

STATE OF NORTH CAROLINA
DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER
GOVERNOR

MANDY COHEN, MD, MPH
SECRETARY

October 1, 2017

SENT VIA ELECTRONIC MAIL

The Honorable Louis Pate, Chair
Joint Legislative Oversight Committee on
Health and Human Services
North Carolina General Assembly
Room 311, Legislative Office Building
Raleigh, NC 27603

The Honorable Josh Dobson, Chair
Joint Legislative Oversight Committee on
Health and Human Services
North Carolina General Assembly
Room 301N, Legislative Office Building
Raleigh, NC 27603

The Honorable Donny Lambeth, Chair
Joint Legislative Oversight Committee on
Health and Human Services
North Carolina General Assembly
Room 303, Legislative Office Building
Raleigh, NC 27603

Dear Chairmen:

Session Law 2017-133, Section 2, requires the Department of Health and Human Services, to submit a report to the Joint Legislative Oversight Committee on Health and Human Services containing findings and recommendations, a proposed telemedicine policy and a recommendation on the PSYPACT. This report is due no later than October 1, 2017. Pursuant to the provisions of law, the Department is pleased to submit the attached report.

Should you have any questions about this report, please contact Maggie Sauer, Director for the Office of Rural Health, at Maggie.Sauer@dhhs.nc.gov or 919-527-6440.

Sincerely,

Mandy Cohen, MD, MPH
Secretary

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AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

Report on Telemedicine Study and Recommendations

SL 2017-133, Section 2



Report to the

**Joint Legislative Oversight Committee on Health and Human
Services**

By

North Carolina Department of Health and Human Services

October 1, 2017

Executive Summary

Background and Overview

Background: In Session Law 2017-133, the North Carolina General Assembly (NCGA) directed the North Carolina Department of Health and Human Services (DHHS) to conduct a study and provide recommendations on a telemedicine policy for the State. DHHS welcomed the opportunity to embark on this important work which has the potential to improve the quality of life for North Carolinians.

DHHS has completed an extensive survey of the information requested in S.L. 2017-133 and is pleased to report that standards exist in many of the areas. As requested by the NCGA, a summary of the recommendations and rationale can be found on pages six through nine for the following items:

- Definition of the term telemedicine
- The scope of services that can be covered by telemedicine
- Acceptable communication and data transfer speeds necessary to ensure privacy of health information and appropriate for insurance reimbursement
- Informed consent standards
- Online prescribing standards
- Telemedicine provider licensing standards
- Private payer telemedicine reimbursement standards
- Psychology Interjurisdictional Compact (PSYPACT)

While North Carolina has made progress advancing the use of telemedicine, there remains much work to do. DHHS is ready to partner with the NCGA to take action to make the necessary changes that will maximize the use of telemedicine.

In the past two decades, DHHS has helped lead the adoption of telemedicine statewide. In 1999, the Division of Medical Assistance enacted a Medicaid policy to reimburse telemedicine programs for their services. This policy continues to be adapted to fit the changing landscape.¹ With the support of the NCGA, the Office of Rural Health has collaborated with East Carolina University Center for Telepsychiatry and e-Behavioral Health since 2013 to administer the North Carolina Statewide Telepsychiatry Program, currently operating in 43 hospitals.²

DHHS recommends that North Carolina adopt an aggressive statewide telemedicine policy that will improve health for all people by increasing access to high quality care. The opportunities range from improving health outcomes for those with chronic conditions, to gaining and maintaining independence for those who are aging or have a disability, to improving access to care in rural areas.

Technology is evolving quickly and our ability to assist our most vulnerable citizens through creative uses of this tool has vastly increased. Capitalizing on this opportunity requires intentional thought and planning, as well as

¹ Please see pg. 23 for more information.

² Please see pg. 15 for more information.

creating unique and innovative partnerships across State Government. DHHS firmly believes that telemedicine can improve the health of our population if we respond effectively to the two opportunities outlined below:

Opportunity #1: 1115 Medicaid Waiver

Opportunity #2: Broadband Infrastructure

Opportunity 1: 1115 Medicaid Waiver

Presently, the Waiver describes telemedicine as a tool to reach our most vulnerable citizens, particularly those in rural areas. As the State moves to a managed care environment, **Medicaid Managed Care Organizations (MCOs) should be required to ensure access to high quality, patient-centered care by incorporating telemedicine into their payment models.**

DHHS is considering innovative strategies to meet the needs of rural and underserved communities who do not have adequate access to physicians and other healthcare providers. The focus is not only treat illness, but provide an opportunity for improved health. The 1115 Waiver is designed to encourage whole-person care and adequate workforce is an essential core component to our success in that objective. **North Carolina can improve access to the healthcare workforce by participating in Interstate Licensure Compacts such as PSYPACT and increasing incentives for providers to use telemedicine to reach patients in underserved areas.**

Opportunity 2: Broadband Infrastructure

The North Carolina Office of Broadband Infrastructure 2017 Broadband Report recommendations should be enacted as quickly as possible to support patients' ability to communicate and exchange information between their home or community environment and their healthcare provider/entity.³ Enacting these recommendations will enable individuals to connect in their homes by computer, smart device, or home monitoring systems.

Telemedicine tools may create a vehicle to engage patients with their primary care provider to increase continuity of care without the burden of travel or time away from work, school, or family. Though broadband is in every county, residents and businesses struggle to access adequate service for some telemedicine modalities. DHHS will partner with other state agencies and philanthropic groups to identify solutions to address this problem.

Next Steps

Additional work is required to achieve optimal use of these resources. DHHS is ready to continue our work with the NCGA to further outline telemedicine strategies and actions to support our most vulnerable citizens and increase the health of North Carolinians. S.L. 2017-133 is an opportunity to gather the collective resources across DHHS, Departments of Commerce, Insurance, and Information Technology, along with other stakeholders to adequately address these prospects.

To that end, DHHS recommends the establishment of a Legislative Subcommittee to engage our collective state efforts and those of other stakeholders to build a comprehensive telemedicine implementation plan. DHHS looks forward to engaging with this Subcommittee to develop a roadmap for this plan.

³ Please see pg. 25 for more information.

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I. S.L. 2017-133, Section 1-2 Requirements and Responses

The following document provides some context for review of current practices and future considerations for the creation of a more robust telemedicine infrastructure for the State which builds upon the current infrastructure and proposed Medicaid policy emphasizing the quadruple aim as defined by better experience of care, per capita cost containment and funding stability, better health, and improved provider engagement and support.

To achieve this vision, DHHS provides the following responses and recommendations for each area requested by NCGA:

(1) A definition of the term telemedicine

- a.** Adopt the Health Resources & Services Administration (HRSA)’s definition of telehealth and telemedicine as “the use of electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include video conferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.” The Centers for Medicare & Medicaid Services have incorporated this definition.⁴
- b.** DHHS agrees with the opinion of the American Telemedicine Association, that the terms “telehealth” and “telemedicine” may be used interchangeably.⁵

(2) The scope of services that can be covered by telemedicine

- a.** Support the development of telemedicine programs that increase access to care, uphold the standard of care, improve patient satisfaction, reduce costs, and engage practitioners to provide care at the top of their licenses. Telemedicine is not a service in itself; it is a modality for providing the service. As the capabilities of technology continue to evolve, so will the scope of telemedicine programs.⁶
- b.** Adopt best practices as suggested by the National Quality Forum (NQF) and the Agency for Healthcare Research and Quality (AHRQ) to ensure patients have access to the highest quality and continuity of care.⁷

(3) Acceptable communication and data transfer speeds necessary to ensure the privacy of health information and appropriate for insurance reimbursement

- a.** Covered entities and business associates must follow all federal and state regulations to secure protected health information (PHI), including those set forth by Health Insurance Portability and Accountability Act (HIPAA), HIPAA Privacy and Security Rules, the Health Information Technology for Economic and Clinical Health (HITECH) Act, and the Office of Civil Rights. Covered entities and business associates must conduct risk analyses and install administrative, physical, and technical safeguards to ensure the protection of PHI.⁸

⁴ Please see pg. 10 for more information.

⁵ Ibid.

⁶ Please see pg. 9 for more information.

⁷ Please see pg. 19 for more information.

⁸ Please see pg. 18 for more information.

- b.** The North Carolina Office of Broadband Infrastructure 2017 Broadband Report recommendations should be enacted as quickly as possible to support patients' ability to communicate and exchange information directly between their home or community environment and their healthcare provider/entity.⁹
- c.** Recognize that a high-speed broadband internet connection is essential for the provision of telemedicine services, which take many forms. Telemedicine programs using Live Video Conferencing require a high-speed broadband internet connection with a minimum bandwidth of 1Mbps (megabits per second) download speed and 384 Kbps (kilobits per second) upload speed. Having sufficient bandwidth helps to ensure a clear, uninterrupted picture during the video conference.¹⁰
- d.** Eligible providers and institutions should participate in NC HealthConnex, the statewide Health Information Exchange (HIE), to enhance interoperability of electronic health records and share data securely.¹¹

(4) Informed consent standards

- a.** Adopt the recommendations set forth by the American Telemedicine Association that informed consent contain the following:
 - i.** "Inform the patients of their rights when receiving telemedicine, including the right to stop or refuse treatment.
 - ii.** Tell patients their own responsibilities when receiving telemedicine treatment.
 - iii.** Have a formal complaint or grievance process to resolve any potential ethical concerns or issues that might come up as a result of telecare.
 - iv.** Describe the potential benefits, constraints, and risks (like privacy and security) of telemedicine.
 - v.** Inform patients of what will happen in the case of technology or equipment failures during telemedicine sessions, and state a contingency plan."¹²
- b.** Consult patients and involved family members before services are rendered to them over telemedicine. Patients and involved family members should feel comfortable using the technology.¹³
- c.** Obtain informed consent before services are rendered. Informed consent can be verbal or written, and ideally will include both by discussing the service with the patient, then letting the patient review and sign a consent form written in their preferred language.¹⁴

⁹ Please see pg. 25 for more information.

