

**North Carolina Where the Only Thing Sweeter Than the Tea is
Our Blood Sugar: Addressing the Diabetes Epidemic in Rural**

North Carolina

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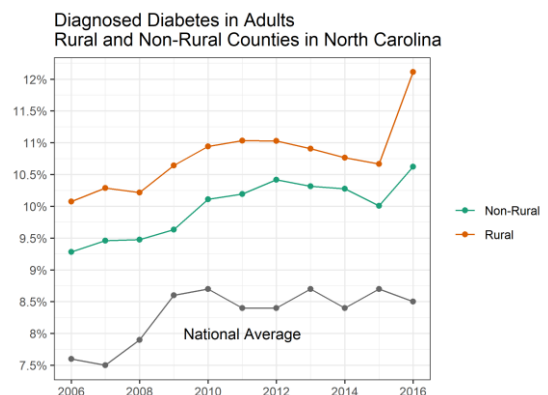
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Executive Summary

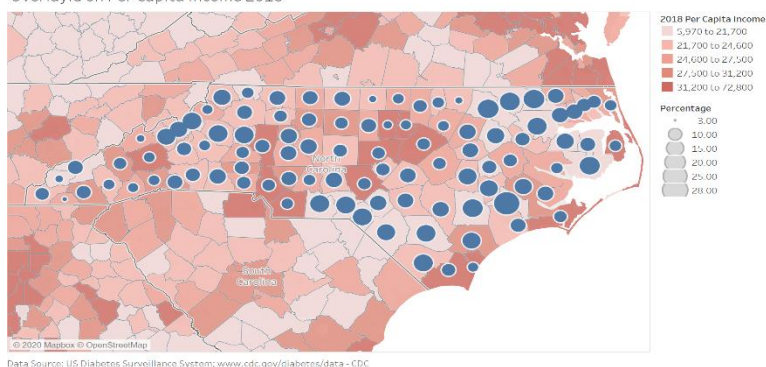
In 2012, the estimated direct cost of diabetes care in North Carolina was 8.4 billion dollars, with an additional 2.5 billion dollars spent on indirect costs from lost productivity due to diabetes (American Diabetes Association, 2016). This total cost is expected to rise to 17 billion dollars if the epidemic remains unchecked (Joseph Konen, Joyce Page, 2012). In 2015, the North Carolina Diabetes Advisory Council released a guide in an attempt to rein in the epidemic. This guide was the North Carolina roadmap from 2015-2020, this report looks to check on the progress as well as provide additional ideas to solve the issue.

Problem

Diabetes is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Many forms of diabetes exist, the most common of which are type 1 diabetes, type 2 diabetes, and gestational diabetes (Joseph Konen, Joyce Page,



Diagnosed Diabetes in North Carolina Adults (20+) in 2016
Overlay on Per Capita Income 2018



2012). North Carolina averages well above the national average for diagnosed cases of Diabetes in Adults, averaging at around 11% of the total adult population versus the national average of

around 8.5%. When broken down between census classified rural counties (of which 44 counties are considered 100% rural) against non-rural the problem is exaggerated even further. Since 2006, the amount of diagnosed adults in rural counties has grown from slightly above 10% to about 12% of the total adult population; this number is expected to continue to rise (American Diabetes Association, 2016). When viewed against the per capita income of each county it is again possible to see the discrepancy of diagnosed

Rural	N	NC Diabetes (%)	US Diabetes (%)	% Diff
FALSE	56	10.62	8.5	24.94
TRUE	44	12.11	8.5	42.47

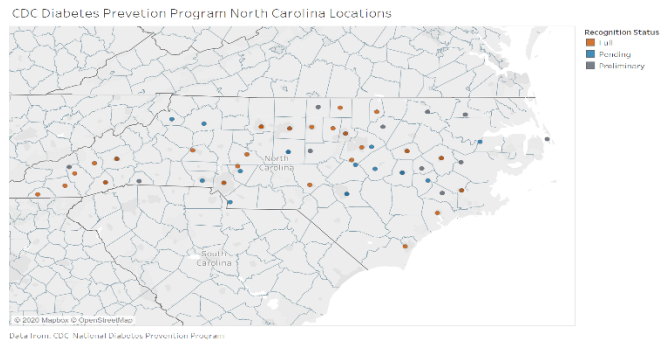
cases of diabetes. In its 2015 report the North Carolina Diabetes Advisory Council (NCDAC) laid out suggestions for helping to stop the

rise in diabetes cases in North Carolina, many of these being common throughout diabetes prevention. They list six action items in the primary prevention of diabetes:

- Decrease the percentage of adults who are current smokers.
- Decrease the percentage of high school students reporting current use of any tobacco product.
- Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days.
- Increase the percentage of high school students who are neither overweight nor obese.
- Increase the percentage of adults getting the recommended amount of physical activity.

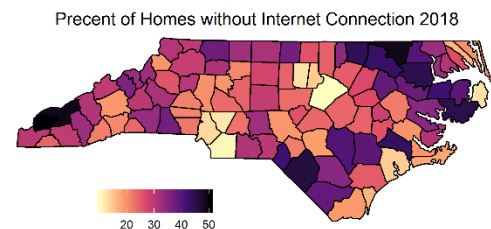
- Increase the percentage of adults who consume five or more servings of fruits and vegetables per day.

Many of these action items become more challenging for those North Carolinians that are living in rural areas, as they may not have access to healthy food, and are much more likely to be smokers. In fact in 2016, 28% of North Carolinians whose income was less than 25,000 dollars were smokers (Centers for Disease Control and Prevention, 2015). The rural population is also less likely to have access to a CDC Diabetes Prevention Program, which is the biggest action item for NCDAC in the prevention of Diabetes. Currently North Carolina has 77 registered CDC Prevention Programs; of these only 34 have achieved full CDC recognition (Centers for Disease Control and Prevention, 2018). Overall, North Carolina has a diabetes problem, and for those in the rural areas it can be even worse.



Policy Alternatives

The current diabetes management plan in North Carolina is a good one, with one major flaw. The idea is built on education, but how can people be educated without access to said education? There are two kinds of education provided for diabetes prevention, in person, and online. As stated before



North Carolina has only 77 total registered prevention programs, almost all of which are

centered in urban areas, limiting access to many of North Carolinas residents. Some of these programs can be attended virtual, however again many living in rural areas do not have access to broadband internet, causing this to not be a viable option. While these programs have been proven to work and should continue, lack of access means there is still much more action to take (North Carolina Diabetes Advisory Council, 2015).

Policy Recommendations

This report is not meant to override current NCDAC policies but build on top of them. The programs provided by local agencies and governed by the CDC, must continue, however, these programs need to be accessible by more rural North Carolinians. Currently if the programs were evenly distributed across North Carolina's population each program would have to handle roughly 17000 participants, this is an unsustainable amount of participants. By providing more programs as well as better access to these programs, it is feasible that the rising trend of diabetes could reverse, or at least stay stable.

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