

Alabama Chapter

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American Academy of Pediatrics

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Increasing Human Papillomavirus (HPV) Vaccine Coverage by Strengthening Adolescent Immunization Quality Improvement for Providers (IQIP) Activities

Final Report

January 2021

**Alabama Chapter-American Academy of Pediatrics
Increasing Human Papillomavirus (HPV) Vaccine Coverage by Strengthening
Adolescent Immunization Quality Improvement for Providers (IQIP) Activities**

September 2019 to October 2020

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RATIONALE

About 79 million Americans, most in their late teens and early 20s, are infected with HPV. Each year, about 14 million people become newly infected. Most of the new cases are teens and young adults. The Centers for Disease Control and Prevention (CDC) estimates that HPV is responsible for 34,800 cancer cases every year. High rates of HPV-related cancers are clustered in the Southeast, and Alabama is no different, with significantly higher rates than the national average. Alabama ranks first in cervical cancer deaths, third in rates of cervical cancer, fifth in rates of oropharyngeal cancer and seventh in oropharyngeal cancer deaths. Alabama has more than 1,000 cases of HPV-associated cancers annually.

The Alabama Department of Public Health (ADPH) Immunization Patient Resources with Integrated Technology (ImmPRINT) Registry results indicate that only 21% of females and 20% of males aged 13 – 17 in Alabama have completed the HPV vaccine series. These numbers lag far behind the completion rate for Tdap and meningococcal vaccine, which were 71% and 58%, respectively, in 2019 per ADPH. Rates of HPV vaccine series completion have also fallen well short of the Healthy People 2020 target of 80% of adolescents. Persistently low coverage levels expose many Alabama adolescents to HPV disease and HPV-associated cancers. This project's focus was to improve HPV vaccination rates among adolescents in Alabama.

PROJECT SUMMARY

Led by the Alabama Department of Public Health (ADPH) and the Alabama Chapter of the American Academy of Pediatrics (AL-AAP), this project utilized the CDC's Immunization Quality Improvement for Providers (IQIP) model to increase HPV vaccination by reducing missed opportunities to vaccinate and improving immunization delivery practices at the clinic level. A total of 50 Vaccines for Children (VFC) provider practices/clinics from across Alabama were recruited and participated in the project. Project activities included three training and learning encounters, during which practices reviewed clinic HPV immunization data at baseline, developed an improvement plan to increase HPV immunization rates, and reviewed HPV series completion data at the end of the QI period. Peer clinician faculty reviewed the adolescent immunization coverage report with each clinic's staff and discussed results. Feedback encounters with clinic staff included delivery of training curriculum combined with question-and-

answer sessions that allowed for participation and collaboration between physicians and clinic staff. Providers participated as a clinic team as well as networked with other practices in the collaborative.

Practices reviewed HPV immunization clinic rates at baseline, developed a quality improvement plan, and assessed progress to improve HPV rates over two Plan-Do-Study-Act cycles at approximately three months and six months. Clinic data was shared and reviewed at the clinic level and in aggregate. The University of Alabama at Birmingham School of Public Health provided data analysis from ImmPRINT.

Participants	Project Partners	Project Support
<ul style="list-style-type: none"> • 50 practice sites from across Alabama • 71 pediatricians • Children ages 9 – 13 years in practice panels 	<ul style="list-style-type: none"> • Alabama Chapter-AAP • Alabama Department of Public Health Immunization Division 	<ul style="list-style-type: none"> • Alabama Department of Public Health

PROJECT GOALS

- Increase practice-wide HPV vaccine series initiation and completion by 10% for patients by age 13 and decrease HPV vaccine missed opportunities rate by 5% for patients aged 9 – 13.

Project Goals

Improve primary care infrastructure so that participants could

- Reliably identify eligible patients;
- Deliver a strong provider recommendation;
- Decrease missed opportunities by administering the vaccine at acute care visits; and
- Utilize reminder/recall processes

Project Aims

- Increase Dose 1 delivery by 10% over baseline.
- Increase Dose 2 delivery by 10% over baseline.

