Before making changes, our QI project team met to:

- **Better understand the problem.** We discussed why our HPV vaccination rates are so low, and what systems we would need in order to increase our rates.
- **Develop a general mission or goal.** We acknowledged that we needed to improve our HPV vaccination rates to protect the adolescents in our care.
- **Figure out what we could study to know if we were improving.** We ran an Electronic Health Record (EHR) report to assess our rates, and will use that same report to study our improvement each month.
- **Generate and prioritize possible changes that may make a difference.** We realized we lack a system to reach out to patients due or overdue for doses of the HPV vaccine. We decided to implement reminder/recall to get eligible patients into the practice for HPV vaccination.

“Our QI team included physician leadership (me), our Practice Manager, Lead Nurse, and a Medical Assistant. This team is familiar with the day-to-day workings of the practice, and served as “cheerleaders” for the rest of the practice staff. Several of the pediatricians chose to use this project for MOC Part IV credit through the AAP’s EQIPP module on immunization.”

To get started, we created a Quality Improvement (QI) team.

“My name is Dr. Lewis, I am a pediatrician at a busy suburban practice. My mother had cervical cancer, and a friend was just diagnosed with oropharyngeal cancer, so I want to protect the adolescents in my care from HPV cancers. When we ran a report of our HPV vaccination rates, I was surprised to see they were so low. Our team is talking about causes for this and we are committed to doing better!”
We decided to use a Plan–Do–Study–Act (PDSA) cycle.

“A PDSA cycle is used to rapidly test a change on a small scale, learn from the process, and apply those lessons to another cycle. We decided to use a PDSA cycle to test a reminder/recall system and see if it helps us improve the process of getting adolescents to come in, and ultimately improve our HPV vaccination rates.”

**Plan**

We identified a gap in our performance and came up with a proposed test to close the gap. We documented our ideas and discussed potential barriers. We then predicted what outcomes we thought we would see.

> **Performance Gap:** We do well with childhood vaccinations, but are less successful at adolescent immunizations, especially HPV. We lack a system to follow up with patients who are due or overdue for any doses of HPV vaccine.
> **Idea for Test:** We will create a monthly call list of patients with upcoming birthdays turning 11 or 12 years of age, who are due or overdue for HPV vaccine doses. We will make reminder/recall calls to each patient and each month track the success of that process. Every month we will use our EHR to track our overall outcome—our practice’s HPV immunization rates.
> **Barriers:** We may have wrong phone numbers. Our staff may not be able to handle the number of calls, the influx of patients, or the demands on our vaccine supply. We may increase our “no-show” rate.
> **Goal to close the performance gap:** Make at least 1 reminder/recall phone call to patients on the call list who, according to the EHR, are due/overdue for HPV vaccine doses (and not already scheduled for an appointment).
> **Predicted Outcome:** By the month’s end, 60% of the patients on the call list will have a scheduled appointment. By calling patients due or overdue for HPV vaccine doses, we will see an increase in eligible patients coming in and HPV vaccinations administered, which in time will improve our overall HPV vaccination rates.

**Do**

We tried the change (reminder/recall) to see if we could bring in patients with calls and if that improved our HPV vaccination rates in the target age group.

> **What happened:**
  > In month #1, we implemented the reminder/recall process, and found it was feasible to run the reports and create the call lists.
  > The phone calls were very time consuming. Front desk staff kept track of the proportion of patients on the list with a scheduled appointment.
  > Our Practice Manager tracked “no shows” and we’ve had few, possibly because we were only scheduling appointments for a few weeks out, so there was less of a chance to forget about the appointment.

**Act**

Based on what we learned, we decided to tweak our system and do a second PDSA cycle.

What we will do differently:

> We will send reminder cards (instead of calls) to patients who are due for a dose of HPV vaccine because this can be done quickly through automation. This will cut the call list down considerably.
> Dr. Lewis is going to talk with the two providers who do not want to give more than 2 vaccines at an adolescent visit and explain why this is not the current recommendation.
> When eligible patients check in, front desk staff will give parents the “Recommended Immunizations for Children from 0 Through 18 Years Old” handout and star the vaccines that the patient is due for at that visit.

