise and technical capability and in a manner that supports coordinated State and national goals, which shall include at least all of the following:

"(1) Ensuring that patient health information is secure and protected, in accordance with applicable law.

"(2) Improving health care quality, reducing medical errors, reducing health disparities, and advancing thedelivery of patient-centered medical care.

"(3) Providing appropriate information to guide medical decisions at the time and place of care.

"(4) Ensuring meaningful public input into HIT infrastructure development.

"(5) Improving the coordination of information among hospitals, laboratories, physicians' offices, and otherentities through an effective infrastructure for the secure and authorized exchange of health care information.

"(6) Improving public health services and facilitating early identification and rapid response to public healththreats and emergencies, including bioterrorist events and infectious disease outbreaks.

"(7) Facilitating health and clinical research.

"(8) Promoting early detection, prevention, and management of chronic diseases.

"(b) The Department, in cooperation with the Department of Information Technology created by this act,shall establish and direct an HIT management structure that is efficient and transparent and that is compatible with the Office of the National Health Coordinator for Information Technology (National Coordinator) governance mechanism. The HIT management structure shall be responsible for all of thefollowing:

"(1) Developing a State plan for implementing and ensuring compliance with national HIT standards andfor the most efficient, effective, and widespread adoption of HIT.

"(2) Ensuring that (i) specific populations are effectively integrated into the State plan, including agingpopulations, populations requiring mental health services, and populations utilizing the public health system, and (ii) unserved and underserved populations receive priority consideration for HIT support.

"(3) Identifying all HIT stakeholders and soliciting feedback and participation from each stakeholder in the development of the State plan.

"(4) Ensuring that existing HIT capabilities are considered and incorporated into the State plan.

"(5) Identifying and eliminating conflicting HIT efforts where necessary.

"(6) Identifying available resources for the implementation, operation, and maintenance of health information technology, including identifying resources and available opportunities for North Carolinainstitutions of higher education.

"(7) Ensuring that potential State plan participants are aware of HIT policies and programs and theopportunity for improved health information technology.

"(8) Monitoring HIT efforts and initiatives in other states and replicating successful efforts and initiatives inNorth Carolina.

"(9) Monitoring the development of the National Coordinator's strategic plan and ensuring that allstakeholders are aware of and in compliance with its requirements.

"(10) Monitoring the progress and recommendations of the HIT Policy and Standards Committee andensuring that all stakeholders remain informed of the Committee's recommendations.

"(11) Monitoring all studies and reports provided to the United States Congress and reporting to the JointLegislative Oversight Committee on Information Technology and the Fiscal Research Division on the impact of report recommendations on State efforts to implement coordinated HIT.

"(c) By no later than January 15, 2016, the Department shall provide a written report on the status of HITefforts to the Joint Legislative Oversight Committee on Health and Human Services, the Joint Legislative Oversight Committee on Information Technology, and the Fiscal Research Division. The report shall be comprehensive and shall include all of the following:

"(1) Current status of federal HIT initiatives.

"(2) Current status of State HIT efforts and initiatives among both public and private entities. **"(3)** Other

State information technology initiatives with potential applicability to State HIT efforts.**"(4)** Efforts to

ensure coordination and avoid duplication of HIT efforts within the State.

"(5) A breakdown of current public and private funding sources and dollar amounts for State HIT initiatives.

"(6) Efforts by the DHHS CIO to coordinate HIT initiatives within the State and any obstacles orimpediments to coordination.

"(7) HIT research efforts being conducted within the State and sources of funding for research efforts.

"(8) Opportunities for stakeholders to participate in HIT funding and other efforts and initiatives during thenext quarter.

"(9) Issues associated with the implementation of HIT in North Carolina and recommended solutions tothese issues.

EDITOR'S NOTE. --Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinical information through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1*, provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.4,* provides: "Except for statutory changes or other provisions that clearly indicate an intention to have effects beyond the 2015-2017 fiscal biennium, the textual provisions of this act apply only to funds appropriated for, and activities occurring during, the 2015-2017 fiscal biennium."

Session Laws *2015-241, s. 33.6,* is a severability clause.

Session Laws *2017-57, s. 1.1,* provides: "This act shall be known as the 'Current Operations Appropriations Act of 2017.'"

Session Laws *2017-57, s. 39.4,* provides: "Except for statutory changes or other provisions that clearly indicatean intention to have effects beyond the 2017-2019 fiscal biennium, the textual provisions of this act apply only to funds appropriated for, and activities occurring during, the 2017-2019 fiscal biennium."

Session Laws *2017-57, s. 39.6,* is a severability clause.

Session Laws *2018-76, s. 3(a)* -(c), provides: "(a) The Department of Health and Human Services and the Government Data Analytics Center within the Department of Information Technology shall jointly collaborate with organizations representing local government and local law enforcement to explore participation by local confinement facilities in the North Carolina Health Information Exchange Network (HIE Network), known as NC HealthConnex, in order to facilitate the secure electronic transmission of individually identifiable health information pertaining to prisoners in the custody of local confinement facilities.

"(b) The Department of Public Safety, the Department of Health and Human Services, and the Government Data Analytics Center within the Department of Information Technology shall work collaboratively to ensure North Carolina prison facilities are full participants in the HIE Network, known as NC HealthConnex, in order to facilitate the secure electronic transmission of individually identifiable health information pertaining to inmates in the custody of the Division of Adult Correction and Juvenile Justice of the Department of Public Safety.

"(c) On or before October 1, 2018, the Department of Health and Human Services and the Government Data Analytics Center within the Department of Information Technology shall provide an interim report to the Joint Legislative Oversight Committee on Health and Human Services on the actions required by this section. On or before October 1, 2019, the Department of Health and Human Services and the Government Data Analytics Centerwithin the Department of Information Technology shall provide a final report to the Joint Legislative Oversight Committee on Health and Human Services on the actions required by this section."

LEGAL PERIODICALS. --

For article, "Prescription-Drug Policing: The Right to Health-Information Privacy Pre-and-Post-Carpenter," see *69 Duke L.J. 775 (2020)*.

For article, "The Debilitating Scope of Care Coordination Under HIPAA," see *98 N. C.L. Rev. 1395 (2020)*.

End of Document

N.C. Gen. Stat. § 90-414.2

Current through Session Laws 2021-162 of the 2021 Regular Session

NC - General Statutes of North Carolina Annotated > CHAPTER 90. MEDICINE AND ALLIED OCCUPATIONS > ARTICLE 29B. STATEWIDE HEALTH INFORMATION EXCHANGE ACT

§ 90-414.2. Purpose

This Article is intended to improve the quality of health care delivery within this State by facilitating and regulating the use of a voluntary, statewide health information exchange network for the secure electronic transmission of individually identifiable health information among health care providers, health plans, and health care clearinghouses in a manner that is consistent with the Health Insurance Portability and Accountability Act, Privacy Rule and Security Rule, 45 C.F.R. §§ 160, 164.

History

2015-241, s. 12A.5(d)

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

End of Document

N.C. Gen. Stat. § 90-414.3

Current through Session Laws 2021-162 of the 2021 Regular Session

NC - General Statutes of North Carolina Annotated > CHAPTER 90. MEDICINE AND ALLIED OCCUPATIONS > ARTICLE 29B. STATEWIDE HEALTH INFORMATION EXCHANGE ACT

§ 90-414.3. Definitions

The following definitions apply in this Article:

(1) Business associate. -- As defined in *45 C.F.R. § 160.103*.

(2) Business associate contract. -- The documentation required by *45 C.F.R. § 164.502(e)(2)* that meets the applicable requirements of *45 C.F.R. § 164.504(e)*.

(3) Covered entity. -- Any entity described in *45 C.F.R. § 160.103* or any other facility or practitioner licensed by the State to provide health care services.

(4) Department. -- North Carolina Department of Health and Human Services.

(5) Disclose or disclosure. -- The release, transfer, provision of access to, or divulging in any other manner an individual's protected health information through the HIE Network.

(6) Repealed by Session Laws *2017-57, s. 11A.5(f),* effective July 1, 2017.

(7) GDAC. -- The North Carolina Government Data Analytics Center.

(8) HIE Network. -- The voluntary, statewide health information exchange network overseen and administered by the Authority.

(9) HIPAA. -- Sections 261 through 264 of the federal Health Insurance Portability and Accountability Act of 1996, P.L. 104-191, as amended, and any federal regulations adopted to implement these sections, as amended.

(10) Individual. -- As defined in *45 C.F.R. § 160.103*.

(11) North Carolina Health Information Exchange Advisory Board or Advisory Board. -- The Advisory Board established under *G.S. 90-414.8*.

(12) North Carolina Health Information Exchange Authority or Authority. -- The entity established pursuant to *G.S. 90-414.7*.

(13) Opt out. -- An individual's affirmative decision communicated to the Authority in writing to disallow his or her protected health information from being disclosed by the Authority to covered entities or other persons or entities through the HIE Network.

(14) Protected health information. -- As defined in *45 C.F.R. § 160.103*.

(15) Public health purposes. -- The public health activities and purposes described in *45 C.F.R. §*

164.512(b).

(16) Qualified organization. -- An entity with which the Authority has contracted for the sole purpose of facilitating the exchange of data with or through the HIE Network.

(17) Research purposes. -- Research purposes referenced in and subject to the standards described in 45 C.F.R. § 164.512(i).

(18) State CIO. -- The State Chief Information Officer.