DESIGN AND APPROACH

There was a total of 50 pre-identified Alabama Vaccines for Children (VFC) provider practices that were scheduled for IQIP visits in 2019-2020 that then elected to participate in this project for MOC credit. Participating clinics selected quality improvement strategies to improve the quality of immunization services, decrease missed opportunities and improve immunization registry data quality.

These included, but were not limited to:

- Routinely measuring immunization coverage levels and sharing with staff
- Utilizing the Vaccine Forecaster in the immunization registry (ImmPRINT) to determine which immunizations were due at every visit.
- Implementing front desk staff protocols for scheduling and rescheduling vaccination appointments
- Recommending HPV vaccine, the same day, and the same way they recommend Tdap and meningococcal vaccines for all boys and girls aged 11-12 years.
- Designating an immunization champion to reduce vaccination barriers and improve coverage

- Integrating ImmPRINT into clinic workflow to determine immunizations due and ensure accurate administration, historical data entry and active patient lists
- Inactivating patients in ImmPRINT who are no longer seen by their practices
- Developing reminder/recall processes
- Offering walk-in or "immunization-only" visits

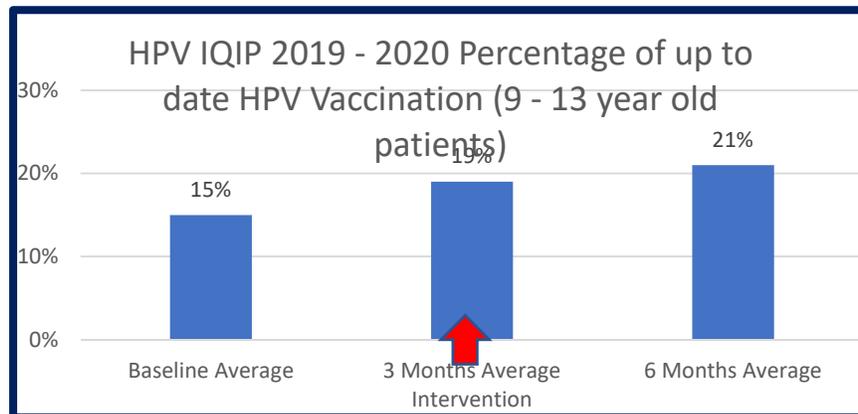
PARTICIPATING PRACTICES

- Acton Pediatrics
- Alabama Children's Clinic
- Alabaster Pediatrics
- Anniston Pediatrics
- Bama Pediatrics
- Dabbs & Hyland
- DeKalb Clinic
- Drs. James & Kathryn Mize
- Etowah Pediatrics
- Fairhope Pediatrics
- FOPHC-Pediatric Health Center
- Fort Payne Pediatrics
- Franklin County Primary
- Gulf Coast Pediatrics
- Horizon Health Care, LLC/ Kid's Clinic
- Internal Medicine and Pediatrics
- Jose R. Caballero, MD
- Kid's Town Pediatrics-Decatur
- Kid'sFirst Pediatrics
- Madison's Children Clinic
- Marshall County Pediatrics - Boaz
- Marshall County Pediatrics- Guntersville
- Midtown Pediatrics
- Mobile County Health Dept-Eight Mile
- Muhammad El-Bahesh, MD.
- Pediatric & Adolescent Medicine, PC/Infirmary Pediatrics
- Pediatric Care Center of NE Alabama
- Pediatrics East-Deerfoot
- Pediatrics East-Trussville
- Pediatrics of Providence
- Premiere Medical Center
- Primary Care Pediatrics & Family Medicine
- Purohit Pediatric Clinic-Anniston
- Purohit Pediatric Clinic-Roanoke
- Riverside Pediatrics
- Robert W. Smith, MD
- Scottsboro Pediatrics
- Selma Pediatrics
- Shoals Pediatrics Group
- Simon-Williamson Clinic
- Smart Start Pediatrics
- South Alabama Pediatrics
- Springville Pediatrics
- Sylacauga Pediatrics
- Talladega Pediatrics
- Tender Care Pediatrics
- Tennessee Valley Pediatrics
- West Alabama Pediatrics
- Wilbanks Pediatrics
- Willow Tree Pediatrics

HPV QI PIVOT CURRICULUM CHANGES 2020 – 2021

In early March 2020, the nation was hit with the COVID-19 healthcare crisis and the HPV IQIP Project paused from mid-March through May 2020 to focus on COVID-19 workflow changes while working on HPV vaccination strategies of reminder recall and series completion. The ABP project approval time frame was from 11/5/2019 to 10/31/2021 with a project suspension of March – May 2020.

