



A COMPREHENSIVE LOOK AT SERVING THE MEDICALLY UNDERSERVED

Presentation by: Chelsea Houser, SPT

UNC Division of Physical Therapy

MY BACKGROUND...



- **Chelsea Houser, Student of Physical Therapy at UNC – Chapel Hill**
- **Born and raised in Gaston County, North Carolina¹**
- **Attended undergrad at UNC – Wilmington where I played on the club volleyball team and was an Exercise Science major with a minor in Psychology**



MY WORK HISTORY...

- I grew up in a medically underserved community and have experienced some of the challenges firsthand.
- I have also worked in several underserved communities
 - Oleander Rehabilitation (Rehab Intern) – a non-rural, medically underserved²
 - Bodies in Balance Physical Therapy (PT Tech) – a partially rural, medically underserved³
 - UNC Health Johnston (Student PT) – partially rural, medically underserved⁴
 - Compleat Rehab & Sports PT (Student PT) – non-rural, medically underserved⁵

LEARNING OBJECTIVES...

- a. Understand what makes a community medically underserved.
- b. Understand how a patient's personal and environmental factors can create a barrier for appropriate medical care.
- c. Understand the social determinants of health and be able to assess how these may be playing a role in a patient's perception of medical care.
- d. Understand the unique challenges of being a medical provider in rural North Carolina.

WHERE ARE WE HEADED?

1. Medically underserved vs. Health professional shortage
2. Health statistics of underserved populations in North Carolina
3. Social Determinants of Health
4. Vicious cycle of being medically underserved
5. Challenges of working in a medically underserved area

WHAT MAKES A COMMUNITY MEDICALLY UNDERSERVED?^{6,7}


- Medically Underserved Areas (MUAs) are areas that have insufficient access to primary care physicians.
- Common characteristics of medically underserved areas:
 - Rural
 - Low literacy rates
 - Primarily blue-collar workers
 - High poverty rates
 - High infant mortality rates
 - High population of elderly individuals
- North Carolina ranks 13th in the US for most medically underserved with 113 designated underserved areas.



MEDICALLY UNDERSERVED SCORE...⁸

- **A score is given to each county in the US to show exactly how underserved that community is. This is called the Index of Medical Underservice Score.**
- **A score of 0 indicates the highest possible needs. A score of 100 indicates the lowest need.**
- **To be considered medically underserved, this score has to be 62.0 or below.**
- **These scores apply to a county as a whole. It does not consider individual portions of it.**