“Using the monthly call list, the front desk staff called families whose 11- or 12-year-old children were due or overdue for a dose of HPV vaccine. This was a lot of work and they did a great job! The QI team helped keep up the momentum by starting a friendly competition to see who could complete the most calls by reaching an adult or leaving a voice message.”

Study

We predicted that we would see an increase in patients eligible for the HPV vaccine coming in and receiving the vaccine.

**What we learned:**

> The front desk staff were diligent, but struggled to call everyone on this month’s list. By month’s end, the percentage of patients on the call list with a scheduled appointment was 42%. During busy months (back-to-school, flu and RSV season) staff could not have made it through the entire list.
> Some of the eligible adolescents that came in did NOT get vaccinated! Two of our providers want to give only 2 vaccines at an adolescent visit, so they ordered Tdap and MCVa, not HPV.
> Our immunization rates improved only a little. This was expected because we only scheduled visits for patients with birthdays during that month.

Plan

Our Aim Statement: By June 1, 2017, our practice will improve our HPV vaccination rates for girls and boys 11 to 12 years of age. We will increase both series initiation with dose one, and series completion with all recommended doses by 10 percentage points.

**Act**

After our initial QI team meeting, we used the EHR report that our Practice Manager ran to help us set our goal and write our Aim statement.

**Study**

Evaluate the changes you tried differently in the next cycle. Decide what you will do differently in the next cycle.

**Do**

Write a specific idea for what to change including what, who, when. Also try to predict the results of the test.

**Act**

Try your change on a small scale and note what happens.

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“After our initial QI team meeting, we used the EHR report that our Practice Manager ran to help us set our goal and write our Aim statement.”

"Our rates improved a little, but we would like them to improve more quickly so we are going to do another PDSA cycle to address some of the things we learned. I know that this is something I can do for patients in my practice that will make a difference.”
Resources for improving HPV vaccination rates:

HPV Champion Toolkit [www.aap.org/hpvtoolkit](http://www.aap.org/hpvtoolkit)
The HPV Champion Toolkit provides resources to help practices improve HPV vaccination rates. Resources include:

- Online learning opportunities for CME credit
- Quality improvement resources
- HPV vaccine content and education resources
- Public communication resources

EQIPP: Immunizations

**Cost: Free for AAP members (Non-Members $199)**
This EQIPP course is designed to identify immunization rates in your practice, barriers to immunization delivery systems and techniques to overcome those barriers through the use of clear aims that reflect expert principles and proven quality improvement methods and tools.

**Available at:** [http://eqipp.aap.org/](http://eqipp.aap.org/)

**Credit Information:**
- AMA PRA Category 1 Credit(s)™: 28.00
- AAP Credit: 28.00
- MOC Part 4: 25.00
- NAPNAP Credit: 28.00
- Performance Improvement: 20.00
- Pharmacology Rx: 4.25

Pedialink

The AAP Online Learning Center

**Adolescent Immunizations: Strongly Recommending the HPV Vaccine**

**Cost: Free**
This course will discuss strategies for strongly recommending the HPV vaccine and will offer information to help pediatricians address their patients’ concerns about the vaccine.

**Available at:** [http://pedialink.org](http://pedialink.org)
(click the Continuing Education tab)

**Adolescent Immunizations: Office Strategies**

**Cost: Free**
This course provides strategies that pediatric offices can use to optimize their adolescent immunization efforts and improve their adolescent immunization rates.

**Available at:** [http://pedialink.org](http://pedialink.org)
(click the Continuing Education tab)

**Credit Information:**
- AMA PRA Category 1 Credit(s)™: 1.00
- AAP Credit: 1.00
- Contact Hour: 1.00
- NAPNAP Credit: 1.00
- Pharmacology Rx: 0.00

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