History

2015-241, s. 12A.5(d); 2015-264, s. 86.5(b); 2017-57, s. 11A.5(c), (f)

Annotations

Notes

EDITOR'S NOTE. --

Session Laws 2015-241, s. 12A.5(f1), as added by Session Laws 2015-264, s. 86.5(d), provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to G.S. 90- 414.4(b), as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in G.S. 90-414.4(b), as enacted by subsection (d) of this section."

Session Laws 2015-241, s. 1.1, provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws 2015-241, s. 33.6, is a severability clause.

Session Laws 2017-57, s. 1.1, provides: "This act shall be known as the 'Current Operations Appropriations Act of 2017.'"

Session Laws 2017-57, s. 39.6, is a severability clause.

EFFECT OF AMENDMENTS. --

Session Laws 2015-264, s. 86.5(b), effective October 1, 2015, rewrote subdivision (9).

Session Laws 2017-57, s. 11A.5(c), (f), effective July 1, 2017, repealed subdivision (6), which defined Emergency Medical Conditions; and rewrote subsection (13) which formerly read: "Opt out. -- An individual's affirmative decision

communicated in writing to disallow his or her protected health information maintained by the Authority from being disclosed to other covered entities or other persons or entities through the HIE Network.'"

End of Document

Current through Session Laws 2021-162 of the 2021 Regular Session

NC - General Statutes of North Carolina Annotated > CHAPTER 90. MEDICINE AND ALLIED OCCUPATIONS > ARTICLE 29B. STATEWIDE HEALTH INFORMATION EXCHANGE ACT

§ 90-414.4. Required participation in HIE Network for some providers

(a) Findings. -- The General Assembly makes the following findings:

(1) That controlling escalating health care costs of the Medicaid program and other State-funded health care services is of significant importance to the State, its taxpayers, its Medicaid recipients, and other recipients of State-funded health care services.

(2) That the State and covered entities in North Carolina need timely access to certain demographic and clinical information pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries and paid for with Medicaid or other State-funded health care funds in order to assess performance, improve health care outcomes, pinpoint medical expense trends, identify beneficiary health risks, and evaluate how the State is spending money on Medicaid and other State-funded health care services. The Department of Information Technology, the Department of State Treasurer, State Health Plan Division, and the Department of Health and Human Services, Division of Health Benefits, have an affirmative duty to facilitate and support participation by covered entities in the statewide health information exchange network.

(3) That making demographic and clinical information available to the State and covered entities in North Carolina by secure electronic means as set forth in subsection (b) of this section will improve care coordination within and across health systems, increase care quality for such beneficiaries, enable more effective population health management, reduce duplication of medical services, augment syndromic surveillance, allow more accurate measurement of care services and outcomes, increase strategic knowledge about the health of the population, and facilitate health care cost containment.

(a1) Mandatory Connection to HIE Network. -- Notwithstanding the voluntary nature of the HIE Networkunder *G.S. 90-414.2*, the following providers and entities shall be connected to the HIE Network and begin submitting data through the HIE Network pertaining to services rendered to Medicaid beneficiaries and to other State-funded health care program beneficiaries and paid for with Medicaid or other State-funded health care funds in accordance with the following time line:

(1) The following providers of Medicaid services licensed to operate in the State that have an electronic health record system shall begin submitting, at a minimum, demographic and clinical data by June 1, 2018:

a. Hospitals as defined in *G.S. 131E-176(13)*.

b. Physicians licensed to practice under Article 1 of Chapter 90 of the General Statutes, except for licensed physicians whose primary area of practice is psychiatry.

c. Physician assistants as defined in 21 NCAC 32S.0201.

d. Nurse practitioners as defined in 21 NCAC 36.0801.

(2) Except as provided in subdivisions (3), (4), and (5) of this subsection, all other providers of Medicaid and State-funded health care services and their affiliated entities shall begin submitting demographic and clinical data by January 1, 2023.

(3) The following entities shall submit encounter and claims data, as appropriate, in accordance with the following time line:

a. Prepaid Health Plans, as defined in *G.S. 108D-1*, by the commencement date of a capitated contract with the Division of Health Benefits for the delivery of Medicaid and NC Health Choice services as specified in Article 4 of Chapter 108D of the General Statutes.

b. Local management entities/managed care organizations, as defined in *G.S. 122C-3*, by June 1, 2020.

If authorized by the Authority in accordance with this Article, the Department of Health and HumanServices may submit the data required by this subsection on behalf of the entities specified in this subdivision.

(4) The following entities shall begin submitting demographic and clinical data by January 1, 2023:

a. Physicians who perform procedures at ambulatory surgical centers as defined in *G.S. 131E-146*.

b. Dentists licensed under Article 2 of Chapter 90 of the General Statutes.

c. Licensed physicians whose primary area of practice is psychiatry.

d. The State Laboratory of Public Health operated by the Department of Health and Human Services.

(5) The following entities shall begin submitting claims data by January 1, 2023:

a. Pharmacies registered with the North Carolina Board of Pharmacy under Article 4A of Chapter 90 of the General Statutes.

b. State health care facilities operated under the jurisdiction of the Secretary of the Department of Health and Human Services, including State psychiatric hospitals, developmental centers, alcohol and drug treatment centers, neuro-medical treatment centers, and residential programs for children such as the Wright School and the Whitaker Psychiatric Residential Treatment Facility.

(a2) Extensions of Time for Establishing Connection to the HIE Network. -- The Department of Information Technology, in consultation with the Department of Health and Human Services and the State Health Plan for Teachers and State Employees, may establish a process to grant limited extensions of the time for providers and entities to connect to the HIE Network and begin submitting data as required by this section upon the request of a provider or entity that demonstrates an ongoing good-faith effort to take necessary steps to establish such connection and begin data submission as required by this section. The process for granting an extension of time must include a presentation by the provider or entity to the Department of Information Technology, the Department of Health and Human Services, and the State Health Plan for Teachers and State Employees on the expected time line for connecting to the HIE Networkand commencing data submission as required by this section. Neither the Department of Information Technology, the Department of Health and Human Services, nor the State Health Plan for Teachers and State Employees shall grant an extension of time (i) to any provider or entity that fails to provide this information to both Departments, and the State Health Plan for Teachers and State Employees, (ii) that would result in the provider or entity connecting to the HIE Network and commencing data submission as required by this section later than January 1, 2023. The Department of Information Technology shall consultwith the Department of Health and Human Services and the State Health Plan for Teachers and State Employees to review and decide upon a request for an extension of time under this section within 30 days after receiving a request for an extension.

(a3) Exemptions from Connecting to the HIE Network. -- The Secretary of Health and Human Services, or the Secretary's designee, shall have the authority to grant exemptions to classes of providers of Medicaid and other State-funded health care services for whom acquiring and implementing an electronic health record system and

connecting to the HIE Network as required by this section would constitute an undue hardship. The Secretary, or the Secretary's designee, shall promptly notify the Department of Information Technology of classes of providers granted hardship exemptions under this subsection. Neither the Secretary nor the Secretary's designee shall grant any hardship exemption thatwould result in any class of provider connecting to the HIE Network and submitting data later than December 31, 2022.

(b) Mandatory Submission of Demographic and Clinical Data. -- Notwithstanding the voluntary nature of the HIE Network under *G.S. 90-414.2* and, except as otherwise provided in subsection (c) of this section, as a condition of receiving State funds, including Medicaid funds, the following entities shall submit at least twice daily, through the HIE network, demographic and clinical information pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries and paid for with Medicaid or other State-funded health care funds, solely for the purposes set forth in subsection (a) of this section:

(1) Each hospital, as defined in *G.S. 131E-176(13)* that has an electronic health record system.

(2) Each Medicaid provider, unless the provider is an ambulatory surgical center as defined in *G.S. 131E-146*; however, a physician who performs a procedure at the ambulatory surgical center must be connected to the HIE Network.

(3) Each provider that receives State funds for the provision of health services, unless the provider is an ambulatory surgical center as defined in *G.S. 131E-146*; however, a physician who performs a procedure at the ambulatory surgical center must be connected to the HIE Network.

(4) Each local management entity/managed care organization, as defined in *G.S. 122C-3*.

(b1) Balance Billing Prohibition. -- An in-network provider or entity who renders health care services, including prescription drugs and durable medical equipment, under a contract with the State Health Plan forTeachers and State Employees and who is not connected to the HIE Network in accordance with this Article, is prohibited from billing the State Health Plan or a Plan member more than either party would be billed if the entity or provider was connected to the HIE Network. Balance billing because the provider or entity did not connect to the HIE Network is prohibited.

(c) Exemption for Certain Records. -- Providers with patient records that are subject to the disclosure restrictions of 42 C.F.R. § 2 are exempt from the requirements of subsection (b) of this section but only with respect to the patient records subject to these disclosure restrictions. Providers shall comply with the requirements of subsection (b) of this section with respect to all other patient records. A pharmacy shall only be required to submit claims data pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries and paid for with Medicaid or other State-funded health care funds.

(c1) Exemption from Twice Daily Submission. -- A pharmacy shall only be required to submit claimsdata once daily through the HIE Network using pharmacy industry standardized formats.

(d) Method of Data Submissions. -- The data submissions required under this section shall be by connection to the HIE Network periodic asynchronous secure structured file transfer or any other secure electronic means commonly used in the industry and consistent with document exchange and data submission standards established by the Office of the National Coordinator for Information Technology within the U.S. Department of Health and Human Services.

