Mapping Cervical Cancer Access and Prevention in SC

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BACKGROUND AND PURPOSE

Cancer Burden:
- South Carolina (SC) ranks 11th for cervical cancer mortality in the United States. 1

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. 2
- The Advisory Committee on Immunization Practices (ACIP) recommends the human papillomavirus (HPV) vaccine be administered to children starting at age 11 or 12. 3

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. 4
- 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. 5

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.
- Aiken County is the county with the highest number of VFC locations per 100,000 SC’s Department of Health and Environmental Control (DHEC) defines by the 2013 Rural Urban Continuum Codes.
- The county with the highest number of BCN locations 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 an HPV vaccination ranged from 2-20%, with the lowest rates observed in rural counties such as Dillon (1.87%) and Cherokee (4.00%).

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 an HPV vaccination ranged from 2-20%, with the lowest rates observed in rural counties such as Dillon (1.87%) and Cherokee (4.00%).

RESULTS

| Percentage of women who have had a Pap test in the last three years |
|---------------------------|-----------------|-----------------|
| Mean across counties      | 94.36           | Minimum         |
|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         |
|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.

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