¹⁰ Ibid.

¹¹ Please see pg. 27 for more information.

¹² Please see pg. 18 for more information.

¹³ Ibid.

¹⁴ Ibid.

(5) Online prescribing standards

- a.** Telemedicine practitioners must abide by all federal regulations for E-Prescribing, including those specified under the Controlled Substances Act and the Ryan Haight Online Pharmacy Consumer Protection Act.¹⁵

(6) Telemedicine provider licensing standards

- a.** Provider licensing standards regarding telemedicine should promote and support a patient-centered model of care, enhancing access to quality care and continuity of care. Further study is needed to outline specific care guidelines with input from provider/consumer stakeholders and regulating entities.¹⁶
- b.** Consistent with the language in the 1115 Waiver submitted by DHHS, a standardized and centralized credentialing process should be developed and adopted for all providers, to include those who practice telemedicine, to ensure parity across care delivery models.”¹⁷
- c.** Further study is needed to consider the impact of participation in the Interstate Medical Licensure Compact as formulated by the Federation of State Medical Boards.¹⁸

(7) Private payer telemedicine reimbursement standards

- a.** Further study and stakeholder input are needed to consider reimbursement standards for private payers. DHHS should further examine the standards of other states and the results of those standards on cost and access.¹⁹

(8) Psychology Interjurisdictional Compact (PSYPACT)

- a.** DHHS supports the position of the North Carolina Psychological Association, that North Carolina should create legislation to participate in PSYPACT as this will help to address behavioral health workforce issues.²⁰
- b.** Participation in PSYPACT should be contingent upon upholding patient-centered models and data reporting for continuity of care, such as participating in NC HealthConnex.²¹

In addition to the recommendations above, DHHS requests that the NCGA convene a Legislative Subcommittee to further study telemedicine issues and the opportunities it presents for NC. The Subcommittee should consist of a diverse group of telehealth leaders as identified by NCGA, to include the Departments of Insurance, Commerce, and Information Technology, provider licensing boards, commercial payers, and rural providers. The vision of the

¹⁵ Please see pg. 20 for more information.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Please see pg. 21 for more information.

¹⁹ Please see pg. 22 for more information.

²⁰ Please see pg. 21 for more information.

²¹ Ibid.

Subcommittee will be to ensure that the citizens of North Carolina receive the highest quality, most accessible quality care possible regardless of where they live, work, and play.

II. Overview

In Session Law 2017-133, the North Carolina General Assembly (NCGA) directed the North Carolina Department of Health and Human Services (DHHS) to conduct a study and provide recommendations on a telemedicine policy for the State. The following document provides some context for review of current practices and future considerations for the creation of a more robust telemedicine infrastructure for the State which builds upon the current infrastructure and proposed Medicaid policy emphasizing the quadruple aim of improved outcomes, lower cost of care, improved patient experience, and improved clinician experience.

North Carolina continues to emphasize the needs of underserved, rural and aging citizens. Our rural communities have a higher number of community members who are aging, have higher incidence of chronic disease and die earlier²² due, in part, to the lack of access to quality, whole-person healthcare. Our citizenry is unique and works in a variety of industries throughout North Carolina, including farming, fishing, logging and other small businesses and minimum wage jobs. A robust telemedicine infrastructure could provide significant benefits to the State, including the following:

- Overall improved access to primary and specialty care
- Improved healthcare costs if individuals are able to participate in a regular healthcare routine rather than higher cost care caused by untreated chronic conditions or preventable healthcare emergency
- Improved access to behavioral health services integrated into primary care settings
- Improved access to community-based behavioral health services to decrease the likelihood of emergency events and hospitalizations
- Improved access to substance abuse support services and management to assist in identifying and treating individuals and their affected families
- Support of individuals in their homes and communities rather than traveling long distances, improving work attendance, avoiding loss of income due to childcare and lost time at work, and transportation costs
- Increased engagement of rural providers with their colleagues thus improving quality care for their patients and decreasing provider isolation and improving retention in the communities that need services the most
- Support of older adults and individuals with disabilities to gain and continue independence

The current 1115 Medicaid waiver encourages managed care organizations to plan creatively to provide increased access to care for persons in rural and underserved communities. It does not however, prescribe the type, measurement or other requirements of telemedicine services, leaving that to the General Assembly to further define with additional stakeholder engagement. It does represent a tremendous opportunity for our State to be

²² 2017 County Health Rankings. (2017). Retrieved September 13, 2017, from http://www.countyhealthrankings.org/sites/default/files/state/downloads/CHR2017_NC.pdf

forward thinking in the application of telemedicine to address the health challenges of some of our most vulnerable citizens.

This document does not provide a complete analysis of what is needed, but does suggest some initial steps to begin a more thorough analysis of the issues at hand. DHHS recommends including additional stakeholder engagement across our state to ensure these strategies:

- Follow standard of care quality guidelines that are equal to or better than in-office care,
- Adhere to patient medical home standards, and
- Provide continuity of care

Furthermore, these recommendations in no way suggest telemedicine as a strategy to replace 1:1 patient engagement with primary care physicians and other healthcare providers. It does suggest that North Carolina explore innovative ways to ensure that people receive quality access to care, at the right place, the right time and with the best outcomes for the most effective cost.

III. Background

Many telemedicine and telehealth programs have been created across North Carolina in recent years. As telehealth and telemedicine use continues to grow statewide, it will be increasingly important to create standards that uphold the quality of care and protect patient privacy, yet encourage the growth of telemedicine programs that lead to lower cost, higher quality care, and improved health outcomes for North Carolinians.

A. Telemedicine Definitions

- The **Health Resources & Services Administration (HRSA)** defines telehealth as “the use of electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include video conferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.”²³
- The **American Telemedicine Association** states that telehealth and telemedicine are used interchangeably and refer to “the use of remote health care technology to deliver clinical services.”²⁴
- The **Centers for Medicare & Medicaid Services (CMS)** use HRSA’s definition for telehealth, but also provide additional guidance regarding places of service and the distant site practitioners who can be reimbursed for the service. An originating site is defined as “the location of an eligible Medicare beneficiary at the time the service furnished via a telecommunications system occurs.” The distant site is where the consulting practitioner is located. Practitioners paid under Medicare include physicians, nurse practitioners, physician assistants, nurse-midwives, and more.²⁵

²³ Telehealth Programs. (n.d.). Retrieved August 15, 2017, from <https://www.hrsa.gov/ruralhealth/telehealth/>

²⁴ FAQs. (n.d.). Retrieved August 15, 2017, from <http://www.americantelemed.org/about/telehealth-faqs->

²⁵ Telehealth Services. (2016). Retrieved August 16, 2017, from <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/TelehealthSrvcsfctsh.pdf>

B. Populations Served

When the forms of telemedicine are explained, concerns are often raised over which populations can benefit from services and whether telemedicine is accessible for all populations. These are decisions that program planners and clinicians make on a daily basis with in-person programs, and similar considerations must apply to telemedicine programs. **Section IV** of this document lists an assortment of telemedicine programs serving a diverse group of populations in our State.

Telemedicine presents a unique opportunity to expand access to care and provide direct support to populations in need. For example, many areas of North Carolina are designated Health Professional Shortage Areas (HPSAs), which demonstrate the need for greater access to care in the areas of primary care, mental health, and oral health. Maps of these HPSAs are provided in the **Appendix** of this document. Practitioners located in urban settings can overcome the rural workforce shortages by providing consults to rural residents over great distances. In addition, the Long Term Services and Supports (LTSS) population may gain access to monitoring programs that could aid them in their daily lives and help them remain independent in their communities with their families for longer periods and with greater independence than is presently possible.

C. Forms of Telemedicine

As technology continues to evolve, so will the ways in which people use it. Currently, the most common forms of telemedicine are (1) Video Conferencing, (2) Store and Forward, (3) Remote Patient Monitoring, and (4) mHealth or Mobile Health.

- **Video Conferencing**
 - Uses “two-way interactive audio-video technology to connect users when a live, face-to-face interaction is necessary”
 - Similar to Apple’s FaceTime or Microsoft’s Skype
 - Uses computer screens and microphones to allow face-to-face interaction over live video
 - Allows peripherals (e.g., electronic stethoscopes, otoscopes, and electrocardiograms (EKGs))
 - Used for direct patient care, consultations between providers, and patient education.²⁶
- **Store and Forward**
 - “Allows for the electronic transmission of medical information, such as digital images, documents, and pre-recorded videos through secure email transmission”²⁵
 - Clinicians can analyze tests or exams at a later time, after the patient visit has concluded.
 - Creates flexibility with provider scheduling
 - Reduces patient wait times for specialty services
 - Often used for radiology, pathology, dermatology, and ophthalmology service²⁷
- **Remote Patient Monitoring**
 - Collects patient vital signs and relevant chronic disease metrics (such as glucose levels) for transmission to care coordinators, who can contact the patient for follow-up if needed

²⁶ Video Conferencing. (n.d.). Retrieved August 15, 2017, from <http://www.cchpca.org/what-is-telehealth/video-conferencing>

²⁷ Store and Forward. (n.d.). Retrieved August 15, 2017, from <http://www.cchpca.org/store-and-forward>

- Patients use medical devices with an internet connection in their home to transmit data securely and automatically
- Identifies health issues early on
- Used for chronic disease management²⁸
- **mHealth (also known as Mobile Health)**
 - Uses “devices such as smart phones and portable monitoring sensors that transmit information to providers, as well as dedicated application software (apps), which are downloaded onto devices”
 - Growing with the popularity of wearables, such as fitness trackers, pedometers, and heartbeat sensors
 - Includes reminders and automated data collection
 - Transmits information to providers
 - Assists in virtual care and Remote Patient Monitoring
 - Used for chronic disease management²⁹
- **In-home monitoring and support devices**
 - In-home monitoring and support devices can be placed in the homes of older adults and individuals with disabilities to help them gain and continue their independence. Living at home with support and/or supporting caregivers in the home to ensure/continue independence as long and fully is possible with new technologies. It is important to consider that technology evolves, non-traditional forms of telemedicine may emerge.