OUTCOMES



HPV VACCINATION IQIP PROJECT OBSERVATIONS AND TAKE-AWAYS FROM THE DATA

- Participating practices showed an overall average increase at both the 3-month and 6-month time points when looking at the percentage of practice-level patient panels (aged 9 – 13) who were up to date on their HPV vaccination.
- Despite a “pause” in the project due to the SARS-CoV-2 / COVID-19 pandemic, on average, practices did not demonstrate a drop-off in patients up to date on HPV vaccination.
 - In fact, looking at practice-level numbers in the dataset, many practices appear to have used the “pause” period to clean up their data, remove duplicates, and improve data quality overall.
 - This overall improvement of data quality may have impacted whether individual practices met their “goal” as their numbers at the end of the project may be more reflective of the true panel size, for example, rather than that at the outset of the project. This may indicate more so that the set goals were over- or under-estimated based on the data at baseline.
- It is important to note that the patient panel size was kept constant for calculations throughout the project. In other words, for consistency and ease of interpretation, the number of 9-13-year-old patients in each practice at baseline was used to calculate the percentages at three and 6-months. This number is always changing, as patients age in and out of this cohort.
- Lastly, the HPV vaccine is recommended for individuals up to age 26. This process did not consider vaccination above age 13 in these practices, though, based on trends in the 9 – 13 age group, we may expect an overall increase/improvement at older ages in the practices as well.

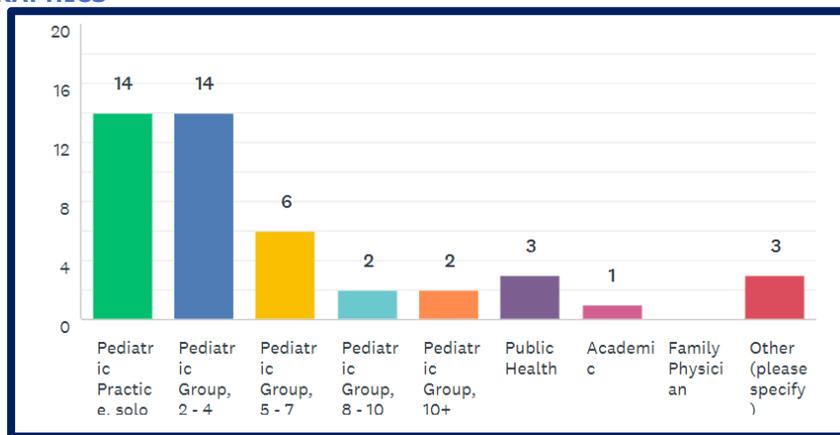
FROM THE POST-SURVEY

- During the project, 81% of the practices utilized both series initiation and completion strategies.
- Frequently used strategies to decrease missed opportunities included: strong provider recommendation (97%); staff education on HPV guidelines (84%); and provision of self-management support for parents (93%).
- Strong provider recommendations utilized by practices included: used verbiage such as: "Your child is 11 and is due for three vaccines today - Tdap, HPV, and meningococcal and we will give those today" (97%); emphasized that HPV vaccine is cancer prevention (97%); and team approach to support provider's recommendation (84%).

- Interventions for series completion/reminder recall included: front desk scheduled patient at check-out for follow-up appointment (86%); and reminder recall for due or overdue dose (68%).
- Practices noted the project had somewhat of an impact or a significant impact (43% and 22%, respectively) on the overall practice operations, but felt the project interventions they implemented were relevant.
- Most methods chosen by practices to sustain their gains included using ImmPRINT (95%) and practice electronic medical record review (86%).
- Well-child visits continued during COVID with practices adjusting scheduling and protocols to include separating well and sick visits (AM/PM) and adjusting the location of visits to separate well/sick visits.
- Practices utilized telehealth visits.

