

Insights from the Cancer Control Field

DOSE HPV: Development of Systems and Education for HPV Vaccination in Boston, MA

Public Health Challenge

Each year in the United States, nearly 3 million men and women seek medical care related to human papillomavirus (HPV) and more than 30,000 are diagnosed with a cancer caused by HPV. The most dangerous forms of HPV—those that cause cancer—can be prevented by the two-dose HPV vaccination series. Nevertheless, HPV vaccination rates remain low in some areas, including Massachusetts. To improve vaccination rates, a community health center in Boston that serves almost half of South Boston's population implemented DOSE HPV: Development of Systems and Education for HPV Vaccination.

At a Glance

A community health center in Boston uses DOSE HPV to support its mission of vaccinating all patients who are between 9 and 18 years old. Read this case study narrative to learn how the center uses DOSE HPV and how you can use DOSE HPV in your setting.

The Setting

Since summer 2017, the South Boston Community Health Center has implemented DOSE HPV. This Federally Qualified Health Center serves a large underserved and vulnerable population, with over 70,000 service visits in the past year.

The community health center decided to implement DOSE HPV to help increase the HPV vaccine uptake rates at the center level. A pediatrician who is also the center's Chief Information Officer championed DOSE HPV, with the goal of implementing a sustainable program to increase vaccination rates.

“As a center, our HPV vaccination rates plateaued, and I was excited to implement DOSE HPV to help increase our HPV vaccine uptake rates at the center level. This program helped get everyone on board.”

**Chief Information Officer, South Boston
Community Health Center**

The Approach

In summer 2017, the health center trained all center staff—family medicine doctors, pediatric providers, nurses, and physician assistants—to use the DOSE HPV program. The trainings consisted of six 60-minute sessions. While the developers conducted the initial trainings, the center was responsible for creating a sustainable action plan. The center staff received protected time to complete the DOSE HPV training. Additionally, they received incentives to complete the training: credits toward professional education, such as Continuing Medical Education and Maintenance of Certification credits.

The first three trainings informed the health care providers about HPV and the vaccination series. The providers learned the reasons to vaccinate and the importance of vaccinating early (as young as age 9). Also, the training included motivational interviewing classes to help providers address patient-level barriers to getting the HPV vaccine. The last three trainings focused on using the program at the site level. These trainings assisted the health center in developing specific, measurable, attainable, reasonable, and timely (SMART) goals. The health center selected two goals: (1) to increase the HPV vaccine initiation rate to 80% among patients aged 9–10 years and (2) to increase the HPV vaccine completion rate to 50%. Additionally, the center developed three objectives: (1) to develop a site-specific, one-page educational sheet for patients, (2) to create provider alerts, and (3) to put in place a standing order allowing nurses to administer the HPV vaccine without a doctor's order.

The educational sheet of frequently asked questions (FAQs) was developed from published medical literature. The FAQs addressed known barriers to vaccination and informed patients on reasons to get the HPV vaccine.

The provider alerts work with the center's electronic health records (EHR) system, letting providers know

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Our motto is “nine is fine and
vaccinate early and often.”

Chief Information Officer, South Boston
Community Health Center

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with a message in the EHR when specific patients coming for their office visit are due for a vaccine dose. The center established two alerts for HPV vaccine reminders. The first one informs the provider when a patient aged 9 or 10 does not have any evidence of an HPV vaccine dose. The alert asks the provider to begin the conversation about vaccination with the patient. The second alert informs the provider of any patient who is due for a first or second dose of the HPV vaccine. Alerts are sent at every patient visit until the patient is vaccinated. If a patient chooses not to be vaccinated, the provider is instructed to enter the reason in the patient's medical record (e.g., patient declined, is afraid, or forgot).

DOSE HPV has taught the center how to overcome vaccine hesitancy among families. Prior to implementing the program, the center saw that some families were concerned about their children receiving a new vaccine. However, by using motivational interviewing techniques and educating patients on the benefits of receiving the vaccine, the center was able to increase its vaccine completion rates by 20%.

The Chief Information Officer tracks the center's HPV vaccine data each month using analytical tools. When rates decline, the center addresses the reason by examining the trends. Then the center determines how well the providers are using the motivational interviewing techniques and giving the

FAQ sheet to patients. The center retrains providers if needed or makes adjustments in order to remove barriers to HPV vaccine uptake.

The center plans to keep implementing many elements of the DOSE HPV program as long as possible because the provider alert system requires little maintenance. The center is also hoping to train new health providers when they are hired.

Challenges and Lessons Learned

Adherence to the Protocol

Staff turnover interfered with the center's adherence to DOSE HPV's protocols. The center's data showed that new, untrained providers often dismissed provider alerts without any follow-through. The center found that it needed to provide training to new staff on the DOSE HPV system to ensure the center was using the program as intended over time.