D. Metrics

In the same way program planners and clinicians must consider how a given program can serve populations, they must also consider the targeted outcomes for patients served. Because the use of telemedicine is new and has not been implemented broadly, there is little standardization for this mode of treatment. Organizations like the National Quality Forum and AHRQ are creating metrics for consideration. It is important that while deploying services through telemedicine, the standard of care is upheld and performance metrics are tracked. North Carolina has an enormous opportunity to be in the forefront of this work. Telemedicine services are at their highest value when they provide better patient outcomes and experience, while also reducing the overall cost of care. Please see **Section V** of this document for continued discussion on quality of care.

IV. Scope of Services

There are a variety of programs currently using telemedicine across North Carolina and nationwide. DHHS conducted an environmental scan of telemedicine services as outlined below. This list is not comprehensive. Examples are based on availability of information and are not meant to reflect endorsement or promotion of individual programs.

²⁸ Remote Patient Monitoring. (n.d.). Retrieved August 15, 2017, from <http://www.cchpca.org/remote-patient-monitoring>

²⁹ Mobile Health. (n.d.). Retrieved August 15, 2017, from <http://www.cchpca.org/mobile-health>

A. Primary Care Services

- General Primary Care Services- Several health systems in North Carolina, including Cone Health and Carolinas HealthCare System, have developed smart phone apps that allow patients and employees to connect with a PCP within minutes.
 - During the videoconference, the PCP can diagnose and provide treatment for low acuity conditions. This is done using smart devices (smart phones, tablets, etc.) to create Live Video Conferencing sessions between patients and primary care providers.
- PCPs School-Based Health- Health-e-Schools is a program administered by the Center for Rural Health Innovation. The program serves public schools located in McDowell, Mitchell, and Yancey counties by connecting students and faculty with access to a PCP. The service is effective in diagnosing low acuity conditions, and PCPs can help to assess whether a patient's condition necessitates a visit to a higher level of care. This program expands access to care and helps keep children from missing school due to travel to primary care offices.³⁰
 - Live Video Conferencing carts are equipped with specialized medical equipment, including electrical stethoscopes and otoscopes, to enable a PCP at the distant site to assess a patient's condition as if the service were being provided in-person. However, the PCP is unable to palpate or feel an area of the patient's body.
- Primary Care Consultation and Education- Telemedicine is also used for provider education or consultation. The Extension for Community Healthcare Outcomes (ECHO) Model was created to provide knowledge and support to PCPs to manage patients with complex conditions.
 - PCPs may participate in grand rounds over Live Video Conferencing with interdisciplinary groups of specialists
 - PCPs procure the specialists' advice on specific cases and gain knowledge to treat these cases
 - PCPs are assigned specialist mentors and engage in continuous learning.³¹
 - The ECHO model has expanded internationally and is sometimes targeted to specific conditions
 - The University of North Carolina has launched an initiative using the ECHO model to enable PCPs to provide Medication Assisted Treatment (MAT) to patients suffering from opioid addiction. Leaders of the initiative hope to increase the number of MAT providers in the state to combat the accidental overdose rate.³²
 - Outside of the ECHO Model, other health systems have utilized their automatic systems to support PCPs. For example, Mission Health is encouraging PCPs to employ Office-

³⁰ Center for Rural Health Innovation: MY Health-e-Schools. (n.d.). Retrieved August 23, 2017, from <http://crhi.org/MY-Health-e-Schools/index.html>

³¹ About ECHO | Project Echo. (n.d.). Retrieved August 24, 2017, from <https://echo.unm.edu/about-echo/>

³² UNC-Chapel Hill. (2017). UNC-Chapel Hill initiative will combat opioid use disorders and overdose deaths. Retrieved August 24, 2017, from <http://uncnews.unc.edu/2017/02/15/unc-chapel-hill-initiative-will-combat-opioid-use-disorders-overdose-deaths/>

Based Opioid Treatment (OBOT) in their practices. Mission Health has modified its electronic health record to attach drug screenings and confirm patient's involvement in treatment. These efforts, in turn, help PCPs to feel supported and encouraged that they are following OBOT policies.³³

B. Chronic Disease Management and Care Coordination

Patients with chronic diseases need regular monitoring and access to primary care, but transportation issues, provider shortages, and limited financial resources are common barriers to this care.

- Remote Patient Monitoring- When a PCP refers a patient to the program, registered nurses install a telehealth kiosk in the patient's home and train the patient on use of the kiosk. The patient is given medical supplies including a weight scale, blood pressure monitor, glucose meter, and peak flow meter. The patient then monitors the readings and uses the kiosk to input the data and answer questions about their current health. The kiosk transmits the data to the patient's electronic health record, which the nurses read each day to monitor the readings and determine any abnormalities. This allows the nurses and PCP to respond with interventions, if needed, to help the patient manage their chronic diseases.³⁴
 - In 2006, Roanoke-Chowan Community Health Center launched the Patient Provider Telehealth Network to target improved outcomes for patients with cardiovascular disease, diabetes, or hypertension.
- Enabling Technology- Individuals with disabilities can gain and continue independence using in-home support devices, which can assist them in their daily routines and alert caregivers of warning signs.
 - Services like *SimplyHome* install systems customized to fit the need of the individual so that they can use the technology to remember to turn off the stove, lock their doors, administrate their medication at the appropriate time, and call for help when needed.³⁵
- Diabetic Care -The prevalence of diabetes in North Carolina continues to increase, with at least 1 in 10 adults in North Carolina living with the chronic disease.³⁶ Patients with diabetes can also develop a disease called diabetic retinopathy (DR), one of the leading causes of blindness in adults. Patients require annual comprehensive eye exams to prevent further damage, but because of workforce shortages in rural areas, patients may need to travel great distances to get an exam. Through teleophthalmology, images of the patient's eyes can be sent through Store and Forward technology to a specialist for later viewing.

³³ Hartye, J., & Boice, D. (2017). Phone Interview on May 17, 2017.

³⁴ Schwartz, K., & Britton, B. (2011). Use of Telehealth to Improve Chronic Disease Management. *NCMJ*, 72(3), 216-218.

³⁵ How It Works – SimplyHome. (n.d.). Retrieved September 13, 2017, from <https://www.simply-home.com/how-it-works>

³⁶ Type 2 Diabetes in North Carolina (2017). Retrieved August 24, 2017, from http://www.diabetesnc.com/downloads/0617/CCCPH_FactSheet_Diabetes_FINAL_May2017.pdf

- Indian Health Service-Joslin Vision Network Teleophthalmology Program has implemented this service into primary care offices so that patients can have images taken during their regular diabetes management appointments. The program has increased the annual DR screening rate by 50%, resulting in a 51% increase in laser treatments to prevent severe vision loss. After conducting over 70,000 retinal exams, the program has been successful in decreasing diabetes-related vision loss for its patients. The program has also reported being “less costly and more effective than a live eye examination for detecting DR and preventing vision loss.”³⁷

C. Behavioral Health Services

Many primary care offices have seen the benefit of integrating behavioral health services, but behavioral health workforce shortages may prevent them from recruiting a behavioral health professional (BHP). In addition, if a large health system owns many primary care offices, it may be more efficient to place the BHP at a central location and serve several sites via telemedicine.

- Carolinas HealthCare System has created behavioral health services in their primary care offices using telehealth. The PCP and patient are located on-site, each patient room is equipped with Live Video Conferencing equipment so that the PCP and patient can speak with the BHP. The BHP can provide the patient with **education, a psychological assessment, crisis intervention, etc. via telemedicine**. This service helps to support PCPs, expands access to behavioral health care for patients, and reduces stigma since behavioral health and primary services are co-located.³⁸
- **Telepsychiatry** is an emerging solution to address higher acuity behavioral health services and workforce shortages. In 2013 the North Carolina General Assembly created a model for statewide telepsychiatry services. As defined in North Carolina Session Law 2013-360:

Telepsychiatry is “the delivery of acute mental health or substance abuse care, including diagnosis or treatment, by means of two-way real-time interactive audio and video by a consulting provider at a consultant site to an individual patient at a referring site.”

This legislation created the **North Carolina Statewide Telepsychiatry Program**, administered by the North Carolina Office of Rural Health and the East Carolina University Center for Telepsychiatry and e-Behavioral Health, which provides access to behavioral health professionals for individuals presenting to hospital emergency departments (EDs) with behavioral health crises. Mobile carts are equipped with screens, cameras, and microphones, patients can have two-way interactions with providers through Live Video Conferencing. After providing over 25,000

³⁷ Teleophthalmology | Indian Health Service (IHS). (n.d.). Retrieved August 24, 2017, from <https://www.ihs.gov/teleophthalmology/>

³⁸ Castro, M., & Sparks, W. (2016). Utilizing Emerging Virtual Care Methods to Improve Access to Care. Presentation, Raleigh, NC.

telepsychiatry assessments, NC-STeP has achieved 25% reductions in median length of stay for telepsychiatry patients and cumulative estimated cost savings of \$15,066,000.³⁹

- Telepsychiatry has become an effective solution not only for emergency departments, but also in community-based settings. **Community Behavioral Health** providers continue to use and expand telepsychiatry to provide support to individuals across North Carolina. Organizations like Daymark Recovery Services use telepsychiatry to extend the availability of clinical services to individuals who otherwise would not have access to the services.