(e) Voluntary Connection for Certain Providers. -- Notwithstanding the mandatory connection and data submission requirements in subsections (a1) and (b) of this section, the following providers of Medicaid services or other State-funded health care services are not required to connect to the HIE Network or submit data but may connect to the HIE Network and submit data voluntarily:

(1) Community-based long-term services and supports providers, including personal care services, private duty nursing, home health, and hospice care providers.

(2) Intellectual and developmental disability services and supports providers, such as day supports and supported living providers.

(3) Community Alternatives Program waiver services (including CAP/DA, CAP/C, and Innovations) providers.

(4) Eye and vision services providers.

(5) Speech, language, and hearing services providers.

(6) Occupational and physical therapy providers.

(7) Durable medical equipment providers.

(8) Nonemergency medical transportation service providers.

(9) Ambulance (emergency medical transportation service) providers.

(10) Local education agencies and school-based health providers.

(f) Confidentiality of Data. -- All data submitted to or through the HIE Network containing protected health information, personally identifying information, or a combination of these, that are in the possession of the Department of Information Technology or any other agency of the State are confidential and shall not be defined as public records under *G.S. 132-1*. This subsection shall not be construed to prohibit the disclosure of any such data as otherwise permitted under federal law.

History

2015-241, s. 12A.5(d); 2017-57, s. 11A.5(b); 2018-41, s. 9(a); 2019-23, s. 1; 2019-81, s. 2; 2020-3, s. 3E.1(a), (b); *2020-97, s. 3.7B(b); 2021-26, ss. 1* -5

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

Session Laws *2019-23, s. 3,* provides: "Notwithstanding any provision of law to the contrary, a provider subjectto *G.S. 90-414.4(a1)(2)* that fails to meet the June 1, 2019, deadline for connecting to the HIE Network and initiatingthe submission of demographic and clinical data shall not be (i) denied payment for any otherwise allowable Medicaid claims or claims for other State-funded health care services submitted between June 1, 2019, and May 31, 2020, or (ii) subjected to any other penalties, as long as that provider meets the June 1, 2020, deadline enactedby this act for submission of such data."

Session Laws *2020-3, s. 3A.1(a),* provides: "Unless the context clearly indicates otherwise, the following definitions apply in this Part:

"(1) CDC. -- The federal Centers for Disease Control and Prevention.

"(2) COVID-19. -- Coronavirus disease 2019.

"(3) COVID-19 diagnostic test. -- A test the federal Food and Drug Administration has authorized for emergency use or approved to detect the presence of the severe acute respiratory syndrome coronavirus2.

"(4) COVID-19 emergency. -- The period beginning March 10, 2020, and ending on the date the Governorsigns an executive order rescinding Executive Order No. 116, Declaration of a State of Emergency to Coordinate Response and Protective Actions to Prevent the Spread of COVID-19.

"(5) COVID-19 antibody test. -- A serological blood test the federal Food and Drug Administration has authorized for emergency use or approved to measure the amount of antibodies or proteins present in theblood when the body is responding to an infection caused by the severe acute respiratory syndrome coronavirus 2."

Session Laws *2020-3, s. 3E.1(b),* provided: "*G.S. 90-414(a2)* reads as rewritten:" and substituted "October 1, 2021" for "June 1, 2020" in clause (ii) of the next-to-last sentence of subsection (a2). However, *G.S. 90-414* is a reserved section and therefore has no subsection (a2). The apparent intent of the act was to amend *G.S. 90- 414.4(a2)*. The amendment was not given effect in this section at the direction of the Revisor of Statutes. Subsequently, however, Session Laws *2020-97, s. 3.7B(b),* effective May 4, 2020, amended Session Laws *2020-3, s. 3E.1(b),* by substituting "*G.S. 90-414.4(a2)*" for "*G.S. 90-414(a2)*" in the introductory language. The amendment is now reflected in the text of subsection (a2) of this section.

Session Laws *2020-3, s. 5,* is a severability clause.

Session Laws *2020-97, s. 4.5,* is a severability clause.

In subdivisions (b)(2) and (b)(3), as amended by Session Laws *2021-26, s. 4,* the semicolon preceding 'however" was substituted for a comma at the direction of the Revisor of Statutes.

Session Laws *2021-26, s. 7(a),* (b), provides: "(a) On or before March 1, 2022, the NC HIE Advisory Board shall submit to the Joint Legislative Oversight Committee on Health and Human Services recommendations regarding appropriate features or actions to support enforcement of the Statewide Health Information Exchange Actcontained in Article 29B of Chapter 90 of the General Statutes and the results of the outreach efforts in subsection (b) of this section.

"(b) The HIE Authority shall work with the State Health Plan Division, Department of State Treasurer, and the Division of Health Benefits, Department of Health and Human Services, to identify the following: (i) all providers andentities who are required to connect to the HIE as a condition of receiving State funds, (ii) providers and entities who have not connected to the HIE in accordance with *G.S. 90-414.4*, and (iii) providers and entities whose deadline for mandatory connection is approaching or has passed. The HIE Authority shall contact each entity or provider identified and ascertain the status of the entity's or provider's effort to connect to the HIE. The HIE Authority shall share information with each provider or entity about the Statewide Health Information Exchange Act and how to connect to the HIE Network. All licensing boards within the State overseeing the providers and entities required to connect to the HIE shall assist by providing contact information and addresses of licensees when that information is not readily available to the HIE Authority, Department of State Treasurer, and the Department of Health and Human Services. Contact information and addresses for providers and entities shall be provided by the Department of State Treasurer, the Department of Health and Human Services, and licensing boards on or before November 1, 2021. On or before November 1, 2021, the Department of State Treasurer, State Health Plan Division,shall provide claim encounter data to support but not exceed the requirements of this section and as part of its responsibilities to administer and operate the State Health Plan for Teachers and State Employees, the StateHealth Plan Division shall use and disclose

Claim Payment Data and/or data from the Claims Data Feed, as necessary to satisfy the requirements of this subsection."

EFFECT OF AMENDMENTS. --

Session Laws *2017-57, s. 11A.5(b),* effective July 1, 2017, inserted subsection catchlines in subsections (a) and (b); added subsections (a1), (a2) and (c); inserted the subsection (d) designation and catchline; in subsection (b), inserted "except as otherwise provided in subsection (c) of this section"; in subdivision (b)(1), substituted "*G.S. 131E-176(13)*" for "G.S. 131E- 76(3)"; and in subdivision (d), substituted "The data" for "The daily" and made stylistic changes.

Session Laws *2018-41, s. 9(a),* effective June 22, 2018, substituted "subdivisions (3), (4), and (5)" for "subdivision (3)" and added subdivisions (4) and (5) in subsection (a1); added item (iii) to the third sentence in subsection (a2); added the last sentence in subsection (c); and added subsection (c1).

Session Laws *2019-23, s. 1,* effective June 6, 2019, rewrote subsections (a), (a1), and (a2); and added subsections (a3), (e), and (f).

Session Laws *2019-81, s. 2,* effective October 1, 2019, in sub-subdivision (a1)(3)a., substituted "*G.S. 108D-1*" for "S.L. 2015-245" and "Article 4 of Chapter 108D of the General Statutes" for "S.L. 2015-245".

Session Laws *2020-3, s. 3E.1(a),* (b), as amended by Session Laws *2020-97, s. 3.7B(b),* effective May 4, 2020, substituted "October 1, 2021" for "June 1, 2020" in subdivision (a1)(2) and subsection (a2).

Session Laws *2021-26, ss. 1* -5, effective May 27, 2021, added the last sentence in subdivision (a)(2); in subdivision (a1)(2), inserted "and their affiliated entities" and substituted "January 1, 2023" for "October 1, 2021"; added the last sentence in subdivision (a1)(3); substituted "January 1, 2023" for "June 1, 2021" in subdivision (a1)(4); substituted "Physicians who perform procedures at ambulator" for "Ambulatory" in subdivision (a1)(4)a.; substituted "January 1, 2023" for "June 1, 2021" in subdivision (a1)(5); in subsection (a2), substituted "January 1, 2023" for "October 1, 2021, or (iii) that would result in any provider or entity specified in subdivisions (4) and (5) of subsection (a1) of this section connecting to the HIE Network and commencing data submission as required by this section later than June 1, 2022"; in subdivisions (b)(2) and (b)(3), inserted "unless the provider is an ambulatory surgical center as defined in *G.S. 131E-146*, however, a physician who performs a procedure at the ambulatory surgical center must be connected to the HIE Network"; and added subsection (b1).

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§ 90-414.5. State agency and legislative access to HIE Network data

(a) The Authority shall provide the Department and the State Health Plan for Teachers and State Employees secure, real-time access to data and information disclosed through the HIE Network, solely for the purposes set forth in *G.S. 90-414.4(a)* and in *G.S. 90-414.2*. The Authority shall limit access granted to the State Health Plan for Teachers and State Employees pursuant to this section to data and information disclosed through the HIE Network that pertains to services (i) rendered to teachers and State employees and (ii) paid for by the State Health Plan.

(b) At the written request of the Director of the Fiscal Research, Legislative Drafting, Legislative Analysis, or Program Evaluation Division of the General Assembly for an aggregate analysis of the data and information disclosed through the HIE Network, the Authority shall provide the professional staff of these Divisions with the aggregated analysis responsive to the Director's request. Prior to providing the Director or General Assembly's staff with any aggregate data or information submitted through the HIE Network or with any analysis of this aggregate data or information, the Authority shall redact any personal identifying information in a manner consistent with the standards specified for de-identification of health information under the HIPAA Privacy Rule, *45 C.F.R. § 164.514*, as amended.

