

Haywood County: Vulnerable Populations and Diabetes in the COVID-19 Era

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Introduction

COVID-19 has profoundly impacted people all over the world both in terms of health and financial stability. While it is easy to be entranced by extraordinarily high numbers of COVID-19 cases in large cities like Chicago, Atlanta, and Miami, health disparities that exist in rural communities elicit distinctive medical challenges. Systemic and social inequalities including less access to healthcare, lower rates of insurance, and higher rates of smoking/hypertension/obesity put individuals in rural communities at higher risk of getting COVID-19 or having worse disease prognosis.⁷ One heightened struggle faced by rural communities is the ability to maintain a healthy and balanced diet, especially in those of financially vulnerable populations. This is especially important in diabetic populations in which a healthy diet is crucial in controlling blood sugar and overall health. In Haywood County, North Carolina, diabetes is the most common chronic disease, affecting 16.6% of residents.⁵ Furthermore, 96.1% of residents did not meet recommended levels of fruits and vegetable consumption and 23% are food insecure.⁵ Access to food is an important factor in addressing the health inequalities existing in rural North Carolina, particularly during times such as now where transportation is further limited due to COVID-19. Researching into possible causes of the poor diet and food availability in Haywood County, I created a map of different stores selling food items. Following the USDA criteria of a food desert being at least 500 people located more than 10 miles from the nearest supermarket/grocery store⁸, I overlaid circles with radii of 10 miles from grocery stores, fast food, gas stations, and Dollar Stores. I also contacted local establishments listed on a Blue Ridge Health handout for diabetic patients for food, medicine, and supplies as to update their form post-COVID. Lastly, I have included COVID-19 precautions that should be taken by diabetic patients. Further studies of food disparities that exist in rural North Carolina could address one of the many factors that contribute to poor health in rural communities, guiding us toward a future of better rural health in North Carolina.

USDA Food Environment Atlas: Vulnerable Populations

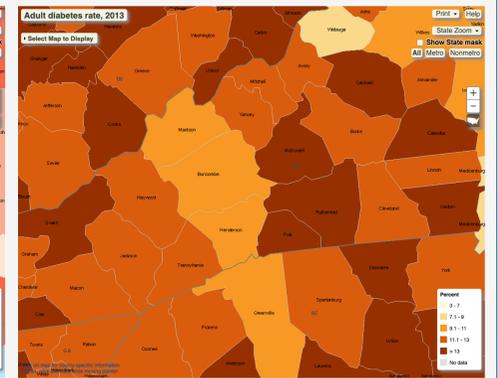
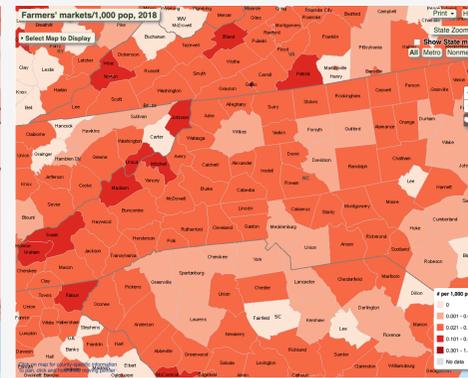
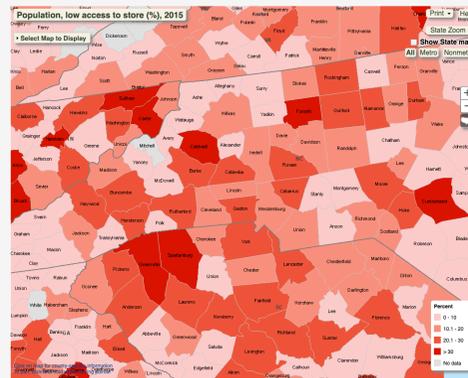
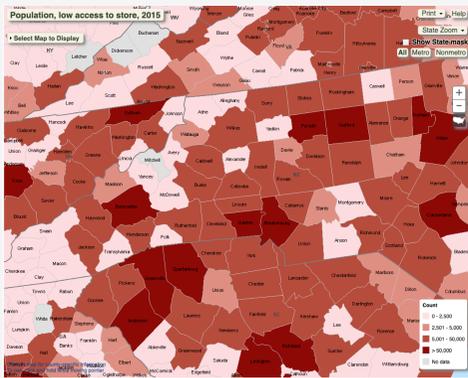