D. Emergency Services

Sometimes it can be unclear to patients whether a particular issue is worth a visit to a hospital ED. RelyMD, created by a group of emergency medicine physicians in North Carolina, is a service allowing patients to use their smart devices for immediate Live Video Conferencing with an emergency medicine physician. After assessing the patient, the physician can recommend a referral. This service helps to divert unnecessary visits to hospital EDs and can give guidance for first aid after an accident.⁴⁰

- In 2016, Wake County EMS partnered with RelyMD to launch a pilot program targeted toward reducing unnecessary ED admissions. When paramedics arrive at a requested location, they can connect the patient with the emergency medicine physician to ascertain whether the issue necessitates ambulance transportation to an ED. However, if after assessing the patient the physician determines that an ED visit is not necessary, the physician can assist the patient and paramedic in creating alternate plans, such as education or follow-up. After providing 20 consults and assisting with alternate arrangements, this pilot program diverted 18 unnecessary ED visits.⁴¹

E. Specialty Care Services

- Neurology -When a patient is suffering from symptoms of stroke, the time to diagnosis and treatment is critical. However, there is a limited number of stroke centers in North Carolina.
 - Wake Forest Baptist Health launched its Telestroke Network to provide rural hospitals with access to trained specialists. Hospitals in the network are equipped with mobile carts, which are used to conduct an assessment via Live Video Conferencing among the patient, onsite practitioner, and distant provider. The care team uses the information from the assessment to help diagnose the patient's condition and create a plan of action. This service helps to eliminate the disparity in stroke care between rural hospitals and tertiary care centers.⁴²

³⁹ Home | NC-STeP. (n.d.). Retrieved August 15, 2017, from <http://www.ecu.edu/cs-dhs/ncstep/>

⁴⁰ How Does RelyMD Work? (n.d.). Retrieved August 24, 2017, from <https://relymd.com/how-does-relymd-work/>

⁴¹ How Wake County EMS Cut Emergency Transfers by 90%. (n.d.). Retrieved August 28, 2017, from <https://relymd.com/wake-county-ems-case-study/>

⁴² Wake Forest Baptist Telestroke Network. (n.d.). Retrieved August 24, 2017, from <http://www.wakehealth.edu/Referring-Physicians/Neurosciences/Telestroke/Telestroke-Network.htm>

- Specialty Services for Children with Special Needs – In 2003, The University of North Carolina Department of Physical Medicine and Rehabilitation created the TelAbility program to help provide care to children with disabilities. TelAbility allows children and their families to access specialists and care coordinators at community-based settings, such as primary care offices, through Live Video Conferencing. The program is interdisciplinary and care involves physicians, physical therapists, occupational therapists, speech-language pathologists, and many more types of practitioners. By helping children with disabilities and their families to engage in appointments close to home, the program aims to increase patient compliance and alleviate transportation burdens.⁴³
- Supports for Persons Needing Assistance to Remain in a Community or Home-Based Setting-In-home monitoring and support devices can be placed in the homes of older adults and individuals with disabilities to help them gain and continue their independence. *Simply Home*, a North Carolina based company, provides assistive technology solutions promoting the independence, community integration, and self-determination of senior adults and people with disabilities. Their remote support systems blend the latest in technology and natural support to provide a safety net for people who want to live independently.

F. Dentistry

According to a recent study, North Carolina ranks 47th in the nation in dentists per capita.⁴⁴ This workforce shortage results in many patients receiving limited or no dental care at all.

- California Model - University of the Pacific in California has created a new model, the Virtual Dental Home (VDH), to expand access to oral health services. This model allows registered dental hygienists in alternative practice (RDHAP), registered dental hygienists working in public health programs (RDH) and registered dental assistants in extended functions (RDAEF) to provide basic dental services in community-based settings. Records from the visit are transmitted to a dentist for review, and the dentist can instruct the dental hygienist or assistant on appropriate responses such as, conducting risk assessments, providing preventive services, and interim therapeutic restorations (ITRs). If further follow-up from a dentist is needed, the patient is referred for treatment at the dentist's office. This service is most effective with children and elders, as they are most susceptible to diseases from neglect of oral health.⁴⁵

⁴³ TelAbility / Home. (n.d.). Retrieved August 28, 2017, from <http://www.telability.org/index.pl>

⁴⁴ Fraher, E., McGee, V., Hom, J., & Gaul, K. (2012). We're Not Keeping Up With the Joneses: North Carolina Has Fewer Dentists per Capita Than Neighboring (and Most Other) States. Retrieved August 24 2017, from http://nciom.org/wp-content/uploads/2012/03/NCMJ_73206-web.pdf

⁴⁵ About Virtual Dental Home. (n.d.). Retrieved August 24, 2017, from <http://dental.pacific.edu/departments-and-groups/pacific-center-for-special-care/innovations-center/virtual-dental-home-system-of-care/about-virtual-dental-home>

V. Patient Privacy and Safety

As Health Information Technology continues to develop, it becomes increasingly important that all processes, workflows, equipment, and data systems are built around upholding patient privacy and safety. Several important considerations are provided below.

A. HIPAA Compliance

Covered entities and businesses must adhere to all applicable laws and regulations regarding patient privacy and safety. This can include, but is not limited to:

- Health Insurance Portability and Accountability Act of 1996 (HIPAA)
- HIPAA Privacy and Security Rules
- Health Information Technology for Economic and Clinical Health (HITECH) Act
- Regulations set forth by the Office of Civil Rights (OCR)

Telemedicine providers must give special attention to the HIPAA Security Rule, as it addresses the safeguards for securing protected health information (PHI) that is stored electronically. Covered entities and business associates should conduct risk analyses and install administrative, physical, and technical safeguards to ensure the protection of PHI.⁴⁶

B. Informed Consent

An important component of quality care is patient and family engagement (PFE). Just as patients should be involved in decision-making about their exams and procedures, they should also be consulted before services are rendered to them over telemedicine. Patients and involved family members should feel comfortable using the technology and informed consent should be obtained before services are rendered. Informed consent can be verbal or written, and if possible, include both by discussing the service with the patient, then letting him or her review and sign a consent form written in the patient's preferred language. DHHS concurs with the American Telemedicine Association's recommendations that informed consent contain the following:

- "Inform patients of their rights when receiving telemedicine, including the right to stop or refuse treatment.
- Tell patients their own responsibilities when receiving telemedicine treatment.
- Have a formal complaint or grievance process to resolve any potential ethical concerns or issues that might come up as a result of telecare.
- Describe the potential benefits, constraints, and risks (like privacy and security) of telemedicine.

⁴⁶ Summary of the HIPAA Security Rule. (n.d.). Retrieved August 16, 2017, from <https://www.hhs.gov/hipaa/for-professionals/security/laws-regulations/index.html>

- Inform patients of what will happen in the case of technology or equipment failures during telemedicine sessions, and state a contingency plan.”⁴⁷

C. Quality of Care

Quality outcomes should be tracked to ensure quality of care through telemedicine. The National Quality Forum (NQF) is developing a framework to support creation of quality and performance metrics, which is now accepting comment for its draft reports.⁴⁸ In addition, the Agency for Healthcare Research and Quality (AHRQ) has created a series of roadmaps and toolkits that establish guidelines for telemedicine programs.⁴⁹ Administrators of telemedicine programs must monitor performance metrics to ensure quality of care and facilitate quality improvement activities to optimize workflow and prevent error.

To demonstrate value of care, payers will likely require tracking certain metrics as a condition of payment. For example, Cherokee Health Systems in Tennessee provides telebehavioral health services to their population and has an agreement with TennCare (Tennessee’s Medicaid Program) to track the following metrics for patients with a behavioral health diagnosis:

- 7-day and 30-day psychiatric hospital readmission rate
- Selective serotonin re-uptake inhibitor (SSRI) adherence for depression management
- Follow-up after psychiatric hospitalization within 7 and 30 days
- Initiation and engagement of alcohol and drug treatment
- Use of multiple concurrent antipsychotics in children/adolescents
- Body mass index (BMI) and weight composite metric
- Comprehensive diabetes care (eye exam, blood pressure, nephropathy, HbA1c testing, and HbA1c poor control)
- Well child visits (age 7-11 years) and adolescent well-care visits (age 12-21 years)
- All-cause hospital readmissions
- Emergency department visits
- Total inpatient hospital admissions
- Mental Health inpatient utilization
- Rate of inpatient psychiatric admissions⁵⁰

⁴⁷ Telemedicine & Informed Consent: Done the Right Way. (n.d.). Retrieved September 06, 2017, from <http://blog.evisit.com/telemedicine-informed-patient-consent-done-right-way>

⁴⁸ NQF: Telehealth Framework to Support Measure Development 2016-2017. (n.d.). Retrieved August 22, 2017, from http://www.qualityforum.org/Telehealth_2016-2017.aspx

⁴⁹ Telemedicine | AHRQ Information Exchange. (n.d.). Retrieved August 22, 2017, from <https://innovations.ahrq.gov/qualitytools/term/203>

⁵⁰ Personal email communication from Parinda Khatri, Director of Integrated Care, Cherokee Health Systems, to Brian Cooper, North Carolina Office of Rural Health, received 08/09/2017 at 8:58 p.m.

VI. Provider Standards

Ensuring patients' access to quality care in a manner that promotes continuity of care and practices supporting the Patient Centered Medical Home (PCMH) model is paramount. The Patient-Centered Medical Home is a model of care that puts patients at the forefront of care. PCMHs build better relationships between people and their clinical care teams.

- **Fragmented care results in poorer care.** Higher rates of fragmentation are associated with higher costs, lower quality and higher rates of preventable hospitalizations.¹
- **Integrated care produces better outcomes.** Communicating information for shared patient populations results in better care.²
- **Payers are increasingly supporting PCMH.** Because the PCMH model can help patients avoid costly complications, public and commercial payers are increasingly rewarding the PCMH model of care.³

A. Licensing and Credentialing

Telemedicine creates new considerations for licensing agencies. In its position statement on telemedicine, the North Carolina Medical Board (NCMB) states that telemedicine “is a potentially useful tool that, if employed appropriately, can provide important benefits to patients...however, licensees practicing via telemedicine will be held to the same standard of care as licensees employing more traditional in-person medical care.” NCMB also comments on the importance of staff training, technologies used in examination, the licensee-patient relationship, prescribing, and medical records.⁵¹

Facilities and health care organizations must also reconsider their credentialing practices when working with telemedicine practitioners. For example, many hospitals may still have their credentialing by-laws written as if all practitioners were providing services in-person; therefore, some rules may be modified as appropriate to allow for greater telemedicine adoption at the facility. For instance, it may be unnecessary for a hospital to require immunization records in its credentialing application for telemedicine practitioners.