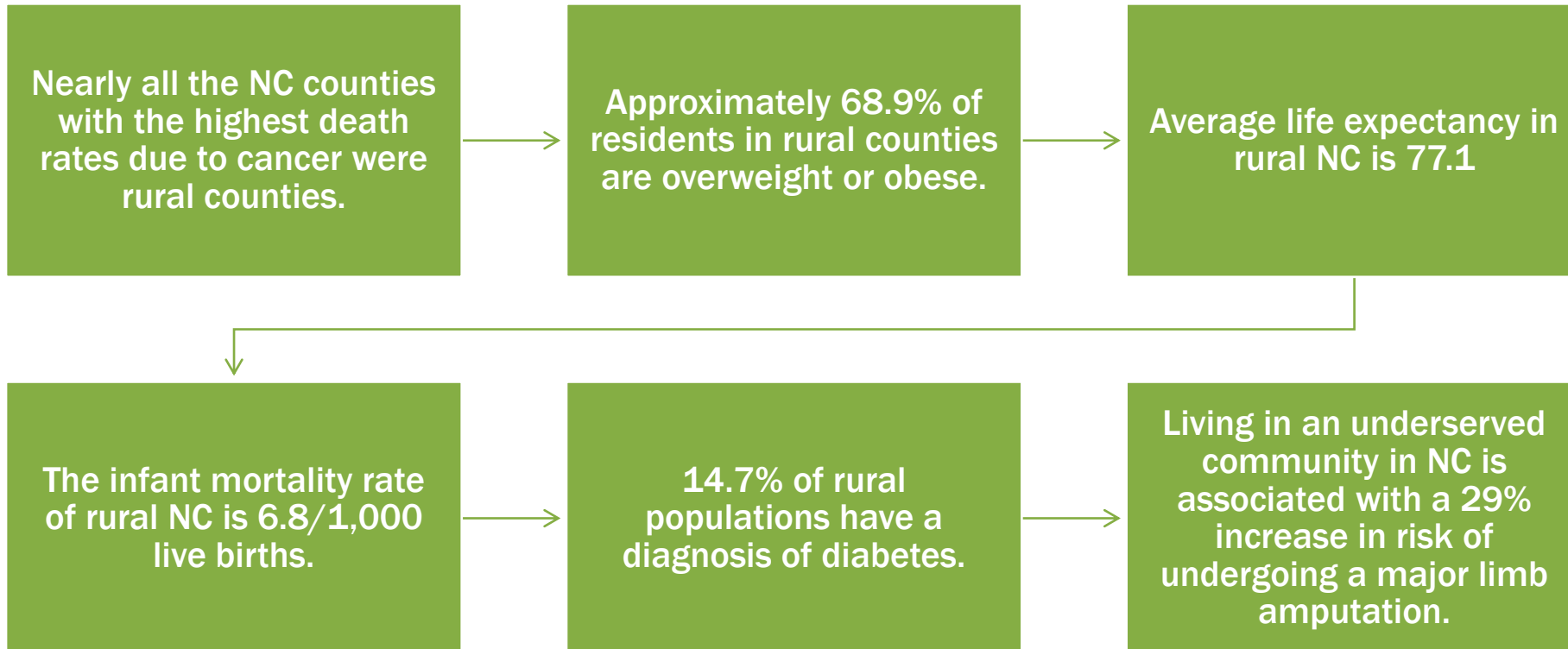
Discipline ⁱ	MUA/P ID ⁱ	Service Area Name ⁱ	Designation Type ⁱ	Primary State Name ⁱ	County ⁱ	Index of Medical Underservice Score ⁱ	Status ⁱ	Rural Status ⁱ	Designation Date ⁱ
Primary Care	04050	Gaston Service Area	Medically Underserved Area	North Carolina	Gaston County, NC	61.3	Designated	Non-Rural	07/05/1994
Primary Care	02482	JOHNSTON SERVICE AREA	Medically Underserved Area	North Carolina	Johnston County, NC	46.3	Designated	Partially Rural	11/01/1978
Primary Care	02537	New Hanover Service Area	Medically Underserved Area	North Carolina	New Hanover County, NC	50.6	Designated	Non-Rural	05/12/1994
Primary Care	02495	PENDER SERVICE AREA	Medically Underserved Area	North Carolina	Pender County, NC	50.7	Designated	Partially Rural	11/01/1978
Primary Care	02518	Southwest Gastonia/Bessemer Service Area	Medically Underserved Area	North Carolina	Gaston County, NC	62.0	Designated	Non-Rural	02/10/1992



MEDICALLY UNDERSERVED VS. HEALTH PROFESSIONAL SHORTAGE AREA...^{6,7}

- **A Health Professional Shortage Area (HPSA) is an area in which there is a lack of primary care, dental health, or mental health providers.**
- **Many MUAs also have a HPSA designation, but not all areas considered an HPSA are medically underserved.**
- **North Carolina ranks #9 in the US for biggest health professional shortages, with 56 HPSAs.**

HEALTH STATISTICS OF UNDERSERVED NORTH CAROLINA... 10,11,12,13



SOCIAL DETERMINANTS OF HEALTH...⁹

- The Social Determinants of Health (SDOH) are non-medical factors that affect a person's health, well-being, and overall quality of life.
- These contribute largely to the health disparities observed amongst rural communities.
- The 5 SDOH:
 - Economic Stability
 - Education Access and Quality
 - Health Care Access and Quality
 - Neighborhood and Built Environment
 - Social and Community Context