RESPONSES FROM POST-PROJECT SURVEY

PRACTICE DEMOGRAPHICS

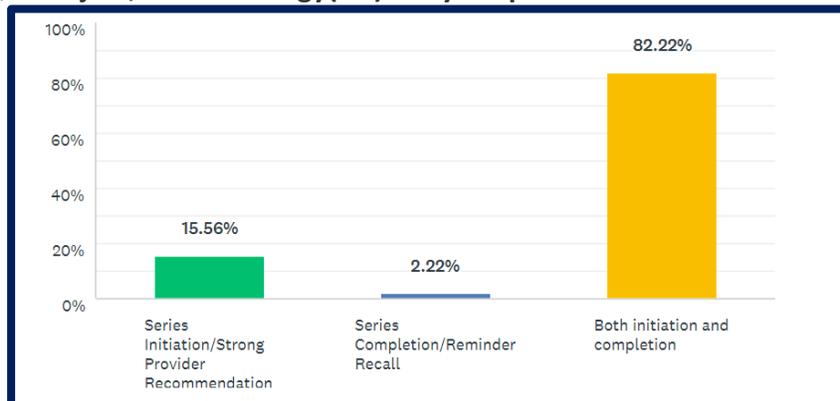


Which best describes the community that your practice serves?

- Urban 27.27%
- Suburban 29.55%
- Rural 43.18%

OVERALL STRATEGY APPROACH

During the HPV IQIP Project, what strategy(ies) did your practice focus on?



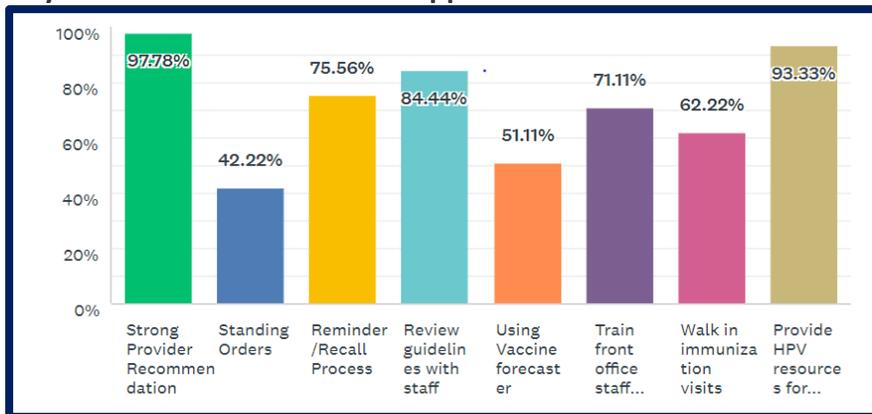
How did you or your staff use ImmPRINT for this project?

All respondents, except for two, reported some use of ImmPRINT (44 respondents). Many shared that they printed an ImmPRINT report for each well-child visit for HPV vaccine-eligible patients. ImmPRINT was also used to generate a list of patients due for vaccinations and to develop “lists for notifications and appointments.” Some respondents reported issues with data in ImmPRINT being incorrect when compared to EMR/EHR.

“We would run reports on ImmPRINT to see who was still in need of their first dose of Gardasil and then call to set up a nurse visit or well-child visit if appropriate.”

- *Our staff has always put whatever vaccines they give into ImmPRINT when they give them. As the lead physician, I went on to ImmPRINT and took out patients who had not been to our practice in over three years or ones for which we had documentation that they had moved away or left our practice. That helped us see a more accurate list of who was missing.*
- *Reviewing immunizations in the relevant age groups to see who was up-to-date on HPV so that patients who were not could be called in to receive their second (or third, if needed) dose.*