B. Drug Prescription Standards

E-Prescribing is defined by CMS as:

“a prescriber’s ability to electronically send an accurate, error-free and understandable prescription directly to a pharmacy from the point-of-care.”⁵²

Telemedicine practitioners can prescribe drugs at a distance via the practice of E-Prescribing. NCMB allows for e-prescribing drugs via telemedicine consults, in compliance with federal and state laws, however:

⁵¹ Telemedicine. (2014). North Carolina Medical Board. Retrieved August 22, 2017, from <https://www.ncmedboard.org/resources-information/professional-resources/laws-rules-position-statements/position-statements/telemedicine>

⁵² E-Prescribing – Centers for Medicare & Medicaid Services. (n.d.). Retrieved August 22, 2017, from <https://www.cms.gov/Medicare/E-Health/Eprescribing/index.html?redirect=/eprescribing>

- “prescribing controlled substances for the treatment of pain by means of telemedicine is not consistent with the standard of care.”⁵³
- The 2008 Ryan Haight Online Pharmacy Consumer Protection Act adds clarification on e-prescribing and maintaining compliance under the Controlled Substances Act.⁵⁴

C. Interstate Licensure Compacts

Since telemedicine allows practitioners to provide services over distances, consideration must be given as to whether practitioners can render services across state lines. NCMB states:

“any licensee using telemedicine to regularly provide medical services to patients located in North Carolina should be licensed to practice medicine in North Carolina.”⁵⁵

- National efforts have been going on for several years to encourage the practice of telemedicine services across state lines.
- In 2013, the Federation of State Medical Boards worked with several stakeholders to create the framework for an Interstate Medical Licensure Compact (IMLC), which would allow qualified physicians to be “eligible for expedited licensure in all states participating in the Compact.”⁵⁶
- There are now 22 states participating in the Compact, of which North Carolina is not a member. States nearby to North Carolina participating in the IMLC include West Virginia, Tennessee, Alabama, Mississippi, and Pennsylvania.⁵⁷

D. PSYPACT

To promote a Psychology Interjurisdictional Compact (PSYPACT), the Association of State and Provincial Psychology Boards created model language in February 2015 for state legislatures to consider. If passed by seven states, PSYPACT would become effective, allowing psychologists to apply for “Interjurisdictional Practice Certificates” or “E-Passports” from participating states. These credentials would permit psychologists to provide telepsychology services or to temporarily practice psychology in states different from their home state. If

⁵³ Telemedicine. (2014). North Carolina Medical Board. Retrieved August 22, 2017, from <https://www.ncmedboard.org/resources-information/professional-resources/laws-rules-position-statements/position-statements/telemedicine>

⁵⁴ Online Prescribing | Center for Connected Health Policy. (n.d.). Retrieved August 22, 2017, from <http://www.cchpca.org/online-prescribing-0>

⁵⁵ Telemedicine. (2014). North Carolina Medical Board. Retrieved August 22, 2017, from <https://www.ncmedboard.org/resources-information/professional-resources/laws-rules-position-statements/position-statements/telemedicine>

⁵⁶ Understanding the Medical Licensure Compact | Federation of State Medical Boards. (n.d.). Retrieved August 22, 2017, from <http://www.fsmb.org/policy/advocacy-policy/interstate-model-proposed-medical-lic>

⁵⁷ Interstate Medical Licensure Compact. (n.d.). Retrieved August 22, 2017, from <http://www.imlcc.org/>

PSYPACT became effective, a Commission would be created to provide additional guidance and regulation for the compact.⁵⁸

The North Carolina Psychological Association (NCPA) reached out to DHHS for comment regarding PSYPACT. Leaders of NCPA felt that their members would be in support of PSYPACT, as the Compact would provide flexibility for psychologists to provide services over state lines. DHHS agrees with this recommendation, as PSYPACT has the potential to address behavioral health workforce shortages.

VII. Payment Standards

Telemedicine programs must be sustainable in order to keep functioning. Most payers appear to have a telemedicine policy of some sort, but each one has its own stipulations for payment. In addition, some telemedicine programs are provided directly to the consumer and rely on collecting payments on a cash basis up-front, before the service is rendered. As overall healthcare reimbursement models move from traditional fee-for-service to value-based and capitated models, payment standards by payer can also adapt.

A. Centers for Medicare & Medicaid Services (CMS)

Outside of demonstration areas like Alaska and Hawaii, CMS only reimburses Live Video Conferencing visits. CMS also places particular requirements on the location of the originating site and the type of distant site practitioner. Below are the requirements:

- Authorized originating sites include offices of physicians, hospitals, rural health clinics, federally qualified health centers, hospital-based renal dialysis centers, skilled nursing facilities, and community mental health centers. These sites must be located in a county outside of a Metropolitan Statistical Area (MSA) or a Health Professional Shortage Area (HPSA) located in a rural census tract.
- Eligible distant site practitioners include physicians, nurse practitioners, physician assistants, and more.⁵⁹
- Professional services provided via telehealth are reimbursed under Medicare at the appropriate amount designated under the Medicare Physician Fee Schedule (PFS), with one exception. Telehealth services provided by a provider located in a Critical Access Hospital (CAH) who has reassigned billing rights to a CAH that elected the “Optional Billing Method” under Medicare and the payment amount is 80% of the Medicare PFS for telehealth services.
- Originating sites are eligible for reimbursement of an originating site facility fee for telehealth services, paid as a separately billable Part B payment.

⁵⁸ PSYPACT Factsheet. (n.d.). Retrieved August 24, 2017, from <http://www.cchpca.org/sites/default/files/resources/PSYPACT%20Factsheet.pdf>

⁵⁹ Telehealth Services. (2016). Retrieved August 16, 2017, from <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/TelehealthSrvcsfctsht.pdf>

On July 13, 2017, the Centers for Medicare & Medicaid Services (CMS) issued a proposed rule that would update payment policies, payment rates, and quality provisions for services furnished under the Medicare Physician Fee Schedule (PFS) on or after January 1, 2018.

- CMS is currently soliciting public comments and recommendations from practitioners and stakeholders on specific changes in Medicare Telehealth Services to **reduce the administrative burden of practitioners by eliminating the required telehealth modifier for professional claims and to cover five additional procedure codes including Health Risk Assessment and Care Planning for Chronic Care Management.**⁶⁰

B. North Carolina Medicaid Program

In common with the telemedicine policies of CMS, the North Carolina Medicaid Program only reimburses Live Video Conferencing Visits and places requirements on eligible providers and originating sites. Below are the requirements currently in effect:

- For general telemedicine services, eligible clinicians include physicians, nurse practitioners, nurse midwives, and physician's assistants.
 - For telepsychiatry services, additional clinicians can bill for the service, including advanced practice psychiatric nurse practitioners, advanced practice psychiatric clinical nurse specialists, licensed psychologists, licensed clinical social workers, and community diagnostic assessment agencies.
- Originating sites that can bill for services include offices of the clinicians described above and hospitals, federally qualified health centers, rural health clinics, local health departments, and local management entities.⁶¹

C. Private Payment Policies

1. **Blue Cross Blue Shield of North Carolina's (BCBSNC)** position is that telehealth "is a potentially useful tool that, if employed appropriately, can provide important benefits to patients, including: increased access to health care, expanded utilization of specialty expertise, rapid availability of patient records, and the reduced cost of patient care." BCBSNC will reimburse for telehealth services only "if all the following conditions are met:
 - The patient is present at the time of service;
 - All services provided are medically appropriate and necessary;
 - A service provided to a member located in North Carolina is rendered by a provider licensed to practice independently in the state of North Carolina;

⁶⁰ Department of Health and Human Services, Centers for Medicare & Medicaid Services, Fact Sheet: Proposed Policy, Payment, and Quality Provisions Changes to the Medicare Physician Fee Schedule for Calendar Year 2018. (2017). Retrieved August 31, 2017, from <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2017-Fact-Sheet-items/2017-07-13-2.html>

⁶¹ Medicaid and Health Choice Clinical Coverage Policy No: 1H. (2015). Retrieved August 22, 2017, from <https://files.nc.gov/ncdma/documents/files/1H.pdf>

- The encounter satisfies the elements of the patient-provider relationship, as determined by the relevant healthcare regulatory board of the state where the patient is physically located;
- The service takes place via an interactive audio and video telecommunications system. Interactive telecommunications systems must be multi-media communication that, at a minimum, includes audio and video equipment permitting real-time consultation among the patient, consulting practitioner, and referring practitioner (as appropriate);
- The service is conducted over a secured channel with provisions described in Policy Guidelines;
- A permanent record of online communications relevant to the ongoing medical care and follow-up of the patient is maintained as part of the patient's medical record;
- The extent of any evaluation and management services (E/M) provided over the Telemedicine technology includes at least a problem focused history and straight forward medical decision making, as defined by the current version of the Current Procedural Terminology (CPT) manual.”

