

## **Evaluating Parental Knowledge, Attitudes, Beliefs, Perceptions and Behavioral Intentions Regarding the HPV Vaccine**

M. Ford, K. Cartmell, P. Nietert, A. Malek, D. Wilson, K. Sonawane, C. Richardson, P. Le, C. Keeve, J. Zavec, S. Hoffman, I. Sanders, M. Slan, J. McLauren, M Platt, E. Gomez, J. Zserai, B. Poore, C. Cody, V. Ladd, M. Beattie, D. Sudduth, K. Kreps, H. Breland, H. Lemon, J. Roberts, M. Nazario

*Hollings Cancer Center, Medical University of South Carolina*

### **1. Background**

Human papillomavirus (HPV) infections are linked to at least six different cancer types. The Medical University of South Carolina (MUSC) Hollings Cancer Center (HCC), MUSC Department of Pediatrics, and Healthy Me/Healthy South Carolina (SC) Program leaders identified less-than-optimal HPV vaccination rates in rural, medically underserved counties in SC. Therefore, they used the MUSC HCC data visualization tool, South Carolina Cancer Surveillance for Population Health Research and Outreach Tool (SC SPOT), to identify counties in the state with the lowest HPV vaccination rates. This information guided the locations where the MUSC HCC HPV Vaccination Mobile Unit Program provides HPV and other childhood immunizations, employing a statewide, bidirectional community-engaged approach with school districts, school nurses, parents, and teachers.

### **2. Goals**

The program aims to increase:

- Parental knowledge of HPV and cervical cancer, and positive attitudes and favorable beliefs about the HPV vaccine
- Parental behavioral intention to have their children receive the HPV vaccine
- HPV vaccination rates among the counties served by the MUSC HCC HPV Vaccination Mobile Unit

### **3. Solutions and Methods**

Investigators employed a pre-/post-educational intervention design to evaluate changes in parental knowledge after their participation in a one-on-one, 15-minute HPV vaccination educational session. Pre-/post-intervention changes in parental behavioral intention to have their children receive the HPV vaccine, and their children's receipt of the HPV vaccination were evaluated.

Administrators from the South Carolina Department of Public Health and the South Carolina Immunization Coalition linked the program staff with the nurses at each of the schools in the participating counties of SC. Regular meetings were held between the HPV Vaccination Mobile Unit Program staff, school districts, and community leaders to make introductions and to plan the HPV vaccination event in the leaders' community settings.

### **4. Outcomes**

Six hundred forty-nine parents have participated in the HPV Vaccination Mobile Unit Program to date, and 492 (75.8 percent) completed the study survey. The surveyed parents were largely women (87.4 percent), not of Hispanic or Latino origin (75.4 percent), and had heard of HPV (89.4 percent). Their HPV knowledge scores showed a modest but statistically significant increase from pre-program to post-program (79.5 percent vs. 80.8 percent correct,  $p < 0.001$ ). All (100 percent) of the participating parents consented to having their children vaccinated.

## **5. Lessons Learned and Future Directions**

While the program provided an important educational opportunity for the parents, it faced some missed opportunities. Moving forward, the program will employ refined SC SPOT data to identify more granular data than county-level HPV vaccination rates to identify areas where the program will provide childhood immunizations. The SC SPOT program will provide intra-county data to identify regions within counties that may have lower HPV vaccination rates than the county-level rates. These geographical differences in HPV vaccination rates might be masked if only county-level data were employed to guide the focal areas of the program. Therefore, as a next step in the ongoing program, the investigators are seeking new sources of funding to allow them to reach a greater proportion of the SC population.