Social determinants of health are the conditions in which people are born, grow, live, and work that shape the lives of each individual. Factors including socioeconomic status, transportation, education, and access to healthcare services influence how women receive oral care. Additionally, these factors create deeper disparities that leave rural women as well as pregnant individuals more at risk. Research suggests that poor oral health in pregnant women can predispose their children to similar complications; thus, failure to address issues such as gum disease during pregnancy can subject future generations of women to experience those same oral health concerns. Pregnant women living in Region 9 may experience gingivitis from hormonal changes in the body and previous unhealthy behaviors; however, because of limitations in access to facilities, providers, transportation, oral health education, and fluoridated public water supply, these women have become more susceptible to oral health issues.

Methods:
To understand how social determinates affect pregnant women’s access to dental care in eastern North Carolina, a literature review using primary and secondary documents was completed. Information on Medicaid and non-Medicaid dental offices in Region 9 were assessed to understand how transportation and distance limit a patient’s ability to see a dentist who may be further than a 15-minute drive from their home. Information on the number of accessible dentists in Region 9 was examined to demonstrate a disparity in the provider to patient ratio. Other disparities in environmental resources such as public fluoridated water supply were analyzed. Secondary resources were also studied to understand how low oral health education rates among women, beginning in their K-12 education, resulted from the lack of Fluoride Mouth Rise Education Programs to inform the students of healthy behaviors.
Findings:

- Majority of counties in Eastern North Carolina’s Region 9 experience a shortage in dentists.
- Majority of counties in Region 9 do not have a dentist within a 15-mile distance or they may have one dental office that services over 5,000 people (causing significant strain on the system).
- There is an insufficient supply of dental offices in Region 9 counties which accept Medicaid patients within a 15-minute drive.
  - Those offices that do accept Medicaid may not be accepting additional patients.
- 83% of the Region 9 population served by public water systems do NOT receive fluoridated water (causing an increased risk for cavities).
- 96% of qualified Region 9 schools do NOT participate in a Fluoride Mouth Rinse Program (lack of oral health education).
  - **Fluoride Mouth Rinse Programs**: teach students through instruction, demonstration, and practice to properly rinse their mouths with a fluoride-based solution to prevent cavities.

Policy Recommendations:

1. Develop a Fluoride Mouth Rinse Program for pregnant women at their OB/GYN office in Region 9, eastern North Carolina.
   - **When**: At a woman’s first prenatal visit, a nurse or physician instructs, demonstrates, and guides a woman in practicing a fluoride rinse. During their first visit, the healthcare provider should explain what a fluoride rinse is and what it does. The provider should teach pregnant women about the changes in their teeth and gums with a growing pregnancy. Pregnant patients should learn how they are susceptible to issues such as increased bacteria, plaque, and gingivitis.
   - **Intended Benefit**: Implement a new behavior early on in the pregnancy to prevent dental issues and ensure women remain comfortable throughout pregnancy.

2. Conduct regional educational programming and training for women and medical professionals (OB/GYNs) to become knowledgeable about oral health during pregnancy.