However, BCBSNC will not reimburse the following:

- Telemedicine that occurs the same day as a face to face visit, when performed by the same provider and for the same condition.
- Services performed via asynchronous communications systems, except for online medical evaluations.
- Services performed via telephonic (audio only) consultations. (See Section “Benefits Application” regarding availability of member benefits for telephonic services.)
- Triage to assess the appropriate place of service and/or appropriate provider type.
- Patient communications incidental to E/M, counseling, or medical services covered by this policy, including, but not limited to:
 - Reporting of test results
 - Provision of educational materials
- Administrative matters, including but not limited to, scheduling, registration, updating billing information, reminders, requests for medication refills or referrals, ordering of diagnostic studies, and medical history intake completed by the patient.
- New and established outpatient E/M and outpatient consultation E/M services performed without an intervening provider present with the patient, except as reimbursed under online medical evaluations.
- Online medical evaluations occurring more than once within 7 days for the same episode of care and rendered by the same health care provider.
- Online medical evaluations that occur within 7 days after a face-to-face evaluation and management service performed by the same provider for the same condition, whether provider requested or unsolicited patient follow-up.

In addition, the policy contains guidelines around security and confidentiality, licensing, billing, coding, prescription of controlled substances, etc.⁶²

⁶² Blue Cross Blue Shield of North Carolina. (2016). Corporate Reimbursement Policy Telehealth (pp. 1-7). Retrieved from <https://www.bcbsnc.com/assets/services/public/pdfs/medicalpolicy/telehealth.pdf>

2. **Cigna** states that telehealth services “encompass the delivery of health-related services and information through telecommunications technologies to improve a patient’s clinical health status. Telehealth includes a growing variety of applications and services using two-way video, smart phones, wireless devices, and other forms of video telecommunications technology. Telehealth is not a medical specialty in itself but a healthcare delivery modality, which is expected to increase access and decrease the cost of delivering care.” Assuming that medically necessity standards are met, Cigna has additional expectations, including:
 - “To provide a safe telehealth environment, providers are expected to follow the same professional judgment and ethical principles as they would in “face-to-face” visits, including when and how they choose to employ these technologies. Providers are expected to consider the patient’s condition, circumstances, available resources, and their own comfort level and expertise when using telehealth.
 - Providers need to be aware of all relevant state and federal laws related to the use of telehealth to include those that govern prescribing and the establishment of a doctor-patient relationship. In addition, providers need to be aware of relevant practice guidelines developed by the specialty societies as they relate to both in-person and telehealth practices, [ensuring] that they are appropriately licensed to provide services in each state where patients are physically located at the time of treatment.
 - Following every visit, the provider is expected to document and communicate the outcome of the encounter to the patient’s primary care provider or other specialty providers using secure methods (e.g., fax, secure email, transmit to EMR), as well as to the patient, unless the patient has not given consent for that communication.
 - Telephonic sessions are not considered to be medically necessary or appropriate as a substitute for face-to-face or video therapy visits. Without a face to face (or video) examination, a phone call alone does not allow for a proper exam and the legally/medically proper physician-patient relationship.”⁶³
3. **UnitedHealthcare’s** telemedicine policy adopts the originating sites and authorized practitioners from the CMS policy. In addition, UnitedHealthcare “will reimburse for Telehealth services which are recognized by CMS when reported with modifier GT (Interactive Telecommunications).”⁶⁴
4. **NC Department of Insurance** As the regulating agency of the insurance industry in our state, DOI believes the following issues should be considered as it may relate to the commercial market :
 - Telemedicine regulation in the delivery of Medicaid benefits should not be directly imposed on the commercial insurance community
 - A state telehealth/telemedicine policy needs to be fluid enough to evolve with innovation.
 - A telehealth/telemedicine policy needs to encourage market competition and allow carriers the flexibility to realize efficiencies.

⁶³ Cigna. (2017). CIGNA Standards AND Guidelines/Medical Necessity Criteria For Treatment of Mental Health and Substance Use Disorders (pp. 51-52). Retrieved from https://cignaforhcp.cigna.com/public/content/pdf/resourceLibrary/behavioral/2017_CBH_SGandMNC-Final.pdf

⁶⁴ UnitedHealthcare. (2017). Telemedicine Policy (pp. 1-3). Retrieved from <https://www.unitedhealthcareonline.com/ccmcontent/ProviderII/UHC/en-US/Assets/ProviderStaticFiles/ProviderStaticFilesHtml/ReimbursementPolicies/Telemedicine-2017.pdf>

Specific caution should be given when considering private payor requirements for Medicaid services potentially shifting to regulation of the commercial market and will require additional review.

VIII. The Road to Adoption

A. Best Practices in Broadband Internet

1. IT Infrastructure for Telemedicine Programs

Depending on the form of telemedicine used in services, telemedicine programs must have an information technology (IT) infrastructure that can properly support the need for data collection, storage, and transmission. This infrastructure often involves a combination of broadband internet connection, electronic health records, and health information exchange (HIE) systems.

To provide necessary speeds to transfer data, the internet connection supporting a telemedicine program needs to have sufficient bandwidth, which is the capacity for data transfer.

For a telemedicine program using Live Video Conferencing, the University of Arkansas for Medical Services recommends a broadband internet connection with a minimum bandwidth of 1 Mbps (megabits per second) download speed and 384 Kbps (kilobits per second) upload speed.⁶⁵ Having sufficient bandwidth helps to ensure a clear, uninterrupted picture during the video conference. This bandwidth recommendation is in line with the Federal Communications Commission (FCC)'s guidelines for broadband speed.⁶⁶

Since telemedicine transmits data electronically, electronic health records (EHRs) are necessary to facilitate the capture of documentation and automate data collection. This is especially important in telemedicine because the consulting practitioner is not located in the same place as the patient.

- EHR products need to be able to share information between originating sites and distant sites without issues.
- Some EHR products are interoperable, meaning that they use similar protocols for messaging and processing information that enable them to share information seamlessly.⁶⁷

The diverse array of EHR products is not always interoperable. In these cases, EHRs must exchange data through protocols approved by the Office of National Coordinator for Health Information Technology (ONC-HIT).

⁶⁵ Hall-Barrow, Julie. (n.d.). Telemedicine Toolbox. Retrieved August 16, 2017, from <http://www.uams.edu/saves/Telemedicine%20Toolbox.pdf>

⁶⁶ Broadband Speed Guide. (n.d.). Retrieved September 6, 2017, from <https://www.fcc.gov/reports-research/guides/broadband-speed-guide>

⁶⁷ What is EHR Interoperability and why is it important? (n.d.). Retrieved August 16, 2017, from <https://www.healthit.gov/providers-professionals/faqs/what-ehr-interoperability-and-why-it-important>

- One method of information exchange is to set up a central repository for clinical data, which can then transmit the information to many EHRs when needed. This system is a Health Information Exchange (HIE).⁶⁸
- **NC General Statute 90-414.7** created a statewide HIE for virtually all providers in North Carolina to connect to one another. Known as NCHealthConnex, the system is now connected to over 800 facilities with more in process.⁶⁹

As an example, a telemedicine program using Live Video Conferencing would require equipment (such as a screen, camera, microphone, etc.) for both the originating site and distant site. The equipment would need:

- HIPAA-compliant software using appropriate safeguards, such as data encryption.
- Broadband internet connection with a minimum speed of 1 Mbps download, 384 Kbps upload to ensure a clear, uninterrupted picture during the video conference.
- To ensure the originating and distant sites have access to inputting and receiving documentation of the visit, they would need to either:
 - Be connected to the same or interoperable electronic health record (EHR) systems or
 - Have a system in place to transmit data securely using protocols approved by the Office of National Coordinator for Health Information Technology (ONC-HIT). An example of the latter would be NC HealthConnex, North Carolina's statewide HIE.

2. IT Infrastructure to Support Direct Patient Access and Support Direct Patient Access and Participation

A high-speed broadband internet connection is required to transmit data, live video, and image files from one location to another. To provide telemedicine services to patients in hospitals, outpatient clinics, community anchor points (e.g. public libraries and schools), and in their own homes, all of these locations must have access to a high-speed internet connection.

- There are more than 400,000 households in North Carolina without access to high-speed internet.
- The North Carolina Office of Broadband Infrastructure released a 2017 Broadband Plan with the goal for "every North Carolinian to have affordable access to broadband service." The plan made several recommendations to accomplish this goal, including:
 - "Incentivize investment in next-generation, future-proof infrastructure and reduce barriers to deployment
 - Create community-based adoption and utilization programs and initiatives
 - Close the 'homework gap' for K-12 students without access at home
 - Facilitate integration of broadband into economic development strategies

⁶⁸ Official Information about Health Information Exchange (HIE). (n.d.). Retrieved August 22, 2017, from <https://www.healthit.gov/HIE>

⁶⁹ NC Health Information Exchange Authority. (n.d.). Retrieved August 22, 2017, from <https://hiea.nc.gov/>

- Recognize and leverage the influence telehealth technologies have on household broadband adoption and use
- Enhance public safety and first responder connectivity, by continuing the pursuit of a state-wide, interoperable data network and the Next-Generation 911 Initiative.”⁷⁰

B. Best Practices in Reimbursement

States have the option to determine whether to cover telehealth services, what types of telehealth and which specific procedures to cover, where in the state it can be covered, how it is provided, what types of practitioners may be reimbursed as long as they are qualified as Medicaid providers according to Medicaid regulations, and how much to reimburse for specific telehealth services as long as the payments do not exceed federal upper limits for reimbursement.

- Under Medicaid, “states may reimburse the physician or other licensed practitioner at the distant site and reimburse a facility fee to the originating site.
- States can also reimburse any additional costs such as technical support, transmission charges, and equipment. These add-on costs can be incorporated into the fee-for-service rates or separately reimbursed as an administrative cost by the state. If they are separately billed and reimbursed, the costs must be linked to a covered Medicaid service.”⁷¹

As of April 2017, 48 states and the District of Columbia have some form of reimbursement for telehealth under their Medicaid program. Only Massachusetts and Rhode Island do not have definitive reimbursement policies for Medicaid coverage of telehealth services.⁷²

- Although there has been some increase in the past year in states covering Store and Forward and Remote Patient Monitoring, utilization and reimbursement for Live Video Conferencing is far more widespread across state Medicaid programs.
- Medicaid programs in eight states (Alaska, Arizona, Illinois, Minnesota, Mississippi, Missouri, Virginia and Washington) reimburse for all three telehealth delivery methods.