Figure 1: Number of people per county living more than 1 mile from a supermarket/grocery store in an urban area or more than 10 miles in a rural area.¹

Figure 2: Percentage of people in a county living more than 1 mile from a supermarket/grocery store in an urban area or more than 10 miles in a rural area.²

Figure 3: The number of farmers' markets in the county per 1,000 county residents.³

Figure 4: Estimates of the age-adjusted percentage of persons age 20+ with diabetes.⁴

Health Statistics Haywood County

Population; Low access to Grocery Store (2015)	Population low access to store (%) (2015)	Population that is food insecure	Overall Poverty Rate	Poverty Rate Among Children Under age 5	Low income and low access to store (%) (2015)	Households, no car and low access to store (2015)	SNAP households, low access to store (2015)	Diabetes (%) (2018)	% Meet diet requirements for fruits/vegetables (2018)
51,501	21.61%	23%	16.7%	45.3%	7.99%	2,319	2,486	16.6%	96.1%

Data/Resource Form

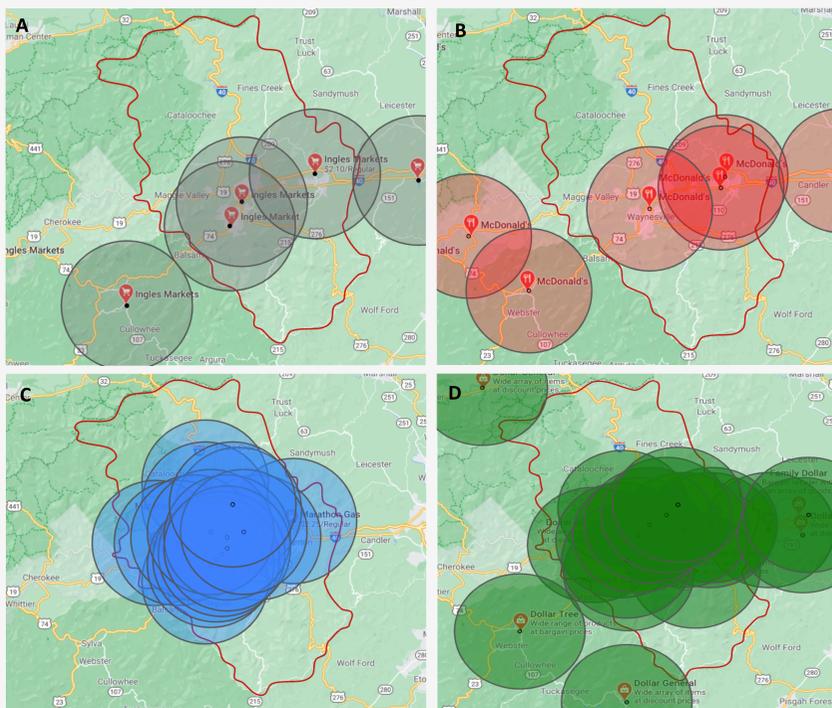


Figure 5: 10 Mile Radius from Select Stores

- A. Ingles Markets
- B. McDonald's
- C. Gas Stations
- D. Dollar Stores

AGENCY	RESOURCE	ADDRESS/PHONE#	AGENCY	RESOURCE	ADDRESS/PHONE#
Open Door Ministries	Food Boxes - Mon-Fri; assist with medications, gas cards for medical appointments	32 Commerce Street, WVL 828/452-3846	Haywood Christian Ministry	Food Boxes - 1 large every 2 months and 1 small box weekly (around 15 items)	150 Branner Avenue, WVL 828/456-4838
RX Outreach	Free Prodigy Monitor and Reduced Cost on Diabetic Supplies Monday thru Friday	PO Box 66536, St. Louis, MO; 63166-6536 1-888-796-1234 Call 1-866-348-6479 for nearby site	Haywood County Health Department	Pre Diabetic Classes (CDC: Diabetes Prevention Program)	157 Paragon Parkway Ste 300, Clyde 828/452-6675
Summer Meals for Kids & Teens	Meals: Mon-Fri Breakfast from 7:30-8:30, Lunch 11:30-1 Saturday dinner at 6 pm Sunday lunch 11:30-1, Dinner at 6		Haywood County Meals on Wheels	Food for Seniors, Home Bound Individuals	157 Paragon Parkway Ste 300, Clyde 828/452-6620
The Community Kitchen	Food boxes on 2nd and 4th Tuesday Supper only - 7 days a week from 5-6 pm	394 Champion Drive, Canton 828/648-0014	Haywood County Transit	Transit - Mon-Fri (fee involved)	50 Armory Drive, Clyde 828/565-0362
YMCA Healthy Living Mobile Market	Nutritional Food for Free (every other Tuesday)	98 Pisgah Drive, Canton 828/648-0014	Haywood Health & Human Services - Department of Social Services	FNS, Medicare, Emergency Utilities	157 Paragon Parkway Ste 300, Clyde 828/452-6620
Bethel Baptist Church	Hygiene Items 2nd Tuesday of each month 3-5:30 pm	15 Facility Drive, Clyde 3:30 - 4:40 pm http://www.ymcawnc.org/schedules-7	Haywood Pathways Center	Free dinner open to public Mon-Sun 5:45-6:30	179 Hemlock St, WVL 246-0332