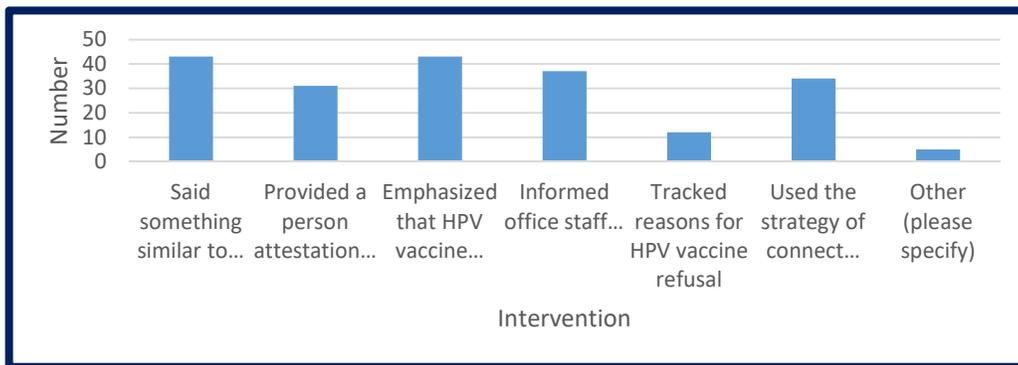
What strategies did you use to decrease missed opportunities?



Answer Choices	Percent	Number
Strong provider recommendation	97.73%	43
Standing orders	40.91%	18
Reminder/recall process	75.00%	33
Review CDC guidelines for HPV vaccination with immunization staff	84.09%	37
Using Vaccine Forecaster	50.00%	22
Train front desk protocols for scheduling and rescheduling appointments to support HPV vaccination	70.45%	31
Walk-in immunization visits	63.64%	28
Provide informational materials on HPV vaccination to support parent and patient decision-making	93.18	41
Total respondents		44

STRONG PROVIDER RECOMMENDATION STRATEGIES

What types of interventions did you implement for series initiation/strong provider recommendations?



Answer Choices	Percent	Number
Said something like: “Your child is 11 and is due for three vaccines today – Tdap, HPV, and meningococcal, and we will give those today.”	97.73%	43
Provided a personal attestation: “I believe in HPV vaccination and have vaccinated my son/daughter/niece/nephew/grandchild.”	70.45%	31
Emphasized that HPV vaccine is cancer prevention	97.73%	43
Informed office staff about the project and how to support the physician’s recommendation	84.09%	37
Tracked reasons for HPV vaccine refusal	27.27%	12
Used the strategy of connect, clarify, and counsel with parents who are hesitant	77.27%	34
Other (please specify)	11.36%	5
Total respondents		44

“I believe sharing personal stories of our own with parents (that our children had the series and did well) gave the parents peace of mind more so than anything.”

Thinking about the interventions that you implemented for series initiation/strong provider recommendation, what do you think had the most positive impact on the interaction with parents/patients you spoke to and/or your practice’s HPV vaccination rates? (What worked well?)

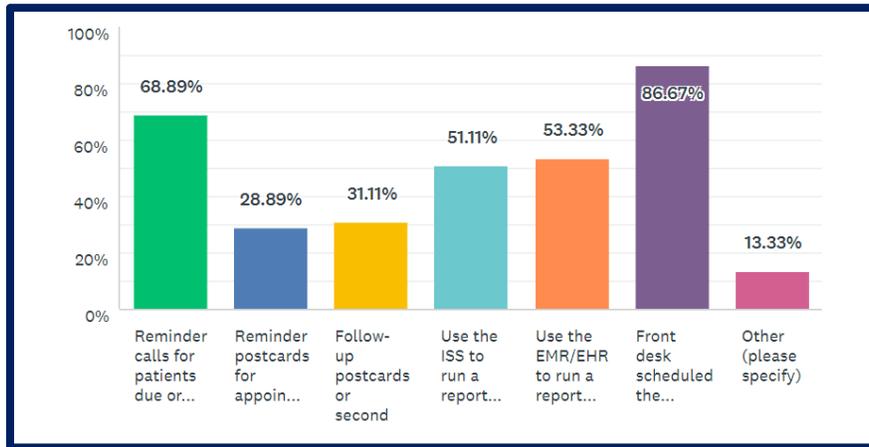
The two interventions that providers felt were most successful were emphasizing that the HPV vaccine is cancer prevention (14 respondents) and telling caregivers that the HPV vaccine, among others, was scheduled to be given to their child during the appointment (14 respondents). Another intervention that was perceived to be successful was to provide a personal attestation (11 respondents).