ECONOMIC STABILITY... 9,14,15,19



- Economic stability has to do with a person's access to employment and income.
- This factor influences many other health factors, such as access to healthy foods, safe housing, childcare, and many more.
- Rural vs. Urban NC:
 - 41% of individuals live below the poverty line as compared with 32.5% in urban areas.
 - 5.3% unemployment rate vs. 4.7%



EDUCATION ACCESS & QUALITY...^{9,15,17}

- **Education access and quality considers amount of high-quality, educational opportunities available in a community.**
- **In general, individuals with higher education tend to be healthier and have better health literacy than those with lower education.**
- **Statistics:**
 - **45.1% of 3rd grade students in rural NC are reading at a proficient reading level.**
 - **54% of rural NC adults have post-secondary education compared with 66% in urban areas.**

HEALTH CARE ACCESS & QUALITY...^{9,16,17}



Health Care Access and Quality involves the ability to get timely and high-quality health care services in a variety of settings, particularly primary care.



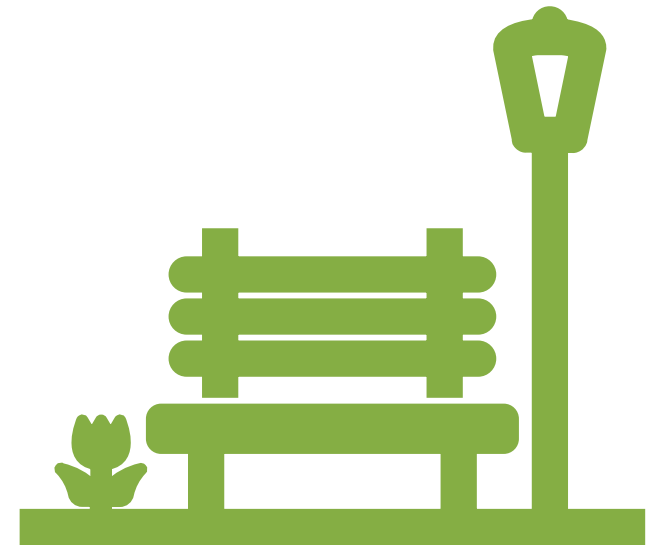
This can be limited by many variables, including number of providers and offices available, access to health insurance, and distance from health care facilities.



In NC, 15.6% of the population is uninsured.

NEIGHBORHOOD & BUILT ENVIRONMENT... 9,10,15

- Neighborhood and Built Environment refers to the environment and communities that individuals live, work, and play.
- This can include things like, access to safe drinking water, violence/crime rates, air quality, transportation, access to food, and access to safe parks or gyms for performing physical activity.
- In underserved areas of NC:
 - 13.1% are food insecure
 - 18.1% are enrolled in SNAP
 - 7% live in a food desert
 - 16.1% have housing problems (overcrowding, lack of utilities, high cost, etc.)
 - 73% of people have access to safe space for physical activity
 - Incarceration rate is 341/100,000





SOCIAL & COMMUNITY CONTEXT... 9,10,19

- **Social and Community Contexts** refers to the quality of an individual's relationship with family, friends, and other members of the community.
- **Positive social environments and support** received from these relationships can help offset the negative effects of many of the other SDOHs.
- **23.6%** of children in rural communities have experienced at least two adverse experiences, such as having a parent/guardian die or go to jail, neighborhood violence, living with an adult with substance abuse, among many other traumas.
- **22.7%** of rural North Carolinians live with mental illness and **5.1%** have reported suicidal ideation.