History

2015-241, s. 12A.5(d); *2017-102, s. 39(a)*; *2018-142, s. 4(b)*

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital

Improvements Appropriations Act of 2015.'" is a severability clause.
EFFECT OF AMENDMENTS. --

Session Laws *2017-102, s. 39(a),* effective July 12, 2017, substituted "*G.S. 90-414.4(a)*" for "subsection (a) of this section" in subsection (a).

Session Laws *2018-142, s. 4(b),* effective December 15, 2018, in subsection (b), substituted "Legislative Drafting, Legislative Analysis" for "Bill Drafting, Research", and made a minor stylistic change.

End of Document

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§ 90-414.6. State ownership of HIE Network data

Any data pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries submitted through and stored by the HIE Network pursuant to *G.S. 90-414.4* or any other provision of this Article shall be and will remain the sole property of the State. Any data or product derived from the aggregated, de-identified data submitted to and stored by the HIE Network pursuant to *G.S. 90-414.4* or any other provision of this Article, shall be and will remain the sole property of the State. The Authority shall not allow data it receives pursuant to *G.S. 90-414.4* or any other provision of this Article to be used or disclosed by or to any person or entity for commercial purposes or for any other purpose other than those set forth in *G.S. 90-414.4(a)* or *G.S. 90-414.2*. To the extent the Authority receives requests for electronic health information as the term is defined in *45 C.F.R. § 171.102*, or other medical records from an individual, an individual's personal representative, or an individual or entity purporting to act on an individual's behalf, the Authority (i) shall not fulfill the request and (ii) shall make available to the requester and the public, via the Authority's website, educational materials about how to access such information from other sources.

History

2015-241, s. 12A.5(d); *2021-26, s. 6*

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1)*, as added by Session Laws *2015-264, s. 86.5(d)*, provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1*, provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

Session Laws *2021-26, s. 7(a),* (b), provides: "(a) On or before March 1, 2022, the NC HIE Advisory Board shall submit to the Joint Legislative Oversight Committee on Health and Human Services recommendations regarding appropriate features or actions to support enforcement of the Statewide Health Information Exchange Actcontained in Article 29B of Chapter 90 of the General Statutes and the results of the outreach efforts in subsection (b) of this section.

"(b) The HIE Authority shall work with the State Health Plan Division, Department of State Treasurer, and the Division of Health Benefits, Department of Health and Human Services, to identify the following: (i) all providers andentities who are required to connect to the HIE as a condition of receiving State funds, (ii) providers and entities who have not connected to the HIE in accordance with *G.S. 90-414.4*, and (iii) providers and entities whose deadline for mandatory connection is approaching or has passed. The HIE Authority shall contact each entity or provider identified and ascertain the status of the entity's or provider's effort to connect to the HIE. The HIE Authority shall share information with each provider or entity about the Statewide Health Information Exchange Act and how to connect to the HIE Network. All licensing boards within the State overseeing the providers and entities required to connect to the HIE shall assist by providing contact information and addresses of licensees when that information is not readily available to the HIE Authority, Department of State Treasurer, and the Department of Health and Human Services. Contact information and addresses for providers and entities shall be provided by the Department of State Treasurer, the Department of Health and Human Services, and licensing boards on or before November 1, 2021. On or before November 1, 2021, the Department of State Treasurer, State Health Plan Division,shall provide claim encounter data to support but not exceed the requirements of this section and as part of its responsibilities to administer and operate the State Health Plan for Teachers and State Employees, the StateHealth Plan Division shall use and disclose Claim Payment Data and/or data from the Claims Data Feed, as necessary to satisfy the requirements of this subsection."

EFFECT OF AMENDMENTS. --

Session Laws *2021-26, s. 6,* effective May 27, 2021, added the last sentence.

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§ 90-414.7. North Carolina Health Information Exchange Authority

(a) Creation. -- There is hereby established the North Carolina Health Information Exchange Authority to oversee and administer the HIE Network in accordance with this Article. The Authority shall be located within the Department of Information Technology and shall be under the supervision, direction, and control of the State CIO. The State CIO shall employ an Authority Director and may delegate to the Authority Director all powers and duties associated with the daily operation of the Authority, its staff, and the performance of the powers and duties set forth in subsection (b) of this section. In making this delegation, however, the State CIO maintains the responsibility for the performance of these powers and duties.

(b) Powers and Duties. -- The Authority has the following powers and duties:

(1) Oversee and administer the HIE Network in a manner that ensures all of the following:

a. Compliance with this Article.

b. Compliance with HIPAA and any rules adopted under HIPAA, including the Privacy Rule and Security Rule.

c. Compliance with the terms of any participation agreement, business associate agreement, or other agreement the Authority or qualified organization or other person or entity enters into with a covered entity participating in submission of data through or accessing the HIE Network.

d. Notice to the patient by the healthcare provider or other person or entity about the HIE Network, including information and education about the right of individuals on a continuing basis to opt out or rescind a decision to opt out.

e. Opportunity for all individuals whose data has been submitted to the HIE Network to exercise on a continuing basis the right to opt out or rescind a decision to opt out.

f. Nondiscriminatory treatment by covered entities of individuals who exercise the right to opt out.

g. Facilitation of HIE Network interoperability with electronic health record systems of all covered entities listed in *G.S. 90-414.4(b)*.

h. Minimization of the amount of data required to be submitted under *G.S. 90-414.4(b)* and any use or disclosure of such data to what is determined by the Authority to be required in order to advance the purposes set forth in *G.S. 90-414.2* and *G.S. 90-414.4(a)*.

(2) In consultation with the Advisory Board, set guiding principles for the development, implementation, and operation of the HIE Network.

(3) Employ staff necessary to carry out the provisions of this Article and determine the compensation, duties, and other terms and conditions of employment of hired staff.

(4) Enter into contracts pertaining to the oversight and administration of the HIE Network, including

contracts of a consulting or advisory nature. G.S. 143-64.20 does not apply to this subdivision.

(5) Establish fees for participation in the HIE Network and report the established fees to the General Assembly, with an explanation of the fee determination process.

(6) Following consultation with the Advisory Board, develop, approve, and enter into, directly or through qualified organizations acting under the authority of the Authority, written participation agreements with persons or entities that participate in or are granted access or user rights to the HIE Network. The participation agreements shall set forth terms and conditions governing participation in, access to, or use of the HIE Network not less than those set forth in agreements already governing covered entities' participation in the federal eHealth Exchange. The agreement shall also require compliance with policies developed by the Authority pursuant to this Article or pursuant to applicable laws of the state of residence for entities located outside of North Carolina.

(7) Receive, access, add, and remove data submitted through and stored by the HIE Network in accordance with this Article.

(8) Following consultation with the Advisory Board, enter into, directly or through qualified organizations acting under the authority of the Authority, a HIPAA compliant business associate agreement with each of the persons or entities participating in or granted access or user rights to the HIE Network.

(9) Following consultation with the Advisory Board, grant user rights to the HIE Network to business associates of covered entities participating in the HIE Network (i) at the request of the covered entities and (ii) at the discretion of and subject to contractual, policy, and other requirements of the Authority upon consideration of and consistent with the business associates' legitimate need for utilizing the HIE Network and privacy and security concerns.

(10) Facilitate and promote use of the HIE Network by covered entities.

(11) Actively monitor compliance with this Article by the Department, covered entities, and any other persons or entities participating in or granted access or user rights to the HIE Network or any data submitted through or stored by the HIE Network.

(12) Collaborate with the State CIO to ensure that resources available through the GDAC are properly leveraged, assigned, or deployed to support the work of the Authority. The duty to collaborate under this subdivision includes collaboration on data hosting and development, implementation, operation, and maintenance of the HIE Network.

(13) Initiate or direct expansion of existing public-private partnerships within the GDAC as necessary to meet the requirements, duties, and obligations of the Authority. Notwithstanding any other provision of law and subject to the availability of funds, the State CIO, at the request of the Authority, shall assist and facilitate expansion of existing contracts related to the HIE Network, provided that such request is made in writing by the Authority to the State CIO with reference to specific requirements set forth in this Article.

(14) In consultation with the Advisory Board, develop a strategic plan for achieving statewide participation in the HIE Network by all hospitals and health care providers licensed in this State.

(15) In consultation with the Advisory Board, define the following with respect to operation of the HIE Network:

a. Business policy.

b. Protocols for data integrity, data sharing, data security, HIPAA compliance, and business intelligence as defined in G.S. 143B-1381. To the extent permitted by HIPAA, protocols for data sharing shall allow for the disclosure of data for academic research.

c. Qualitative and quantitative performance measures.

d. An operational budget and assumptions.

(16) Annually report to the Joint Legislative Oversight Committee on Health and Human Services andthe Joint Legislative Oversight Committee on Information Technology on the following:

a. The operation of the HIE Network.

b. Any efforts or progress in expanding participation in the HIE Network.

c. Health care trends based on information disclosed through the HIE Network.

(17) Ensure that the HIE Network interfaces with the federal level HIE, the eHealth Exchange.