Thinking about the interventions that you implemented for series initiation/strong provider recommendation, what do you think had the least impact on the interaction with parents/patients you spoke to and/or your practice’s HPV vaccination rates? (What did not work so well?)

Six respondents shared that simply providing a recommendation to receive the HPV vaccine without any additional patient/caregiver education was not effective. Providing overly detailed information to patients and caregivers and using medical jargon were also ineffective for some practices (6 respondents). Additional interventions that had limited impact on the interaction with patients and caregivers were tracking reasons for HPV vaccine refusal (4 respondents) and using the Connect, Clarify, and Counsel strategy (4 respondents).

“If you tried to explain too much, it seemed they were more hesitant about the HPV vaccine, especially for the boys.”

SERIES COMPLETION/REMINDER RECALL STRATEGIES



Thinking about the interventions that you implemented for series completion/reminder recall, what do you think had the most positive impact on the interaction with parents/patients you spoke to and/or your practice's HPV vaccination rates? (What worked well?)

The intervention most reported as having a positive impact on series completion/reminder recall was scheduling the follow-up vaccination visit before the patient left the office (27 respondents). Another intervention that was successful for many survey respondents was calling or texting patients to remind them that they were due, overdue, or scheduled for an additional dose (11 respondents).

Thinking about the interventions that you implemented for series completion/reminder recall, what do you think had the least impact on the interaction with parents/patients you spoke to and/or your practice's HPV vaccination rates? (What did not work so well?)

The intervention most reported as having limited impact on series completion/reminder recall was calling patients to remind them that they were due, overdue, or scheduled for an additional dose (9 respondents). Several individuals shared that many phone calls were not answered, or the phone number is no longer in service. Five respondents did not find scheduling the follow-up vaccination visit before the patient left the office to be an effective intervention. Four respondents experience issues with sending reminder postcards for scheduled appointments. Postcards may be ignored, and one individual had many returned due to incorrect addresses.

SUSTAINABILITY/PROJECT OBSERVATIONS

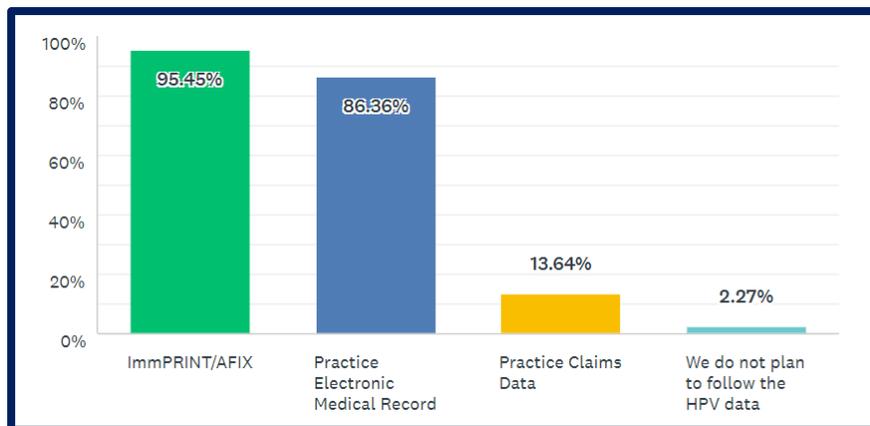
What impact has the pandemic had on the ability for your practice to offer HPV vaccines?

Most respondents reported a decrease in the number of well-child and sick visits since the beginning of the pandemic (28 respondents). Providers note that caregivers are uncomfortable bringing their child into the office for care. Because of the decreased office visits, there has been a decline in HPV vaccination rates. Some practices noticed an uptick in well-child visits prior to the beginning of the 2020 – 2021 school year. Eight respondents did not notice any impact of the pandemic on their practice's ability to offer HPV vaccines.