While Medicaid coverage for specific services delivered via telehealth varies from state to state, many state Medicaid programs follow the example of Medicare regarding reimbursement and provider parity.

⁷⁰ Connecting North Carolina: State Broadband Plan. (2017). https://ncbroadband.gov/wp-content/uploads/2017/02/NC-Broadband-Plan_2017_Online_FINAL_PNGs3www.pdf

⁷¹ Department of Health and Human Services, Centers for Medicare & Medicaid Services, Medicaid.Gov Website, Medicaid Benefits: Telemedicine. (n.d.). Retrieved September 1, 2017, from <https://www.medicaid.gov/medicaid/benefits/telemed/index.html>

⁷² State Telehealth Laws and Reimbursement Policies, A Complete Scan of the 50 States and District of Columbia, Center for Connected Health Policy, The National Telehealth Policy Resource Center. (April 2017). Retrieved August 30, 2017, from <http://www.cchpca.org/sites/default/files/resources/50%20STATE%20PDF%20FILE%20APRIL%202017%20FINAL%20PASSWORD%20PROTECT.pdf>

- Generally, Medicaid programs reimburse for services provided via telehealth at the same rates as those delivered in-person.
- Staff at the Center for Connected Health Policy was contacted and report that they are “unaware of any state that pays for telemedicine services at a different rate than in-person services.”⁷³

Blue Cross Blue Shield, Aetna, Cigna and other private payers are not required under federal law to provide coverage for any type of telemedicine.

Some states have passed laws that affect private payers’ telehealth reimbursement policies. “As of September 2016, 32 states have passed private payer parity laws,”⁷⁴ but just a few states require payment parity, that the telemedicine encounter be reimbursed at the same rate as an in-person encounter.

- States’ private payer parity laws have many coverage limitations, such as only reimbursing for live video encounters. Some also include the caveat that telemedicine must be covered but is subject to the terms and conditions of the contract between the enrollee and payer.
- No two private payer parity laws are the same
- Some states only require parity of benefits, while others require parity of reimbursement at the same level as in-person care⁷⁵

The Center for Connected Health Policy is conducting a study to assess and describe telehealth private payer parity laws, assess the relative impact the laws have had on private and public payers, and develop recommendations for improving private payer parity laws.

- Before 2010, only eight states had private payer parity laws. Since 2010, 25 states have passed private payer parity laws. “While such legislation has gained momentum and popularity, there has not been any comprehensive analysis of the impact of these laws related to the expanded use and payment for telehealth services.
- Many of the private payer parity laws fail to address the impact on its Medicaid program, and whether these requirements extend to private payers that serve Medicaid patients.”⁷⁶

Federal legislation is also pending to address these issues. “Congress is reconsidering a nationwide telehealth coverage bill, named the Medicare Telehealth Parity Act of 2017⁷⁷, designed to introduce an incremental, though

⁷³ Personal email communication from Christine Colouro, Program Associate II, Center for Connected Health Policy, to Glenn Field, North Carolina Office of Rural Health, received 08/28/2017 at 5:32 p.m.

⁷⁴ Ibid.

⁷⁵ Telehealth Resource Centers, Reimbursement: Private Payer Law. (n.d.). Retrieved September 1, 2017, from <https://www.telehealthresourcecenter.org/toolbox-module/private-payer-law>

⁷⁶ Assessing the Impact of Telehealth Private Payer Laws across States, Center for Connected Health Policy, The National Telehealth Policy Resource Center. (n.d.). Retrieved September 1, 2017, from <http://www.cchpca.org/assessing-impact-telehealth-private-payer-laws-across-states>

⁷⁷ H.R.2550 - Medicare Telehealth Parity Act of 2017 (2017). Retrieved September 5, 2017, from <https://www.congress.gov/bill/115th-congress/house-bill/2550/text/ih?overview=closed&format=xml>

significant, expansion of coverage for telehealth services under the Medicare program.” The bipartisan Act is sponsored by Representative Mike Thompson (D-CA), with seven co-sponsors to date (four Republican, three Democrat). If enacted, the Act would modernize the way Medicare reimburses telehealth services by expanding the number of qualifying geographic locations and expanding coverage of telehealth services under Medicare incrementally in three phases. Key provisions of the proposed Act include:

- Expanding qualifying originating sites to include all federally qualified health centers and all rural health clinics;
- Qualifying geographic location also includes counties in Metropolitan Statistical Areas with populations fewer than 50,000;
- Expanding telehealth coverage to include services provided by certified diabetes educators, respiratory therapists, audiologists, occupational therapists, speech language therapists, and physical therapists;
- Expanding qualifying originating sites to include a home telehealth site, and the qualifying originating geographic location include counties in Metropolitan Statistical Areas with populations of 50,000-100,000;
- Expanding qualifying originating geographic locations to include counties in Metropolitan Statistical Areas with populations above 100,000;
- Medicare coverage of remote patient monitoring services (RPM) for covered chronic care conditions, and home dialysis services for those with end stage renal disease;
- Authorizes the Centers for Medicare & Medicaid Services to develop and implement new payment methods for these telehealth services.

“The introduction of the Medicare Telehealth Parity Act of 2017, coupled with other telehealth related bills and the creation of the Congressional Telehealth Caucus, represents continued progress towards expanded telehealth coverage and hopefully portends increasing support for and understanding of telehealth benefits among federal lawmakers.”⁷⁸

C. Best Practices in Workforce and Licensing

As discussed in **Section VI** of this document, many states are participating in the Interstate Medical Licensure Compact (IMLC). Developed by the Federation of State Medical Boards (FSMB) the IMLC is designed to provide an expedited process with fewer administrative burdens for qualified physicians seeking licensure in multiple states.

- The IMLC will help to increase “access to health care for patients in underserved or rural areas and allowing them to more easily connect with medical experts through the use of telemedicine technologies.”⁷⁹

⁷⁸ Lacktman, Nathaniel M. Ferrante, Thomas S. “Is Telemedicine Change Coming to Congress? The Medicare Telehealth Parity Act of 2017 Among Several New Federal Bills.” (2017). Retrieved September 1, 2017, from <https://www.healthcarelawtoday.com/2017/07/10/is-telemedicine-change-coming-to-congress-the-medicare-telehealth-parity-act-of-2017-among-several-new-federal-bills/>

⁷⁹ Interstate Medical Licensure Compact Homepage, The IMLC. (n.d.). Retrieved August 29, 2017, from <https://imlcc.org/>

- The Compact also strengthens public safety by facilitating participating states' ability to share investigative and disciplinary information. Regulatory authority will remain with the participating state medical boards, rather than being delegated to the Compact or any entity administering the Compact.
- Participation in the IMLC is voluntary for both physicians and state boards of medicine licensure.
- States participating in the Compact can act as a primary state for licensure and source of verification for background checks through the Compact. "Under this agreement licensed physicians can qualify to practice medicine across state lines within the Compact if they meet the agreed upon eligibility requirements.
- Approximately 80% of physicians meet the criteria for licensure through the IMLC."⁸⁰
- Updates on states with compact legislation pending, member states issuing licenses, and member states issuing licenses and Letters of Qualification for expedited licensure can be tracked state-by-state in the interactive map at The Interstate Medical Licensure Compact website at <https://imlcc.org/>.

State Medical Boards may also create separate licenses for telemedicine providers. The first telemedicine license was issued in Tennessee in 1998. However, effective on October 31, 2016, the Tennessee Medical Board discontinued issuing new telemedicine licenses.

- Those holding a Tennessee telemedicine license have the option to convert it to a full Tennessee medical license without cost if he or she submits an application to the Board by October 31, 2018.
- The Tennessee Medical Board also revised its telemedicine rules to more clearly reflect modern day telemedicine.
- The revised rules emphasize that telemedicine is the practice of medicine and prohibit tele-medicine providers from being held to a stricter standard of care. Pursuant to Tenn. Code Ann. § 63-1-155(c)(1)(A), "A healthcare provider who delivers services through the use of telehealth shall be held to the same standard of professional practice as a similar licensee of the same practice area of specialty that is providing the same healthcare services through in-person encounters."⁸¹

Several pieces of federal legislation are also pending to help address workforce issues and encourage the adoption of telemedicine:

- **The CONNECT Act (S. 1016 – CONNECT for Health Act of 2017)** -Expands access to telehealth by making a series of exceptions to the restrictions around telehealth currently in Medicare, including the originating site, geographic, provider, and service restrictions for ACOs, waivers, mental health services, Medicare Advantage and bundled and global payments.
 - It allows for the reimbursement for remote patient monitoring services when they are in combination with chronic or transitional care management services.

⁸⁰ Zimmerschied, Caleb. "Cross-state Licensing Process Now Live in 8 States," AMA Wire, May 8, 2017. Retrieved August 31, 2017, from <https://wire.ama-assn.org/life-career/cross-state-licensing-process-now-live-8-states>.

⁸¹ Revised Telemedicine Rules Assigned Effective Date of October 31, 2016, Tennessee Department of Health Board of Medical Examiners Annual Newsletter. (2016). Retrieved August 30, 2017, from https://www.tn.gov/assets/entities/health/attachments/Fall_2016_Newsletter.pdf (Accessed 08/30/2017)

- Additional sections eliminate some of the geographic or originating site restrictions on FQHCs, facilities operated by Indian Health Services, stroke care and ESRD services.⁸²
- **H.R. 1152 – Care Veterans Deserve Act of 2017-** Allows a licensed healthcare professional to practice using telemedicine in any state under the VA program.⁸³
- **H.R. 2123 – VETS Act of 2017-** Allows health care professionals who are employed by, or have contracts with the Department of Veterans Affairs to be able to treat VA patients in any state using telemedicine, even if neither the provider nor the patient is physically located in a facility owned by the federal government.⁸⁴
- **H.R. 3360 – Telehealth Enhancement Act of 2017-**Adds urban critical access hospitals, sole community hospitals, home telehealth sites, and counties with fewer than 25,000 people as eligible for Medicare payments for telemedicine.⁸⁵

D. Supporting the Telemedicine Workforce in Rural Communities

North Carolina State Loan Repayment-To help increase access to care in rural and underserved communities, the North Carolina Office of Rural Health (NC ORH) administers a State Loan Repayment Program (SLRP) for eligible providers who choose to work in designated areas of the state.