Double Up Food Bucks	EBT Only - Haywood County Farmer's Markets from April 20th to October 26th	Wed - First Baptist Church overflow parking lot on South Main - WVL 3:30 - 6:30 pm Sat - 250 Pigeon St, WVL 8:00-12:00 pm	Meridian Behavioral Health Services	Mental Health and Housing Assistance	307 Broadview Road, WVL 828/452-9258 828/631-3973
Ducketts Produce	EBT Accepted Mon-Sat 9am - 6pm and Sunday 12-5pm	5868 Pigeon Road, Canton 828/648-7096	Mountain Projects	Housing, Food Insurance	2177 Asheville Road, WVL 828/452-1447
First United Methodist Church	Food Pantry on Saturdays 8-11am	566 S Haywood St, WVL 828/456-9475	No Boundaries	Diabetic Supplies when available	49 Forga Plaza, WVL 828/456-7930
Grace of the Mountains	Food Boxes - Mon thru Fri (10am) for only Waynesville, Hazelwood, Maggie Valley, Lake Junaluska residents	394 Haywood St, WVL 456-6029			

Figure 6: Post COVID-19 Updated Diabetic Resource Form: Blue Ridge Health Haywood

COVID Precautions

- Having type 2 diabetes increases your risk of severe illness from COVID-19 and having type 1 or gestational diabetes may increase your risk of severe illness from COVID-19.⁶
- CDC Guidelines⁶:
 - Continue taking medications and insulin per usual.
 - Test your blood sugar and track the results.
 - Make sure to have a 30-day supply of diabetes medications, including insulin.
 - Contact provider or nearest community health center if you have concerns about your condition or feel sick.
- General Guidelines:
 - Clean your hands often with soap/water for 20 seconds or hand sanitizer with at least 60% alcohol.
 - Avoid contact with those that are sick.
 - Socially distance (6 feet) and limit contact with other people.
 - Clean/disinfect items touched often/items that were outside of the home.
 - WEAR A MASK!

Conclusions/Future Directions

There are many factors that contribute to the disparities in diet in rural North Carolina. Mapping accessible food locations draws attention to access as a causative factor. The few grocery stores and supermarkets of Haywood County give limited coverage to the county as a whole and leave many populations vulnerable to limited healthy options for food. Furthermore, the abundance of unhealthy food options via fast-food, gas stations, and dollar stores leaves many who have limited access to transportation, let alone financial stability to fund healthier food options, stuck with unhealthy food options. With the heightened difficulties in transportation and access resultant from COVID-19, now more than ever is it important to address food insecurities in rural NC. Forms such as Figure 6 are crucial, especially in populations such as people with diabetes whose health relies heavily on diet, in giving options for access to healthy food. Further studies will hopefully give insight into the mechanisms of food access as health determinants in rural NC, along with how to best address these disparities that exist.

References

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