



Increasing HPV Vaccination Rates: Outcomes of a Targeted Funding Opportunity, 2017-2018

Background

Human papillomavirus (HPV) vaccine protects against HPV types that most commonly cause cervical, throat/tonsil, anal, penile, vaginal, and vulvar cancers. Despite the importance of HPV cancer prevention, South Dakota HPV vaccination coverage rates fall considerably short of the Healthy People 2020 goals of 80%. In 2016, the percentage of males and females ages 13-17 in South Dakota who were up-to-date on the HPV vaccine series was 38.6% compared to 43.4% nationally.¹ The U.S. Advisory Committee on Immunization Practices recommends routine HPV vaccination at age 11 or 12 years.² Vaccination may be given starting at age 9 through age 26.² To reduce the burden of HPV associated cancers, the Comprehensive Cancer Control, Immunization, and All Women Count! Programs within the SD Department of Health (SDDOH) released a request for applications targeting health systems interested in partnering to implement evidence-based interventions to increase HPV vaccination rates in the state. Health systems were required to implement at least two of the proposed evidence-based interventions: client reminder and recall systems, community-based interventions, provider assessment and feedback, provider reminders, and standing orders. Two health systems were awarded a total of \$26,165 in funding. In addition to the funding for this project, the programs also provided technical assistance to support project implementation, address questions, and share best practices, throughout the duration of the project period.

Project Summary

Avera Health, an integrated health system, implemented project efforts at all SD clinic locations. Community Health Center of the Black Hills, a Federally Qualified Health Center, implemented project efforts at two clinic sites in Rapid City, SD. Collectively, the potential project impact included over 110,000 males and females ages 11-26. Throughout this report, outcome data is de-identified. Grantees are referred to as Health System A and Health System B to provide confidentiality for reported results. The project period for Health System A was March 1, 2017-February 28, 2018, and the project period for Health System B was June 1, 2017-August 31, 2018.

Interventions

Client Reminder and Recall Systems: Both awarded health systems chose to enhance their client reminder system as part of this project. Health System A implemented a process within the clinical event manager of their electronic health record (EHR) to determine patients due for their first or subsequent doses of HPV vaccine. An auto dialer system and prerecorded message was utilized as the initial reminder type. As implementation progressed, the health system also utilized text and email reminders. For minors ages 11-17, reminders were sent to the patients' parent/guardian; patients ages 18-26 received reminders directly. Health system B chose to implement a mailed reminder to guardians of patients ages 11-15 who had never received any doses of HPV vaccine.

Provider Reminders: Health System A integrated a provider alert system into the clinical event manager of their EHR for patients ages 11-26. Provider alerts populate when a patient presents for a clinic visit if the patient is due for either the initial or subsequent doses of HPV vaccine. Leadership trained clinical staff on the alert process and protocol. As part of the reminder process, clinical staff verified and updated HPV vaccination status in the South Dakota Immunization Information System as appropriate. Similarly, Health System B integrated HPV vaccination provider alerts into their existing clinical provider alert dashboard. Alerts populated for patients ages 11-26 due for either their first or subsequent doses of HPV vaccine. Provider education was also implemented at Health System B regarding the reminder system.

Outcomes

Grantees were asked to provide system-level data at baseline and on a quarterly basis throughout the project. The data presented in this section was compiled from grantee reports. Efforts were made by program staff to aid sites in providing accurate data reporting; however, accuracy is not guaranteed. Outcome measures tracked to demonstrate effectiveness included HPV vaccine doses administered, HPV vaccine series initiation rates (one or more doses), and HPV series completion rates. Overall, nearly 17,000 client reminders and 12,900 doses of HPV vaccine were administered during the project.

First dose initiation and series completion rates increased for both sites through the project. Health System A saw a 10% increase over baseline in HPV vaccination initiation rates among all patients ages 11-26, from 25% to 35%. This represents over 550 newly vaccinated patients. Rate increases were higher among patients ages 11-14 versus those ages 15-26, 13% vs. 8%. Rates among males increased 4% more than rates among females. Health System B increased HPV vaccine initiation rates among all patients ages 11-26 by 5% over baseline, from 20% to 25%. This represents nearly 6,900 newly vaccinated patients. Rates were similar among all age groups and genders. HPV vaccination series completion rates increased by 5% over baseline among all patients ages 11-26 in Health System A, from 6% to 11%. Rate increases were higher among those ages 11-14 versus those ages 15-26, 8% vs. 3%. Health System B achieved a series completion rate increase of 3%, from 14% to 17%. There were no notable differences among genders or age groups.

Conclusion

Project efforts included implementation of provider and client reminders to increase HPV vaccination rates within two unique health systems in South Dakota. Both health systems saw an increase in HPV vaccination initiation and series completion rates through project implementation. Other health systems in SD interested in implementing similar interventions are encouraged to reach out to the SDDOH for assistance.

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References

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2. Meites E, Kempe A, Markowitz LE. Use of a 2-Dose Schedule for Human Papillomavirus Vaccination — Updated Recommendations of the Advisory Committee on Immunization Practices. *MMWR Morb Mortal Wkly Rep* 2016; 65: 1405–1408. DOI: <http://dx.doi.org/10.15585/mmwr.mm6549a5>.