History

2015-241, s. 12A.5(d); 2017-102, s. 39(b)

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 12A.5(g),* as amended by Session Laws *2015-264, s. 86.5(e),* provides: "Except as provided in subsection (f1) of this section, subsections (d) and (e) of this section become effective October 1, 2015. Subsection (f) of this section becomes effective on the date the State Chief Information Officer notifies the Revisor of Statutes that all contracts pertaining to the HIE Network established under Article 29A of Chapter 90 of the General Statutes (i) between the State and the NC HIE, as defined in G.S. 90-413.3, and (ii) between the NC HIE and any third parties have been terminated or assigned to the North Carolina Health Information Exchange Authority established under Article 29B of Chapter 90 of the General Statutes, as enacted by subsection (d) of this section. The remainder of this section becomes effective July 1, 2015."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

Session Laws *2021-26, s. 7(a),* (b), provides: "(a) On or before March 1, 2022, the NC HIE Advisory Board shall submit to the Joint Legislative Oversight Committee on Health and Human Services recommendations regarding appropriate features or actions to support enforcement of the Statewide Health Information Exchange Actcontained in Article 29B of Chapter 90 of the General Statutes and the results of the outreach efforts in subsection (b) of this section.

"(b) The HIE Authority shall work with the State Health Plan Division, Department of State Treasurer, and the Division

of Health Benefits, Department of Health and Human Services, to identify the following: (i) all providers andentities who are required to connect to the HIE as a condition of receiving State funds, (ii) providers and entities who have not connected to the HIE in accordance with *G.S. 90-414.4*, and (iii) providers and entities whose deadline for mandatory connection is approaching or has passed. The HIE Authority shall contact each entity or provider identified and ascertain the status of the entity's or provider's effort to connect to the HIE. The HIE Authority shall share information with each provider or entity about the Statewide Health Information Exchange Act and how to connect to the HIE Network. All licensing boards within the State overseeing the providers and entities required to connect to the HIE shall assist by providing contact information and addresses of licensees when that information is not readily available to the HIE Authority, Department of State Treasurer, and the Department of Health and Human Services. Contact information and addresses for providers and entities shall be provided by the Department of State Treasurer, the Department of Health and Human Services, and licensing boards on or before November 1, 2021. On or before November 1, 2021, the Department of State Treasurer, State Health Plan Division,shall provide claim encounter data to support but not exceed the requirements of this section and as part of its responsibilities to administer and operate the State Health Plan for Teachers and State Employees, the StateHealth Plan Division shall use and disclose Claim Payment Data and/or data from the Claims Data Feed, as necessary to satisfy the requirements of this subsection."

EFFECT OF AMENDMENTS. --

Session Laws *2017-102, s. 39(b),* effective July 12, 2017, substituted "*G.S. 90-414.4(b)*" for "*G.S. 90-414(b)*" and "*G.S. 90-414.4(a)*" for "*G.S. 90-414(a)*" in subdivision (b)(1)h.

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§ 90-414.8. North Carolina Health Information Exchange Advisory Board

(a) Creation and Membership. -- There is hereby established the North Carolina Health Information Exchange Advisory Board within the Department of Information Technology. The Advisory Board shall consist of the following 12 members:

(1) The following four members appointed by the President Pro Tempore of the Senate:

a. A licensed physician in good standing and actively practicing in this State.

b. A patient representative.

c. An individual with technical expertise in health data analytics.

d. A representative of a behavioral health provider.

(2) The following four members appointed by the Speaker of the House of Representatives:

a. A representative of a critical access hospital.

b. A representative of a federally qualified health center.

c. An individual with technical expertise in health information technology.

d. A representative of a health system or integrated delivery network.

(3) The following three ex officio, nonvoting members:

a. The State Chief Information Officer or a designee.

b. The Director of GDAC or a designee.

c. The Secretary of Health and Human Services, or a designee.

(4) The following ex officio, voting member:

a. The Executive Administrator of the State Health Plan for Teachers and State Employees, or a designee.

(b) Chairperson. -- A chairperson shall be elected from among the members. The chairperson shall organize and direct the work of the Advisory Board.

(c) Administrative Support. -- The Department of Information Technology shall provide necessary clerical and administrative support to the Advisory Board.

(d) Meetings. -- The Advisory Board shall meet at least quarterly and at the call of the chairperson. A majority of the Advisory Board constitutes a quorum for the transaction of business.

(e) Terms. -- In order to stagger terms, in making initial appointments, the President Pro Tempore of the Senate shall designate two of the members appointed under subdivision (1) of subsection (a) of this section

to serve for a one-year period from the date of appointment and, the Speaker of the House of Representatives shall designate two members appointed under subdivision (2) of subsection (a) of this section to serve for a one-year period from the date of appointment. The remaining appointed voting members shall serve two-year periods. Future appointees who are voting members shall serve terms of twoyears, with staggered terms based on this subsection. Appointed voting members may serve up to two consecutive terms, not including the abbreviated two-year terms that establish staggered terms or terms of less than two years that result from the filling of a vacancy. Ex officio, nonvoting and voting members are not subject to these term limits. A vacancy other than by expiration of a term shall be filled by the appointing authority.

(f) Expenses. -- Members of the Advisory Board who are State officers or employees shall receive no compensation for serving on the Advisory Board but may be reimbursed for their expenses in accordance with *G.S. 138-6*. Members of the Advisory Board who are full-time salaried public officers or employees other than State officers or employees shall receive no compensation for serving on the Advisory Board but may be reimbursed for their expenses in accordance with *G.S. 138-5(b)*. All other members of the Advisory Board may receive compensation and reimbursement for expenses in accordance with *G.S. 138-5*.

(g) Duties. -- The Advisory Board shall provide consultation to the Authority with respect to the advancement, administration, and operation of the HIE Network and on matters pertaining to health information technology and exchange, generally. In carrying out its responsibilities, the Advisory Board may form committees of the Advisory Board to examine particular issues related to the advancement, administration, or operation of the HIE Network.

History

2015-241, s. 12A.5(d); *2018-84, s. 10*

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

EFFECT OF AMENDMENTS. --

Session Laws *2018-84, s. 10,* effective June 25, 2018, added subdivision (a)(4); and added "appointed" or variantin

the second sentence and at the beginning of the fourth sentence and added "and voting" in the fifth sentence of subsection (e); and made related changes.

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§ 90-414.9. Participation by covered entities

(a) Each covered entity that participates in the HIE Network shall enter into a HIPAA compliant business associate agreement described in *G.S. 90-414.7(b)(8)* and a written participation agreement described in *G.S. 90-414.7(b)(6)* with the Authority or qualified organization prior to submitting data through or in the HIE Network.

(b) Each covered entity that participates in the HIE Network may authorize its business associates on behalf of the covered entity to submit data through, or access data stored in, the HIE Network in accordance with this Article and at the discretion of the Authority, as provided in *G.S. 90-414.7(b)(8)*.

(c) Notwithstanding any federal or State law or regulation to the contrary, each covered entity that participates in the HIE Network may disclose an individual's protected health information through the HIE Network to other covered entities for any purpose permitted by HIPAA.

History

2015-241, s. 12A.5(d); *2015-264, s. 86.5(c)*; *2017-57, s. 11A.5(d)*

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

Session Laws *2017-57, s. 1.1,* provides: "This act shall be known as the 'Current Operations Appropriations Act of 2017.'"

Session Laws *2017-57, s. 39.4,* provides: "Except for statutory changes or other provisions that clearly indicatean intention to have effects beyond the 2017-2019 fiscal biennium, the textual provisions of this act apply only to funds appropriated for, and activities occurring during, the 2017-2019 fiscal biennium."

Session Laws *2017-57, s. 39.6,* is a severability clause.

EFFECT OF AMENDMENTS. --

Session Laws *2015-264, s. 86.5* .(c), effective October 1, 2015, substituted "participates" for "elects to participate" three times in subsections (a) through (c).

Session Laws *2017-57, s. 11A.5(d),* effective July 1, 2017, substituted "90-414.7" for "90-414.5" in subsections (a) and (b); in subsection (c) inserted "federal or", and deleted "unless the individual has exercised the right to opt out" at the end.

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§ 90-414.10. Continuing right to opt out; effect of opt out

(a) Each individual has the right on a continuing basis to opt out or rescind a decision to opt out.

(b) The Authority or its designee shall enforce an individual's decision to opt out or rescind an opt out prospectively from the date the Authority or its designee receives written notice of the individual's decision to opt out or rescind an opt out in the manner prescribed by the Authority. An individual's decision to opt out or rescind an opt out does not affect any disclosures made by the Authority or covered entities through the HIE Network prior to receipt by the Authority or its designee of the individual's written notice to opt out or rescind an opt out.

(c) A covered entity shall not deny treatment, coverage, or benefits to an individual because of the individual's decision to opt out. However, nothing in this Article is intended to restrict a health care provider from otherwise appropriately terminating a relationship with an individual in accordance with applicable law and professional ethical standards.

(d) Except as otherwise permitted in *G.S. 90-414.11(a)(3)*, or as required by law, the protected health information of an individual who has exercised the right to opt out may not be made accessible or disclosed to covered entities or any other person or entity through the HIE Network for any purpose.

(e) Repealed by Session Laws *2017-57, s. 11A.5(e),* effective July 1, 2017.

History

2015-241, s. 12A.5(d); *2017-57, s. 11A.5(e)*; *2019-23, s. 2*

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as

enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

EFFECT OF AMENDMENTS. --

Session Laws *2017-57, s. 11A.5(e),* effective July 1, 2017, twice inserted "written" in subsection (b); and deleted subsection (e), which related to criteria that must be met in order for disclosure of protected health information of an individual who has exercised the right to opt out.