- **In Session Law 2017-57**, the NCGA, defined “expansion of the State Loan Repayment Program to include eligible providers residing in North Carolina who use telemedicine in rural and underserved areas.”⁸⁶
 - This expansion allows the state to incentivize providers who commit a portion, or all of, their time to serving rural and underserved areas through telemedicine services.
 - This incentive may support the sustainability of telemedicine programs by decreasing workforce turnover.

⁸² S.1016 - CONNECT for Health Act of 2017 (2017). Retrieved September 5, 2017, from <https://www.congress.gov/bill/115th-congress/senate-bill/1016>

⁸³ H.R. 1152 – Care Veterans Deserve Act of 2017. (2017). Retrieved September 5, 2017, from <https://www.congress.gov/bill/115th-congress/house-bill/1152>

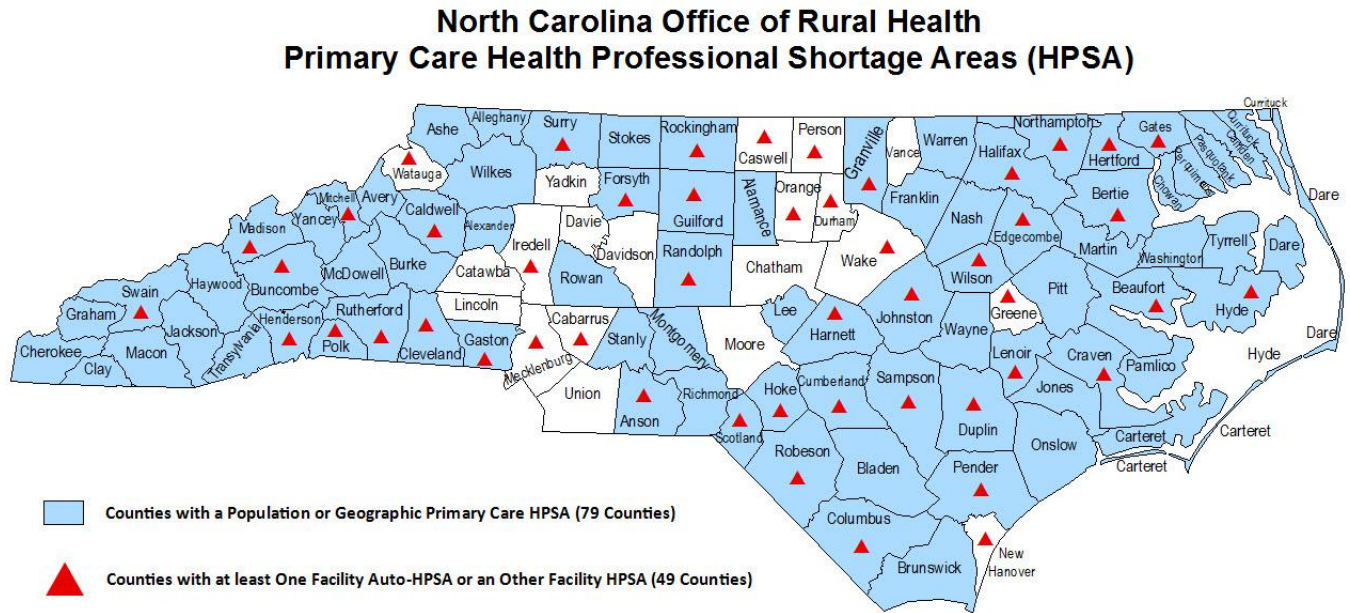
⁸⁴ H.R. 2123 – VETS Act of 2017. (2017). Retrieved September 5, 2017, from <https://www.congress.gov/bill/115th-congress/house-bill/2123>

⁸⁵ H.R. 3360 – Telehealth Enhancement Act of 2017. (2017). Retrieved September 5, 2017, from <https://www.congress.gov/bill/115th-congress/house-bill/2123>

⁸⁶ North Carolina Session Law 2017-57 (2017). Sec 11A.9.

IX. Appendix

A. Figure 1: North Carolina Primary Care Health Professional Shortage Areas



Disclaimer: Primary Site only, does not include Correctional Facilities
or Federally Qualified Health Center (FQHC) satellite sites

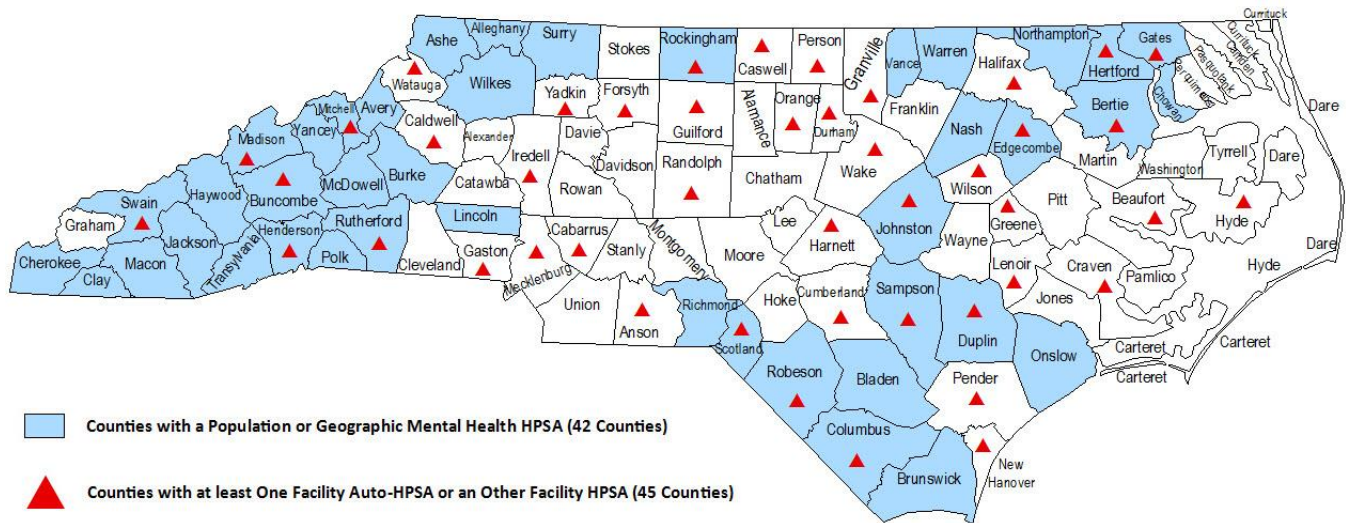
Data as of January 3, 2017



Rural Health
HEALTH AND HUMAN SERVICES

B. Figure 2: North Carolina Mental Health Professional Shortage Areas

**North Carolina Office of Rural Health
Mental Health Professional Shortage Areas (HPSA)**



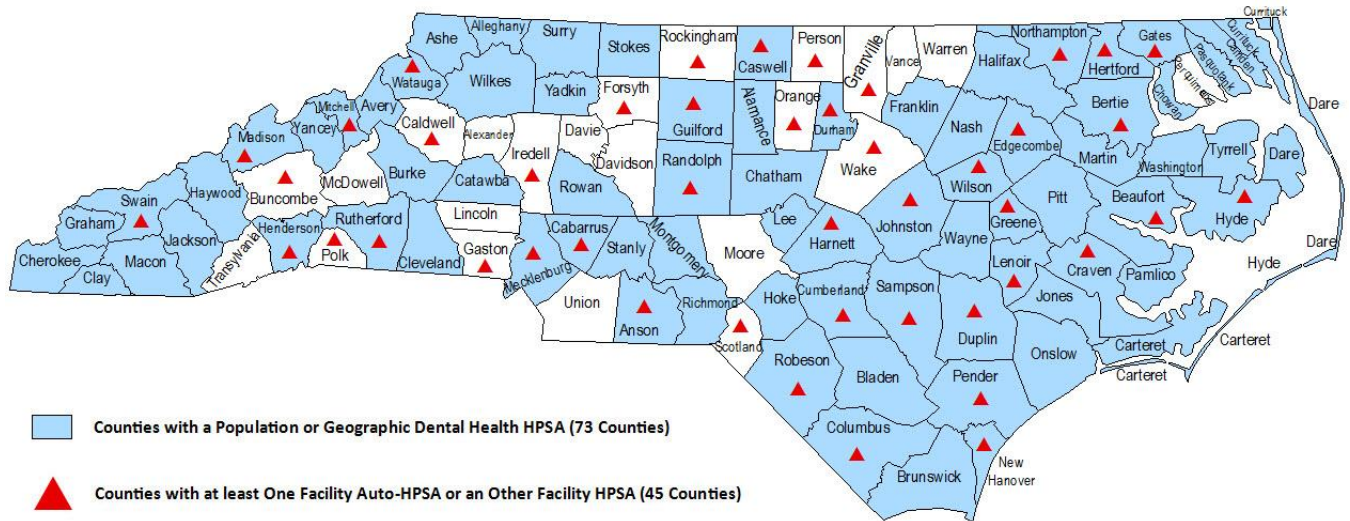
Disclaimer: Primary Site only, does not include Correctional Facilities or Federally Qualified Health Center (FQHC) satellite sites

Data as of January 3, 2017



C. Figure 3: North Carolina Dental Health Professional Shortage Areas

**North Carolina Office of Rural Health
Dental Health Professional Shortage Areas (HPSA)**



Disclaimer: Primary Site only, does not include Correctional Facilities
or Federally Qualified Health Center (FQHC) satellite sites

Data as of January 3, 2017

