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## BACKGROUND AND PURPOSE

### Cancer Burden:

- South Carolina (SC) ranks 11<sup>th</sup> for cervical cancer mortality in the United States. <sup>1</sup>

### Cancer Prevention Recommendation:

- According to the U.S. Preventive Services Task Force, women ages 21 to 65 should have a Pap test every three years. <sup>2</sup>
- The Advisory Committee on Immunization Practices (ACIP) recommends the human papillomavirus (HPV) vaccine be administered to children starting at age 11 or 12. <sup>3</sup>

### Cancer Prevention Programs for Low-Income Children and Women:

- The Vaccines For Children (VFC) Program is a program funded by the federal government and supplies certain providers with vaccinations to give to those in need. These preventative vaccinations include the HPV vaccine. <sup>4</sup>
- The Best Chance Network (BCN) is a CDC-funded program in South Carolina that provides low-income women with free breast and cervical cancer screening services, diagnostic testing, support services, and community education. <sup>5</sup>

**Purpose:** To identify counties where there is low access to locations that provide primary (HPV vaccination) and secondary (Pap test) prevention services for vulnerable populations, and low rates of usage of these prevention services

## METHODS

### Data Sources:

- U.S. Census Bureau- county -level population estimates of those age eligible for VFC (<18 years of age) and BCN cervical cancer screening programming (women 20-64 years of age)
- SC's Department of Health and Environmental Control (DHEC) –BCN cervical service location data, VFC provider location data, and county-level estimates of HPV vaccine and cervical cancer screening utilization were obtained from the Behavioral Risk Factor Surveillance System (BRFSS).

### Spatial Analysis:

- BCN and VFC locations were geocoded and summed for each county.
- Service availability ratios were calculated using the number of BCN locations per 100,000 females aged 20 to 64 and the number of VFC locations per 100,000 persons aged <18 in each county.
- Choropleth maps were created to visualize availability of services and use of cervical cancer screening and HPV vaccination uptake.
- Results were compared across urban versus rural counties, as defined by the 2013 Rural-Urban Continuum Codes.

## RESULTS

### Key Findings

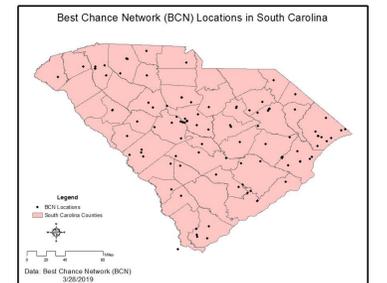
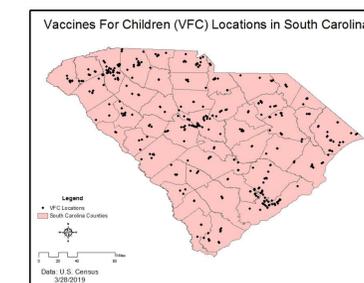
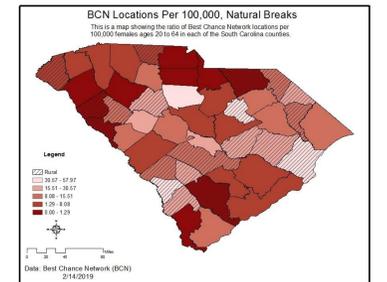
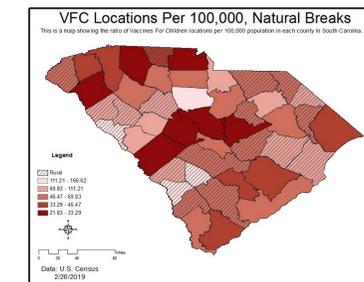
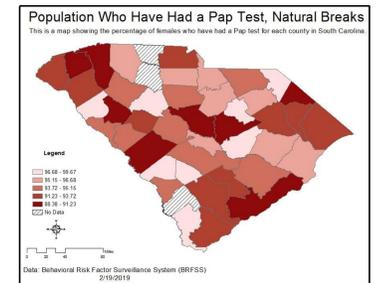
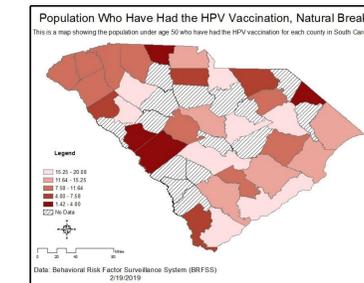
- Across counties, the mean number of BCN locations per 100,000 is 12.41 and the mean number of VFC locations per 100,000 is 65.67.
- The county with the highest number of BCN locations per 100,000 persons is Georgetown (57.96). Nine counties have no existing BCN locations.
- The county with the highest number of VFC locations per 100,000 persons is Bamberg (116.61). All counties have 1+ VFC provider.
- The percentage of females who ever had a Pap test was lowest in urban counties such as Richland, Greenville, Aiken and Florence.
- The percentage of the population under age 50 who ever had a HPV vaccination ranged from 2-20%, with the lowest rates observed in rural counties such as Dillon (1.87%) and Cherokee (4.00%).

### Percentage of women who have had a Pap test in the last three years

Mean across counties	94.36	
Minimum	88.38	Pickens County
Maximum	99.67	Newberry County

### Percentage of people under the age of 50 that have had the HPV vaccine

Mean across counties	11.45	
Minimum	1.42	Aiken County
Maximum	20.08	Laurens County



## DISCUSSION

- Many counties in South Carolina have poor spatial access to BCN locations compared to the population they are trying to reach.
- For HPV vaccination, focus should be directed toward rural counties where an increased number of VFC providers may improve access to services and subsequently, facilitate greater HPV vaccination use.
- Increasing access to BCN providers in urban counties may also positively impact Pap test utilization in these areas.
- Identifying areas with low access to primary and secondary prevention services will help determine which communities may benefit most from interventions or policy changes.

## ACKNOWLEDGEMENTS & REFERENCES

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**Funding Statement:** This study was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under cooperative agreement [5 U1CRH30539-03-00].