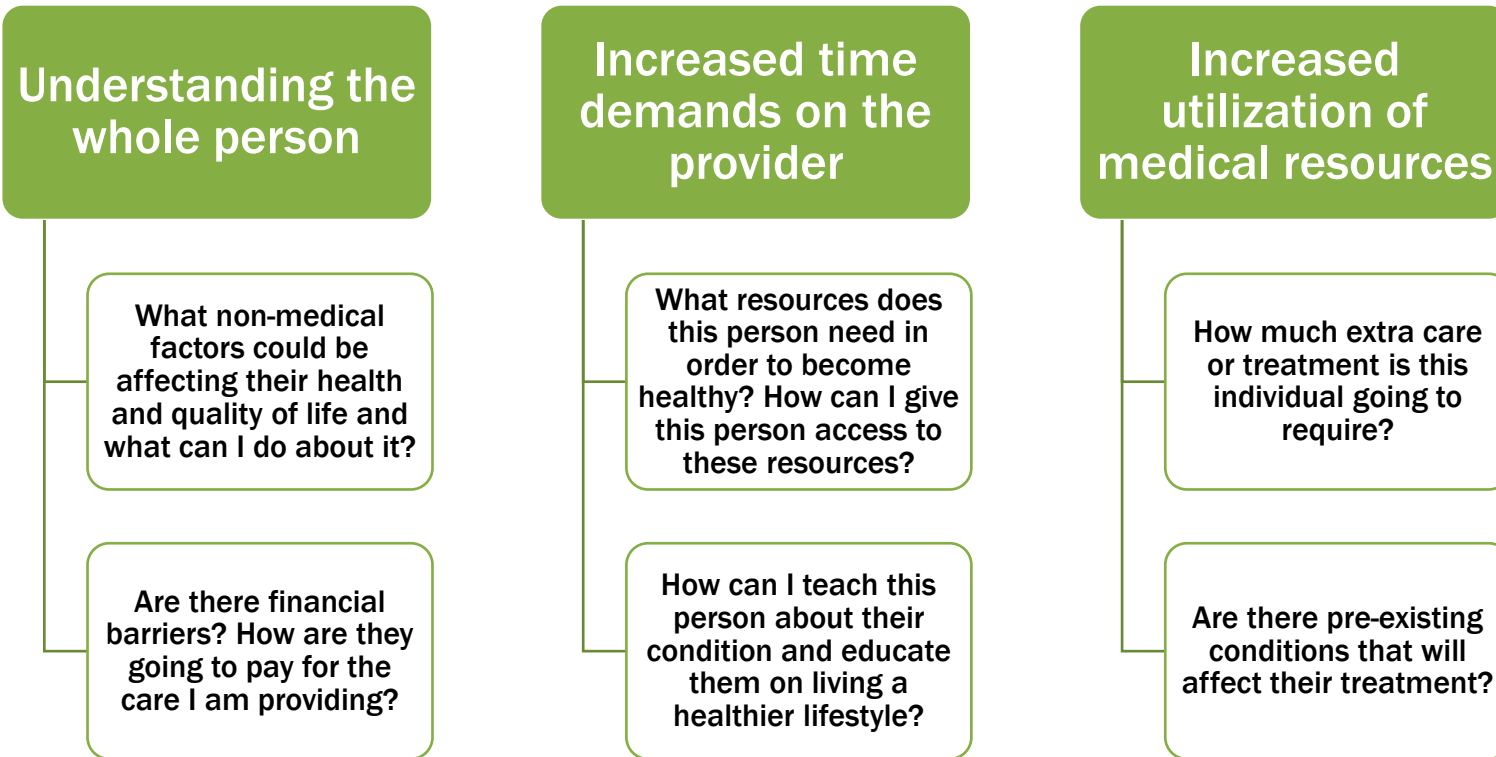
**BEING
MEDICALLY
UNDERSERVED
IS A VICIOUS
CYCLE...**

Case Example:

34-year-old male with diagnosis of diabetes living in rural North Carolina. He presented to the hospital in Smithfield, NC with diabetic wounds on both feet L>R. His left foot was necrotic w/ a completely exposed calcaneus. He lives alone with no family or friends in the area. His closest relative was in Kentucky. He refuses limb amputation after multiple recommendations for this course of treatment. The patient's only option is to eventually return home. His hospital stay totaled 36 days.

