**Strong Recommendation PDSA Cycle 1**

**MODEL FOR IMPROVEMENT**

**Plan a Test of Change**

**Plan** → Describe the proposed test. What performance gap will it address? What idea will you test? What barriers will you need to overcome?

**Do** → Try your change with a few patients over a short period of time. Collect data that can be measured. Describe what happened when you ran the test.

**Study** → Describe how the measured results compare to the predicted outcome.

**Act** → How will you modify the plan in the next test cycle based on “learnings” from this cycle? Or, describe a new idea to test to help you achieve your aim.

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**AIM of this project**

Describe the aim of this project. What are you trying to accomplish? Every aim will require multiple small tests of change.

Within 1 year, we will increase the proportion of our patients who have had at least 2 doses of HPV vaccine by the time they turn 13 years of age. We can assess this by checking the state registry report function. Currently using that function we are at 35%; our goal is 55%.

**Plan**

Describe the proposed test. What performance gap will it address? What idea will you test? What barriers will you need to overcome?

**Performance Gap:**
Our QI team has been informally assessing what each provider does and we found that we’re all over the map, i.e., there is lots of variability in how the various providers are practicing. Each nurse has to check with each doctor for each adolescent to ask, “What vaccines should I get ready?” The nurses can pretty much count on Tdap being ordered because of the school requirement and most doctors are okay with giving Tdap and MCV4 at the same visit, but there’s lots of variability about giving three vaccines to an adolescent at one visit, whether the provider gives the vaccine to boys and girls at the same age (e.g., Dr. J gives HPV vaccine to boys at 12, but to girls at 14), etc. Because the nurses don’t know what to expect, things don’t run smoothly.

**Idea for Test:**
The providers will all go by the AAP recommendations for adolescent immunization, i.e., a strong recommendation for simultaneous Tdap, MCV4 and HPV at one visit.

**Barriers:**
Providers tend to want to act independently and to resist uniformity. Also, habit is strong. We will have to let the whole office (nurses, receptionists, providers) know what the plan is and get everyone on board, and there are a lot of us working here. Providers are concerned about parent resistance.
MEASURES

What is the desired goal that will close the performance gap? *Describe the specific measures that will determine a successful outcome for the test.*

Providers will recommend and order the first dose of HPV vaccine whenever they order Tdap and MCV4 and will be prepared to explain if parents have questions. This will lead to higher immunization rates for all patients by age 13, which we can get from the state registry.

Tasks and tools

<table>
<thead>
<tr>
<th>Who</th>
<th>Dr. C</th>
</tr>
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<tbody>
<tr>
<td>What</td>
<td>In-service talk</td>
</tr>
<tr>
<td>When</td>
<td>Spring quarter “all hands” meeting</td>
</tr>
<tr>
<td>Where</td>
<td>The meeting room</td>
</tr>
<tr>
<td>How</td>
<td>20-minute lecture, then discussion</td>
</tr>
<tr>
<td>Tools</td>
<td>CDC slides, video of patient who suffered from cervical cancer</td>
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</tbody>
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**Predicted outcome:** *Describe your plan for change. List the tasks and tools needed to perform the test. Predict what will happen when the test is carried out.*

The NPs all will be willing to give a strong recommendation. Of our 7 physicians, 2 are on-board, 2 seem willing, and there are 3 who are likely to resist.

**Do**

*Make a change! Try your change with a few patients over a short period of time. Collect data that can be measured. Describe what happened when you ran the test.*

We did the in-service and that went well. One doctor talked about her sister who had experience with cervical cancer and how hard it was to go through everything, so that was moving. That doctor and the NPs (as predicted) volunteered to get the ball rolling. We will try this for 1 week and see how it goes.
Study

Did the change lead to the desire improvement? Describe how the measured results compare to the predicted outcome.

Here are the key problems we identified:

• There’s no easy way to look at immunization rates by provider so we can’t get the thrill of seeing our personal success.
• There’s no easy way to know if a parent “refused” the vaccine because of how it was presented (e.g., as optional).
• There is a rumor that a couple of nurses are against giving HPV vaccine because they feel it allows the kids to “get away” with having sex before marriage without consequences; those nurses give it if it’s ordered, but don’t remind the provider if he/she forgot to order it.

Act

Describe how you will modify the plan in the next test cycle based on “learnings” from this cycle. Or, describe a new idea to test to help you achieve your aim.