Adaptation of the Program

Although the center followed the protocol for most DOSE HPV program components, staff chose to make an adaptation to the program to fit the needs of the center. For example, the center initially had nurses recall patients who missed appointments, as recommended in the implementation guide. The center later stopped this practice because it was time consuming, resulted in a high rate of no-shows, and did not significantly increase its rates of HPV vaccine uptake.

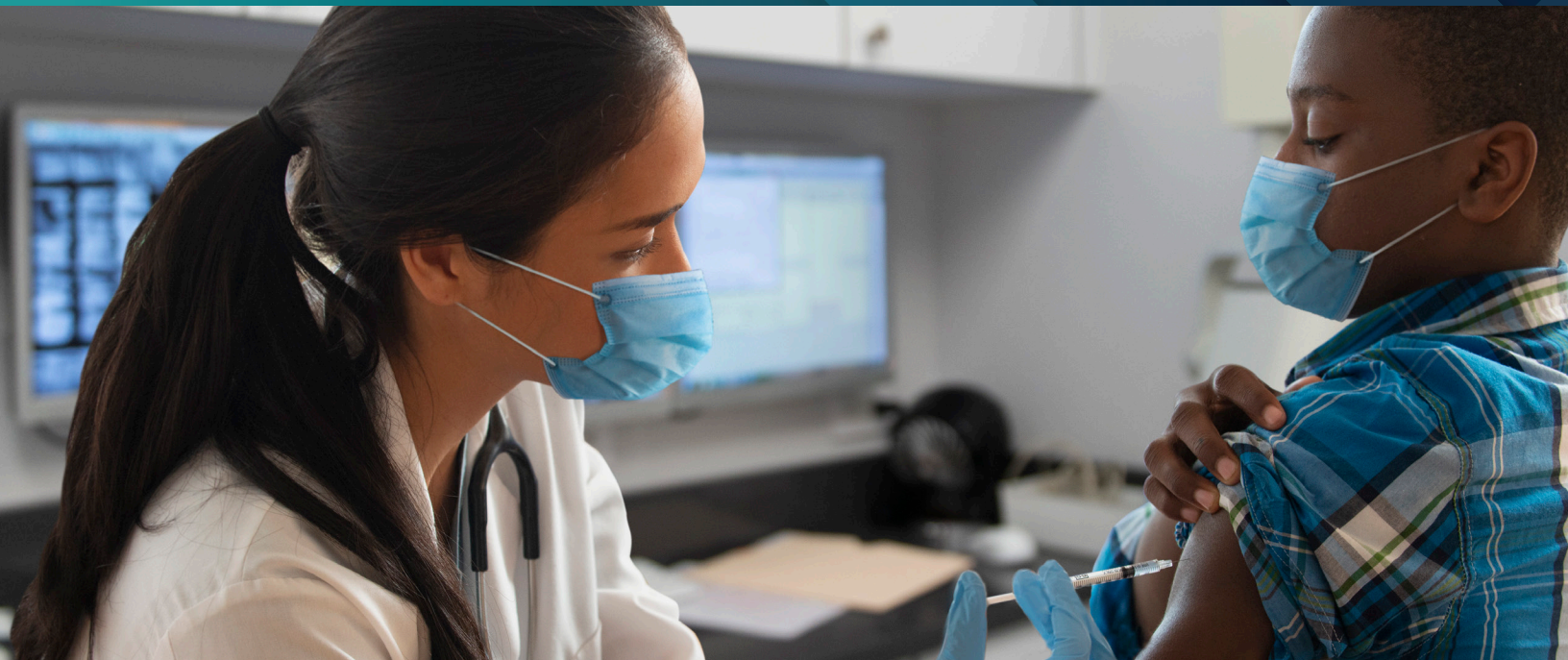
Questions and Answers

How do you encourage center-wide adoption of the program?

The DOSE HPV program creates a culture shift by training providers to establish SMART goals. When providers play a role in tracking their center's HPV vaccination uptake data, they are encouraged to meet their individual goals and are more likely to adhere to DOSE HPV's protocols.

At what age can patients receive their first HPV vaccine dose?

The Centers for Disease Control and Prevention (CDC) recommends administering the HPV vaccine at age 11 or 12 and states that the first vaccination can be given at age 9. The health center vaccinates patients as young as 9 years old. Vaccinating early creates more opportunities for patients to receive the second dose, which should be given 6 to 12 months after the first one.



Find Out More

To learn more about DOSE HPV: Development of Systems and Education for HPV Vaccination and how to use the program at your organization, view the program summary at: <https://ebccp.cancercontrol.cancer.gov/programDetails.do?programId=25930477>

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EBCCP is the recently refreshed version of Research-Tested Intervention Programs (RTIPs). The new website includes improved navigation and search capabilities, video tutorials, case studies, program summaries, and more. Visit us at ebccp.cancercontrol.cancer.gov for the latest resources today!