Session Laws *2019-23, s. 2,* effective June 6, 2019, substituted "*G.S. 90-414.11(a)(3)*, or as required by law"for "*G.S. 90-414.9(a)(3)*" in subsection (d).

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§ 90-414.11. Construction and applicability

(a) Nothing in this Article shall be construed to do any of the following:

(1) Impair any rights conferred upon an individual under HIPAA, including all of the following rights related to an individual's protected health information:

a. The right to receive a notice of privacy practices.

b. The right to request restriction of use and disclosure.

c. The right of access to inspect and obtain copies.

d. The right to request amendment.

e. The right to request confidential forms of communication.

f. The right to receive an accounting of disclosures.

(2) Authorize the disclosure of protected health information through the HIE Network to the extent that the disclosure is restricted by federal laws or regulations, including the federal drug and alcohol confidentiality regulations set forth in 42 C.F.R. Part 2.

(3) Restrict the disclosure of protected health information through the HIE Network for public health purposes or research purposes, so long as disclosure is permitted by both HIPAA and State law.

(4) Prohibit the Authority or any covered entity participating in the HIE Network from maintaining in the Authority's or qualified organization's computer system a copy of the protected health information of an individual who has exercised the right to opt out, as long as the Authority or the qualified organization does not access, use, or disclose the individual's protected health information for any purpose other than for necessary system maintenance or as required by federal or State law.

(b) This Article applies only to disclosures of protected health information made through the HIE Network, including disclosures made within qualified organizations. It does not apply to the use or disclosure of protected health information in any context outside of the HIE Network, including the redisclosure of protected health information obtained through the HIE Network.

History

2015-241, s. 12A.5(d)

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to *G.S. 90- 414.4(b)*, as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, as provided in *G.S. 90-414.4(b)*, as enacted by subsection (d) of this section."

Session Laws *2015-241, s. 1.1,* provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws *2015-241, s. 33.6,* is a severability clause.

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§ 90-414.12. Penalties and remedies; immunity for covered entities andbusiness associates for good faith participation

(a) Except as provided in subsection (b) of this section, a covered entity that discloses protected health information in violation of this Article is subject to the following:

(1) Any civil penalty or criminal penalty, or both, that may be imposed on the covered entity pursuant to the Health Information Technology for Economic and Clinical Health (HITECH) Act, P.L. 111-5, Div. A, Title XIII, section 13001, as amended, and any regulations adopted under the HITECH Act.

(2) Any civil remedy under the HITECH Act or any regulations adopted under the HITECH Act that is available to the Attorney General or to an individual who has been harmed by a violation of this Article, including damages, penalties, attorneys' fees, and costs.

(3) Disciplinary action by the respective licensing board or regulatory agency with jurisdiction over the covered entity.

(4) Any penalty authorized under Article 2A of Chapter 75 of the General Statutes if the violation of this Article is also a violation of Article 2A of Chapter 75 of the General Statutes.

(5) Any other civil or administrative remedy available to a plaintiff by State or federal law or equity.

(b) To the extent permitted under or consistent with federal law, a covered entity or its business associate that in good faith submits data through, accesses, uses, discloses, or relies upon data submitted through the HIE Network shall not be subject to criminal prosecution or civil liability for damages caused by such submission, access, use, disclosure, or reliance.

History

2015-241, s. 12A.5(d)

Annotations

Notes

EDITOR'S NOTE. --

Session Laws *2015-241, s. 12A.5(f1),* as added by Session Laws *2015-264, s. 86.5(d),* provides: "Notwithstanding

any provision of this section, covered entities that are required to submit demographic and clinical information through the successor HIE Network described in subsection (a) of this section pursuant to G.S. 90- 414.4(b), as enacted by subsection (d) of this section, shall not be required to submit such demographic and clinicalinformation through the successor HIE Network until the Authority establishes a date for covered entities to begin submitting demographic and clinical information through the HIE Network or by other secure electronic means, asprovided in G.S. 90-414.4(b), as enacted by subsection (d) of this section."

Session Laws 2015-241, s. 1.1, provides: "This act shall be known as 'The Current Operations and Capital Improvements Appropriations Act of 2015.'"

Session Laws 2015-241, s. 33.6, is a severability clause.

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§§ 90-415 through 90-449

Reserved for future codification purposes.

End of Document

GENERAL ASSEMBLY OF NORTH CAROLINASESSION 2021

N.C. Session Law 2021-26
House Bill 395

AN ACT EXEMPTING AMBULATORY SURGICAL CENTERS FROM THE REQUIREMENT TO SUBMIT DEMOGRAPHIC AND CLINICAL DATA, EXTENDING FOR CERTAIN PROVIDERS AND ENTITIES THE DEADLINES FOR MANDATORY PARTICIPATION IN THE STATEWIDE HEALTH INFORMATION EXCHANGE NETWORK KNOWN AS NC HEALTHCONNEX, AND INSTITUTING REFORMS TO PROTECT PATIENTS.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 90-414.4(a) reads as rewritten:

"§ **90-414.4. Required participation in HIE Network for some providers.**

(a) Findings. - The General Assembly makes the following findings:

(1) That controlling escalating health care costs of the Medicaid program and other State-funded health care services is of significant importance to the State, its taxpayers, its Medicaid recipients, and other recipients of State-funded health care services.

(2) That the State and covered entities in North Carolina need timely access to certain demographic and clinical information pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries and paid for with Medicaid or other State-funded health care funds in order to assess performance, improve health care outcomes, pinpoint medical expense trends, identify beneficiary health risks, and evaluate how the State is spending money on Medicaid and other State-funded health care services. The Department of Information Technology, the Department of State Treasurer, State Health Plan Division, and the Department of Health and Human Services, Division of Health Benefits, have an affirmative duty to facilitate and support participation by covered entities in the statewide health information exchange network.

(3) That making demographic and clinical information available to the State and covered entities in North Carolina by secure electronic means as set forth in subsection (b) of this section will improve care coordination within and across health systems, increase care quality for such beneficiaries, enable more effective population health management, reduce duplication of medical

services, augment syndromic surveillance, allow more accurate measurement of care services and outcomes, increase strategic knowledge about the health of the population, and facilitate health care cost containment."

SECTION 2. G.S. 90-414.4(al) reads as rewritten:

"(al) Mandatory Connection to HIE Network. - Notwithstanding the voluntary nature of the HIE Network under G.S. 90-414.2, the following providers and entities shall be connected to the HIE Network and begin submitting data through the HIE Network pertaining to services rendered to Medicaid beneficiaries and to other State-funded health care program beneficiaries and paid for with Medicaid or other State-funded health care funds in accordance with the following time line:

…

(2) Except as provided in subdivisions (3), (4), and (5) of this subsection, all other providers of Medicaid and State-funded health care services and their affiliated entities shall begin submitting demographic and clinical data by ~~October 1, 2021.~~January 1, 2023.

(3) The following entities shall submit encounter and claims data, as appropriate, in accordance with the following time line:

a. Prepaid Health Plans, as defined in G.S. 108D-l, by the commencement date of a capitated contract with the Division of Health Benefits for the delivery of Medicaid and NC Health Choice services as specified in Article 4 of Chapter 108D of the General Statutes.

b. Local management entities/managed care organizations, as defined in G.S. 122C-3, by June 1, 2020.

If authorized by the Authority in accordance with this Article, the Department of Health and Human Services may submit the data required by this subsection on behalf of the entities specified in this subdivision.

(4) The fo11owing entities shall begin submitting demographic and clinical data by ~~June 1, 2021:~~January 1, 2023:

a. ~~Ambulatory~~ Physicians who perform procedures at ambulatory surgical centers as defined in G.S. 131E-146.

b. Dentists licensed under Article 2 of Chapter 90 of the General Statutes.

c. Licensed physicians whose primary area of practice is psychiatry.

d. The State Laboratory of Public Health operated by the Department ofHealth and Human Services.

(5) The following entities shall begin submitting claims data by ~~June 1,~~ January 1, 2023:

a. Pharmacies registered with the North Carolina Board of Pharmacy under Article 4A of Chapter 90 of the General Statutes.

b. State health care facilities operated under the jurisdiction of the Secretary of the Department of Health and Human Services, including State psychiatric hospitals, developmental centers, alcohol and drug treatment centers, neuro-medical treatment centers, and residential programs for children such as the Wright School and the Whitaker

Psychiatric Residential Treatment Facility."

SECTION 3. G.S. 90-414.4(a2) reads as rewritten:

"(a2) Extensions of Time for Establishing Connection to the HIE Network. - The Department of Information Technology, in consultation with the Department of Health and Human Services and the State Health Plan for Teachers and State Employees, may establish a process to grant limited extensions of the time for providers and entities to connect to the HIE Network and begin submitting data as required by this section upon the request of a provider or entity that demonstrates an ongoing good-faith effort to take necessary steps to establish such connection and begin data submission as required by this section. The process for granting an extension of time must include a presentation by the provider or entity to the Department of Information Technology, the Department of Health and Human Services, and the State Health Plan for Teachers and State Employees on the expected time line for connecting to the HIE Network and commencing data submission as required by this section. Neither the Department of Information Technology, the Department of Health and Human Services, nor the State Health Plan for Teachers and State Employees shall grant an extension of time (i) to any provider or entity that fails to provide this information to both Departments, and the State Health Plan for Teachers and State Employees, (ii) that would result in the provider or entity connecting to the HIE Network and commencing data submission as required by this section later than ~~October 1, 2021, or (iii) that would result in any provider or entity specified in subdivisions (4) and (5) of subsection (a1) of this section connecting to the HIE Network and commencing data submission as required by this section later than June 1, 2022.~~ January 1, 2023. The Department of Information Technology shall consult with the Department of Health and Human Services and the State Health Plan for Teachers and State Employees to review and decide upon a request for an extension of time under this section within 30 days after receiving a request for an extension."