“Initially, the pandemic decreased all visits across the board. When the schools announced that sports would be played and school would be in session, we had a huge increase in well visits and sports physicals. The schools had shut down before the children could receive their sports physicals through the school. We saw many more teenagers than we would during a normal summer.”

- *Patients are still hesitant to come in for routine exams. They are missing opportunities to get HPV vaccines. Interestingly, we caught college age when they needed COVID tests but then Blue Cross Blue Shield said we could not do COVID tests here. That really hurt this age group because we caught up their HVP and meningitis vaccines at these visits this year.*

Do you plan to continue to use HPV vaccination data?



Biggest challenges or barriers to HPV vaccination:

Most survey respondents reported that caregiver hesitation was the biggest challenge or barrier to HPV vaccination (32 respondents). Many of these respondents further shared that caregivers look to social media and the internet for information about vaccines and are likely to encounter misinformation. The COVID-19 pandemic posed a significant challenge for several practices (6 respondents). Respondents reported that caregivers were uncomfortable bringing their children in for appointments and some clinics were operating with a limited staff.

“Helping parents understand this vaccine is safe, effective, and relevant. The parents most hesitant often could not explain why they were hesitant. That is difficult to address efficiently without knowing specifics. In general, parents, especially younger parents, are very distrustful of vaccine manufacturers and tend to believe "internet" testimonials over personal recommendation by their pediatrician.”

Lessons learned because of participating in the HPV IQIP Collaborative.

Most survey respondents reported having success with one or more of the interventions shared through this QI project (29 respondents). Many comments centered on learning how to communicate effectively with patients and their caregivers about the benefits and safety of HPV vaccination. Many respondents noted the importance of involving all practice staff members in the effort to increase HPV vaccination rates.

“Parents need facts and figures to support our recommendations, not just general statements. MDs need to be sure to address the HPV hesitancy more proactively and give a follow-up plan for those who still decide to defer on the day that they are in the office.”

Parent/Caregiver Information or resources about HPV vaccine to help communication.

Many survey respondents shared that a variety of educational materials would help them communicate with patients and caregivers (12 respondents). Brochures, posters, and information sheets were among the suggested materials. More specifically, some respondents would like educational materials to include HPV infection statistics and rates of related cancers in Alabama. Two respondents would appreciate easily accessible and regular updates on Alabama statistics. Two respondents shared that TV and internet commercials would be helpful.

“We were told that we were top 5 [among top 5 states with highest rates], and I passed that information along, but if we had it in written official form, that might help.”

Provider information or resources about HPV vaccine that you need for yourself and/or others in your practice to increase the rate of HPV vaccination.

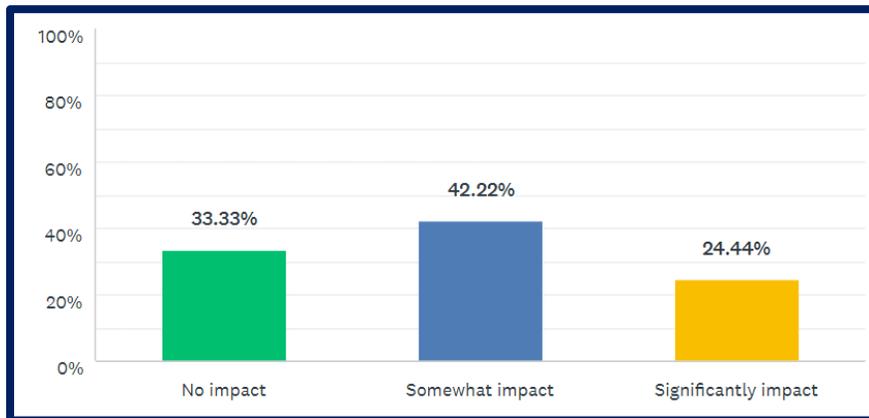
Like the previous question, several respondents reported educational materials as helpful for increasing the rate of HPV vaccination by communicating important information with patients and caregivers (8 respondents). Suggested educational materials included posters and brochures. Three respondents seemed to suggest that easily accessible online HPV vaccination information was important for increasing the rate of vaccination. Two of these respondents simply stated, “AAP and CDC website,” so it is unclear whether they want easily accessible online information for only pediatricians or for patients and caregivers as well. One respondent reported needing a card to remind patients of the dates of the second and third doses of the HPV vaccine.