1. MEASURE: We’re going to measure something easier than immunization rates. Each week, when Janice does inventory on Friday, she’ll post on the bulletin board how many Tdap doses we gave that week and how many HPV doses. (This week it was 22: 8.) Each week that ratio should be at least 1:1 or even 1:2 or 3.
2. TRAIN: Karla will do more in-depth training with the nurses about talking to parents so the nurses are utterly confident and enthusiastic about this.
3. MOTIVATE: Karla is going to pull aside the nurses who are vocally against HPV vaccination and have a heart-to-heart about the value of HPV vaccine (and point out that a person can get HPV from their marital spouse, from non-consensual sex, while still a “virgin”).
4. CONSIDER: We are going to think about tracking HPV vaccination refusals…we can’t take on too much in one week.
5. FOLLOW UP: We will have a discussion at the Monday a.m. meeting about co-administration, how it went, those who didn’t do it and what the concerns were.

END OF CYCLE 1
Strong Recommendation PDSA Cycle 2

Plan a Test of Change

**Plan**   
Describe the proposed test. What performance gap will it address? What idea will you test? What barriers will you need to overcome?

**Do**   
Try your change with a few patients over a short period of time. Collect data that can be measured. Describe what happened when you ran the test.

**Study**   
Describe how the measured results compare to the predicted outcome.

**Act**   
How will you modify the plan in the next test cycle based on “learnings” from this cycle? Or, describe a new idea to test to help you achieve your aim.

AIM of this project

*Describe the aim of this project. What are you trying to accomplish? Every aim will require multiple small tests of change.*

Within 1 year, we will increase the proportion of our patients who have had at least 2 doses of HPV vaccine by the time they turn 13 years of age. We can assess this checking the state registry report function. Currently using that function we are at 35%; our goal is 55%.

Plan

*Describe the proposed test. What performance gap will it address? What idea will you test? What barriers will you need to overcome?*

Performance Gap:

Last week’s Tdap: HPV was 22: 8 per inventory on Friday.

Idea for Test:

The NPs & 3 pediatricians will go by the AAP recommendations for adolescent immunization, i.e., a strong recommendation for simultaneous Tdap, MCV4 and HPV at one visit and we’ll also garner more nurse support.

Barriers:

Some well-meaning people want to change 10 things (e.g., send postcards to bring in more adolescents, turn on the EMR prompt, give vaccines to adolescents at acute visits), but there’s only so much our QI committee can do. Last week we saw that just going off immunization rates was not satisfying so we’re using weekly inventory, which is not perfect. We may need to track “refusals,” but we’re not sure that should start this early. There’s been some nurse resistance...small but vocal.
MEASURES
What is the desired goal that will close the performance gap?

All NPs and 1 (of the 7) pediatricians will recommend and order the first dose of HPV vaccine whenever they order Tdap and will be prepared to explain if parents have questions (same as Cycle 1).

Tasks and tools

| 1. Measure: | Janice will inventory on Friday, she’ll post on the bulletin board how many Tdaps we gave this week and how many HPVs. (Last week it was 22: 8.) This week the ratio should be at closer to 1:1. |
| 2. Train: | Karla will do more in-depth training with the nurses using materials from the AAP toolkit. |
| 3. Motivate: | Karla will talk to anti-HPV vaccine nursing staff (at least the 2 most vocal). |

Predicted outcome: Describe your plan for change. List the tasks and tools needed to perform the test. Predict what will happen when the test is carried out.

The inventory will show we gave a ratio of 25 Tdaps: at least 16 HPVs this week (Marcy checked scheduling and we have 27 adolescents signed up for well care this week).

Do

Make a change! Try your change with a few patients over a short period of time. Collect data that can be measured. Describe what happened when you ran the test.

The NPs and 3 doctors were enthusiastic—this is not heavy lifting for them. One of the anti-HPV vaccine nurses was on vacation this week so Karla couldn’t talk to her. We ran out of VFC stock HPV vaccine on Friday!

Study

Did the change lead to the desire improvement? Describe how the measured results compare to the predicted outcome.

The inventory showed we gave a ratio of 26 Tdaps:17 HPVs this week. Better!

Here are the key problems we identified:

• We ran out of VFC stock for HPV vaccine!
• We’re not addressing all the issues (e.g., getting kids in for 2nd dose).
• Again, there’s no easy way to know if a parent “refused” the vaccine because of how it was presented (e.g., as optional).
• One of the anti-HPV vaccine nurses was on vacation this week so Karla couldn’t talk to her.
Act

Describe how you will modify the plan in the next test cycle based on “learnings” from this cycle. Or, describe a new idea to test to help you achieve your aim.

• STOCK: Janice has been on the phone trying to get more VFC HPV vaccine.
• MOTIVATE: Karla will do more in-depth training with the nurse that was on vacation this week.
• PARKING LOT: We are going to think about tracking HPV vaccination refusals...we can’t take on too much in one week, especially because of the stock issue. We started a “parking lot” of ideas for what we want to do after the stock issue is addressed.
• FOLLOW UP: Again, we will have a discussion at the Monday a.m. meeting about co-administration, how it went, those who didn’t do it and what the concerns were.

END OF CYCLE 2