SECTION 4. G.S. 90-414.4(b) reads as rewritten:

"(b) Mandatory Submission of Demographic and Clinical Data. - Notwithstanding the voluntary nature of the HIE Network under G.S. 90-414.2 and, except as otherwise provided in subsection (c) of this section, as a condition of receiving State funds, including Medicaid funds, the following entities shall submit at least twice daily, through the HIE network, demographic and clinical information pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries and paid for with Medicaid or other State-funded health care funds, solely for the purposes set forth in subsection (a) of this section:

(1) Each hospital, as defined in G.S. 131E-176(13) that has an electronic health record system.

(2) Each Medicaid ~~provider.~~provider, unless the provider is an ambulatory surgical center as defined in G.S. 131E-146, however, a physician who performs a procedure at the ambulatory surgical center must be connected to the HIE Network.

(3) Each provider that receives State funds for the provision of health ~~services.~~services, unless the provider is an ambulatory surgical center as defined in G.S. 13lE-146, however, a physician who performs a procedure at the ambulatory surgical center must be connected to the HIE Network.

(4) Each local management entity/managed care organization, as defined in G.S. 122C-3."

SECTION 5. G.S. 90-414.4 is amended by adding a subsection to read:

"(bl) Balance Billing Prohibition. - An in-network provider or entity who renders health care services, including prescription drugs and durable medical equipment, under a contract with the State Health Plan for Teachers and State Employees and who is not connected to the HIE Network in accordance with this Article, is prohibited from billing the State Health Plan or a Plan member more than either party would be billed if the entity or provider was connected to the HIE Network. Balance billing because the provider or entity did not connect to the HIE Network is prohibited."

SECTION 6. G.S. 90-414.6 reads as rewritten:

"§ **90-414.6. State ownership of HIE Network data.**

Any data pertaining to services rendered to Medicaid and other State-funded health care program beneficiaries submitted through and stored by the HIE Network pursuant to G.S. 90-414.4 or any other provision of this Article shall be and will remain the sole property ofthe State. Any data or product derived from the aggregated, de-identified data submitted to and stored by the HIE Network pursuant to G.S. 90-414.4 or any other provision of this Article, shall be and will remain the sole property of the State. The Authority shall not allow data it receives pursuant to G.S. 90-414.4 or any other provision of this Article to be used or disclosed by or to any person or entity for commercial purposes or for any other purpose other than those set forthin G.S. 90-414.4(a) or G.S. 90-414.2. To the extent the Authority receives requests for electronic health information as the term is defined in 45 C.F.R. § 171.102, or other medical records froman individual, an individual's personal representative, or an individual or entity purporting to acton an individual's behalf, the Authority (i) shall not fulfill the request and (ii) shall make available to the requester and the public, via the Authority's website, educational materials about how to access such information from other sources."

SECTION 7.(a) On or before March 1, 2022, the NC HIE Advisory Board shall submit to the Joint Legislative Oversight Committee on Health and Human Services recommendations regarding appropriate features or actions to support enforcement of the Statewide Health Information Exchange Act contained in Article 29B of Chapter 90 of the General Statutes and the results of the outreach efforts in subsection (b) of this section.

SECTION 7.(b) The HIE Authority shall work with the State Health Plan Division, Department of State Treasurer, and the Division of Health Benefits, Department of Health and Human Services, to identify the following: (i) all providers and entities who are required to connect to the HIE as a condition of receiving State funds, (ii) providers and entities who have not connected to the HIE in accordance with G.S. 90-414.4, and (iii) providers and entities whose deadline for mandatory connection is approaching or has passed. The HIE Authority shall contact each entity or provider identified and ascertain the status of the entity's or provider's effort to connect to the HIE. The HIE Authority shall share information with each provider or entity about the Statewide Health Information Exchange Act and how to connect to the HIE Network. All licensing boards within the State overseeing the providers and entities required to connect to the HIE shall assist by providing contact information and addresses of licensees when that information is not readily available to the HIE Authority, Department of State Treasurer, and the Department of Health and Human Services. Contact information and addresses for providers and entities shall be provided by the Department of State Treasurer, the Department of Health and Human Services, and licensing boards on or before November 1, 2021. On or before November

1, 2021, the Department of State Treasurer, State Health Plan Division, shall provide claim encounter data to support but not exceed the requirements of this section and as part of its responsibilities to administer and operate the State Health Plan for Teachers and State Employees, the State Health Plan Division shall use and disclose Claim Payment Data and/or data from the Claims Data Feed, as necessary to satisfy the requirements of this subsection.

SECTION 8. This act is effective when it becomes law.

In the General Assembly read three times and ratified this the 27th day of May, 2021.

s/ Carl Ford
Presiding Officer of the Senate

s/ Harry Warren
Presiding Officer of the House of Representatives

s/ Roy
Cooper
Governor

Approved **11**:05 a.m. this 27th day of May, 2021

Appendix H: NC HIEA Progress Summary

North Carolina Health Information Exchange Authority
September 2021

North Carolina's health information exchange, NC HealthConnex, enables hospitals and other health care providers to safely and securely share a patients' medical records (i.e. labs, medications, and prior diagnoses) in real-time with other providers who have a treatment relationship with the patient, leading to better-informed, integrated care for patients across North Carolina.

The NC Health Information Exchange Authority (NC HIEA) works with the health care provider community to educate about the state's requirements for connectivity (NC S.L. 2015-241) and the value of participating in health information exchange. Through a public-private partnership with SAS Institute as the technology partner, the NC HIEA has experienced significant progress in building a statewide health information network making data available through the system to improve care to the citizens of North Carolina.

What's more, NC HealthConnex has supported its public health partners at NC Department of Health & Human Services (DHHS) during the pandemic setting up bidirectional data exchanges related to COVID tests and immunizations, as well as providing data services for syndromic surveillance, analytic reporting, and patient matching. HIEs like NC HealthConnex are very effective at combining multiple data sets at the identified patient level, a task which is made more accurate as additional data sources are added. During COVID, this capability has been important for gaining insights about race/ethnicity and comorbidities and will be important as treatments and vaccines are evaluated.

NC HealthConnex has grown from 835 facilities in mid-2016 to more than 7,000 health care facilities including 125 hospitals - sending over 700,000 messages daily. The centralized repository has grown from three million unique patient records in early 2016 to over 13 million as of September 2021.

NC HealthConnex by The Numbers (as of September 2021)

- **84%** of patients eligible for Medicaid have clinical data in the HIE
- **92%** of State Health Plan members have clinical data in the HIE
- **79%** of physicians, certified nurse midwives, nurse practitioners, physician assistants, and dentists participating in the Meaningful Use/Promoting Interoperability program are onboarded to NC HealthConnex
- **2M +** notifications delivered in the month of July via NC*Notify, the HIE's event notification service to support Medicaid managed care/value-based care and close gaps in care.
- **7,100+** ambulatory practices submitting patients' medical records including primary care, county health departments, federally qualified health centers, free and charitable clinics, behavioral health, etc.; **125** hospitals connected and submitting data; additional **5,000+ in onboarding**

The Benefits

This growing, secure electronic network enables NC HealthConnex participants to query and access their patients' comprehensive records across multiple providers. This results in decreased redundancy; more efficient, accurate diagnoses, recommendations and treatment; and improved coordination across all levels of care.

Additionally, NC HealthConnex is a powerful tool to support public health use cases. When public health leaders need to collect data, HIEs are a good vehicle both for compiling data from the field to report to public health and making information available back to the credentialed health care providers who would benefit.

NC*Notify, is an event notification service that proactively pushes admission, discharge, and transfer information to alert providers when patients with whom they have a treatment relationship have received care outside of their electronic health record (EHR) or network to help in care coordination and close gaps in care. The most recent version of this service now includes alerts for COVID positive lab results, chronic care management, high utilizers, diabetes

diagnosis and more. Participants are also able to now check the Controlled Substance Reporting System prior to prescribing via an integration with this database.

NC HealthConnex also enables interstate exchange of health records via the national eHealth Exchange and the SHIEC Patient Centered Data Home™. Out of state exchange is enabled for 22 states as well as the joint HIE for the U.S. Veteran Administration's HIE and the Department of Defense (DoD).

For more information or to ask questions, please contact Leigh Jackson, leigh.jackson@nc.gov, NC DIT Legislative Liaison or Christie Burris, christie.burris@nc.gov, NC HIEA Executive Director.