How can the Chapter or ADPH staff provide follow-up support to your practice team?

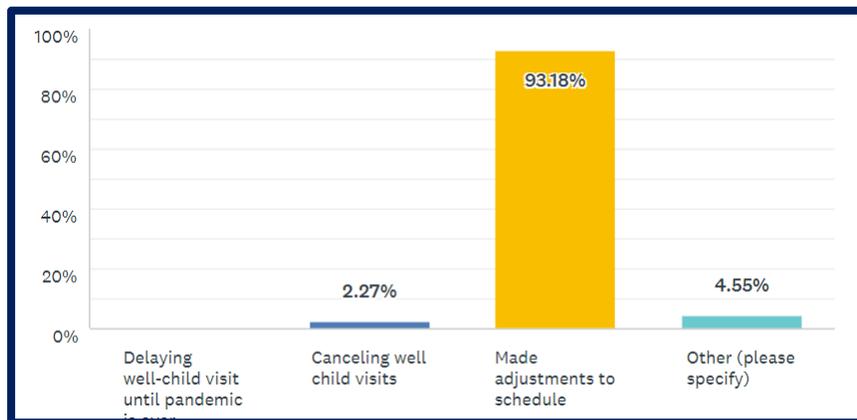
The most common answer to this question was that updated educational materials and guidance for providers from the state AAP chapter and ADPH staff would support continued efforts to increase HPV vaccination rates (8 respondents). Many respondents would like regular updates from ADPH regarding vaccination rates (6 respondents). One of these respondents shared that it was important to “update and improve the validity of the ImmPRINT database.” Additional suggestions included more quality improvement projects, an annual survey, and “frequent follow-up calls with staff who give shots.”

GENERAL PRACTICE

Do efforts required to improve HPV vaccination rates impact practice or provider ability to deliver quality care in other areas?

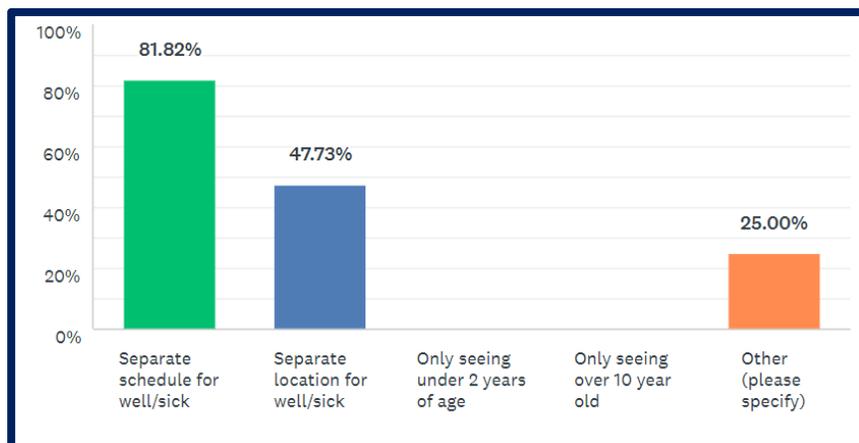


What is your current practice policy for well-child visits due to COVID?



- Other: *Continuing to see them regardless; we are on a normal schedule for now.*

If continuing to conduct well-child visits, please note how you are adjusting your practice process?



- Other: *We use curbside check-in but otherwise operate as usual, allowing for telehealth visits where appropriate; unable to adjust schedule to separate sick/well. Employing a lot*

more telemedicine for sick patients who are stable; patients remain outside until called. The waiting area is not used. Masks are required for children >5 years old and the adult with them. We encourage, but do not require, that well visits come at the first morning appointment and the first afternoon appointment times. Only one parent for older children and we request that extra children who are not being seen do not attend the visit. Each room is wiped down after a visit, well or sick.

Are you providing Telehealth Visits?