What do you do?

CHALLENGES OF BEING A PROVIDER IN THESE COMMUNITIES...



REFERENCES...

1. Gaston County | NCpedia. Accessed May 31, 2023. <https://www.ncpedia.org/geography/gaston>
2. Novant Health Rehabilitation Center - Oleander | New Hanover Regional Medical Center | Wilmington, NC | Novant Health New Hanover Regional Medical Center | Wilmington, NC. Accessed May 31, 2023. <https://www.nhrmc.org/locations/novant-health-rehabilitation-center-oleander>
3. Wilmington physical therapy practice opens Hampstead location | WilmingtonBiz. Accessed May 31, 2023. <https://www.wilmingtonbiz.com/real-estate-commercial/2016/06/14/wilmington-physical-therapy-practice-opens-hampstead-location/14907>
4. Kevin Johnson, MD. Accessed May 31, 2023. <https://www.unhealth.org/care-services/doctors/j/kevin-johnson-md>
5. Compleat Rehab. Accessed May 31, 2023. <https://careers.compleatrehab.com/>
6. Medically Underserved Areas in the US. Accessed June 2, 2023. <https://www.umhs-sk.org/blog/medically-underserved-areas-regions-where-u-s-needs-doctors>
7. Shortage Areas. Accessed June 2, 2023. <https://data.hrsa.gov/topics/health-workforce/shortage-areas>
8. MUA Find. Accessed May 13, 2023. <https://data.hrsa.gov/tools/shortage-area/mua-find>
9. Social Determinants of Health - Healthy People 2030 | health.gov. Accessed June 4, 2023. <https://health.gov/healthypeople/priority-areas/social-determinants-health>
10. North Carolina Institute of Medicine. Healthy North Carolina 2030: A Path Toward Health. Morrisville, NC: North Carolina Institute of Medicine; 2020.

REFERENCES...

11. North Carolina Institute of Medicine. North Carolina Rural Health Action Plan: A Report of the NCIOM Task Force on Rural Health Morrisville, NC: North Carolina Institute of Medicine; 2014.
12. Line Chart of Diagnosed Diabetes Prevalence in Metro and Nonmetro Counties, 2006-2017 - Rural Health Information Hub. Accessed June 5, 2023. <https://www.ruralhealthinfo.org/charts/38?state=NC>
13. McGinagle KL, Kalbaugh CA, Marston WA. Living in a medically underserved county is an independent risk factor for major limb amputation. *J Vasc Surg.* 2014;59(3):737-741. doi:10.1016/j.jvs.2013.09.037
14. Rural health for North Carolina Overview - Rural Health Information Hub. Accessed June 5, 2023. <https://www.ruralhealthinfo.org/states/north-carolina>
15. North Carolina Rural Health Association. *2022 NORTH CAROLINA Rural HEALTH Snapshot*. NC Rural Health Association; 2022:26. Accessed May 13, 2023. <https://foundationhli.org/wp-content/uploads/NC-Rural-Snapshot-Report-2022-FINAL.pdf>
16. Who Are The Medically Underserved? Accessed May 13, 2023. <https://foundationhli.org/who-are-the-medically-underserved/>
17. Census.gov. Accessed June 5, 2023. <https://www.census.gov/>
18. U.S. News & World Report: News, Rankings and Analysis on Politics, Education, Healthcare and More. Accessed June 5, 2023. <https://www.usnews.com/>
19. Rural Mental Health Overview - Rural Health Information Hub. Accessed June 5, 2023. <https://www.ruralhealthinfo.org/topics/mental-health>