NC HIEA/NC HealthConnex Participant Feedback

*"The emergency ADT feed from NC*Notify I reviewed yesterday was timely; when I went into NC HealthConnex to pull the CCD I was able to get some valuable information regarding the physical condition of the client which could then be shared with the direct care staff in the program as the guardian failed to let us know when she dropped the child off for treatment."* Behavioral Health Participant

"Many of our patients are referred to other facilities for specialty care or are hospitalized at locations other than our small inpatient unit. Staff spend a significant amount of time calling other doctors' offices and hospitals requesting notes. NC HealthConnex has allowed our staff to be more well informed about the care our patients receive at other facilities. We are still limited by the fact that not all sites transmit notes to NC HealthConnex; this is ultimately, the information our clinical staff are looking for." Cherokee Indian Hospital, Cherokee, NC

"At the Open Door Clinic, we see many patients that have visited the ED and have been hospitalized for chronic medical conditions. The documents we receive directly from NC HealthConnex allow us to have all of the information we need at our fingertips. There is no interruption of workflow to request records, rescheduling patients until we have all of the information we need, or even having to track down specialist referral notes. Those providers are in the system and are sending the data that we need via NC HealthConnex! The other side to this is the Emergency Department and hospital providers have access to the information we are sharing since our doctors are not on call at all hours. The continuity of care is incredible! We Love it!" Open Door Clinic dba Urban Ministries of Wake County

"When new or current patients come in and have been seen in other medical offices or hospitals, it is great to have the advantage of getting the current medical records for the physicians in advance." Pediatrician's Office

"The ability of this work to reduce the duplication of testing (blood tests and radiology). The cost savings component of this could be in the hundreds of thousands of dollars just in the obstetrical work." County Health Department

"We utilize the HIE for continuity of care due to post-hospitalization / post-ED-visit discharges, and data gathering for closing care gaps for our ACO, our insurance payer programs (such as BQPP), and Medicaid MU quality measure reporting." Children's and Multispecialty Clinic

"I was able to confirm that a patient of mine who had several outstanding referrals to different care organizations had not rescheduled her appointments as planned – this saved time for me and the medical records staff from having to log into three separate Epic systems to get the same information." Independent Physician's Office

Appendix I: NC HealthConnex's Added Value for Health Care Providers

NC HealthConnex Adds Value for Health Care Providers and Entities

NC HealthConnex is a state-supported health data utility that gives health care providers a secure electronic system to share patient information with other providers and state agencies, such as Medicaid and the N.C. Division of Public Health.

Providers in North Carolina use more than 200 electronic health records (EHR) systems. NC HealthConnex reduces this fragmentation of patient records by aggressively onboarding EHRs, with 80 connected so far. NC HealthConnex aggregates the disparate patient data sets and creates more complete health records.

Point of Care Access to Patient Records

When a patient walks through the door, doctors, nurses, pharmacists, and other mental and behavioral health providers can see a fuller picture of their patient's medical care and history through NC HealthConnex's secure web-based clinical portal or integration with their EHR. They can access and share critical data on their patients' labs, diagnostics, history, allergies, medications, and more.

With over 7,000 health care facilities connected, providers have greater visibility across their patients' care continuum, reducing the need for phone calls and faxing records and referrals. NC HealthConnex bridges the gap in out-of-state care with connectivity to 22 state HIEs and the U.S. Departments of Defense and Veterans Affairs via the eHealth Exchange and Patient Centered Data Home™ national networks.

Benefits for Providers and Patients

With NC HealthConnex, providers can more efficiently and accurately diagnose patients and decide on the appropriate treatment. Patients have less burden to keep up with medication lists and other critical information for their care and well-being. This improves the speed, quality, safety, and coordination of patient care. The greater availability of patient data at the point of care can also lower health care costs.

Participation in health information exchanges such as NC HealthConnex improves medical encounters for providers and patients through:

- Improved diagnoses
- More coordinated care between providers
- Greater trust in health care teams
- Reduced duplicate testing
- Lower risk of avoidable complications
- Higher patient satisfaction and experience
- Elimination of reliance on hard copies of tests and records from other health care providers

How Providers Use NC HealthConnex's Value-Added Services

NC*Notify

This real-time notification system alerts providers when their patients visit medical facilities across North Carolina. For example, a primary care doctor enrolled in the service gets an alert when a patient visits an emergency room while travelling on vacation. Providers can customize NC*Notify alerts to meet their workflow needs—and the needs of their patients. Presently, alerts are generated based on admission and discharge information from 140 hospitals and more than 7,000 ambulatory care facilities.

Controlled Substance Reporting System (CSRS)

Pharmacists and prescribers combat the opioid epidemic by checking patients' statewide prescription history before prescribing a controlled substance. This single sign-on capability, developed with the N.C. Department of Health and Human Services, lets providers directly access the CSRS from the NC HealthConnex clinical portal. Providers and their staff save time and effort while meeting state requirements, issuing appropriate prescriptions, and reducing drug misuse.

Direct Secure Messaging (DSM)

With this encrypted email service, clinicians share patients' protected health information through a secure network, reducing the need for phone calls and faxing. NC HealthConnex participants can make contacts through the growing provider directory ofsecure DSM addresses of physicians across the state.

COVID-19 Vaccine Management System (CVMS)

Providers need only report COVID-19 vaccine administration once using their EHR via connectivity with NC HealthConnex and the N.C. Covid Vaccine Management System (CVMS). NC HealthConnex receives COVID-19 vaccine administration data from points of care and offers connectivity to CVMS and patient matching across sources, increasing the accuracy of the vaccine data for providers.

N.C. Immunization Registry

Providers can electronically access and update their patients' immunization records in the N.C. Immunization Registry from their EHR through NC HealthConnex.

N.C. Diabetes Registry

Through this public and population health registry developed by NC HealthConnex and the N.C. Division of Public Health, providers can easily attest that they meet the U.S. Centers for Medicare & Medicaid Services' (CMS) Meaningful Use/Promoting Interoperability measures to qualify for federal incentive payments for using their EHRs to improve health quality.

Appendix J: Glossary

Acute care settings—These health care facilities provide active, short-term treatments for severe injuries, illnesses, urgent conditions, and post-surgery recovery. Examples include hospital stays and outpatient procedures.

Ambulatory care settings—Health care professionals provide outpatient care, without admission to a hospital, in settings including medical offices and clinics, hospital outpatient departments, special clinics, and urgent care clinics.

Accountable care organizations—A group of doctors, hospitals, and other health care providers voluntarily comes together to give coordinated high-quality care to patients. The goal of coordinated care is to ensure that patients get the right care at the right time while avoiding unnecessary duplication of services and preventing medical errors.

Electronic health records—This systemized collection of patient and population health information is stored in a digital format that can be shared by health care providers across different settings.

Health data utility—This entity established for the public or social good is organized as a non-profit, public benefit or B corporation, or state-run public entity and operates in a state or region with broad stakeholder representation on its governing board and broad participation from public health, governmental agencies, hospitals, physicians, health plans, long term and post-acute care, behavioral health, social service organizations, pharmacies, and other health care providers.

Health information exchange—A secure electronic network enables authorized health care providers to access and share patient information across a statewide information network. It improves health care quality, enhances patient safety, improves health outcomes, and reduces overall health care costs by making health information available to participating health care providers.

Health Information Technology for Economic and Clinical Health Act (HITECH)—Part of the 2009 American Recovery and Reinvestment Act, this act gave the U.S. Department of Health and Human Services authority to improve health care quality, safety, and efficiency through the promotion of health IT, including use of electronic health records by providers and the private and secure electronic health information exchange.

Health Insurance Portability and Accountability Act of 1996 (HIPAA)—This federal law governs national standards to protect sensitive health information from being disclosed without patients' consent. The law covers health care providers, health plans, health care clearinghouses, and any person or organization using personally identifying health information in their course of business.

Meaningful Use requirements—From 2011 to 2021, the U.S. Centers for Medicare & Medicaid Services required health care providers to meet these three stages of measures and metrics to qualify for federal incentive payments for adopting, implementing, or upgrading certified electronic health record technology. These criteria were used to demonstrate that providers made meaningful use of their electronic health records to improve health care quality.

Medicaid—This joint federal and state program provides health care coverage and helps with health care costs for eligible people with limited incomes and resources. Covered individuals include low-income adults, children, pregnant women, seniors and people with disabilities.

Medicaid managed care—This system delivers Medicaid health benefits and services through contracted arrangements between state Medicaid agencies and managed care organizations that accept a set per-month payment for these services.

Medicaid transformation—North Carolina Medicaid Managed Care health plans launched in July 2021 after a six-year effort to move Medicaid to a managed care model in response to 2015 legislation.

Network adequacy—This standard measures each NC Medicaid Managed Care health plan's ability to deliver benefits by providing members with adequate access to all covered health care services through a network of contracted health care providers.

Population health—This concept of health encompasses the health outcomes of a group of individuals and the distribution of these outcomes within the group. This field also includes the patterns of health determinants and the policies and interventions that link the health outcomes and determinants.

Public health disease surveillance—This effort is the ongoing, systematic collection, analysis, and interpretation of the who, what, where, when, and how of disease case occurrence in a population. The N.C. Department of Health and Human Services' Division of Public Health undertakes this effort.

Statewide Health Information Exchange Act—This act found in Article 29B of Chapter 90 of North Carolina's general statutes established the N.C. Health Information Exchange Authority within the N.C. Department of Information Technology in 2015.

Syndromic surveillance—Health indicators are monitored in individuals and populations to detect and track disease and its spread before diagnoses are made and outcome data is available.

Value-based care—Providers, including hospitals and physicians, are paid based on patient health outcomes. In this health care delivery model, providers are rewarded for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives in an evidence-based way.

Whole person care—This patient-centered model of care considers the totality of the patient and the many biological, behavioral, social, mental, and environmental factors that affect health and disease. These factors are viewed as interconnected rather than as separate systems or organs.