Contraindications to Vaccination: Cycle 1

Model for Improvement

Team Name: ABC Pediatrics

Plan a Test of Change

Cycle #: Start Date: End Date:

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

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 results from the data collected 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.

Over the next 3 months, among our patients seen at ages 2–24 months, we will:

- Increase the incidence of screening for contraindications to 100%.
- Eliminate any administration of vaccines if a true contraindication is present (0% of vaccine are given if true contraindication is present).
- Decrease the number of missed opportunities to vaccinate due to following incorrect contraindications and/or using precautions too liberally (90% of vaccines are given when due).

Plan

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

Performance Gap

Our providers are very pro-vaccination, but too often misunderstand what are true contraindications to vaccines. Sometimes vaccines are not given if a child presents with mild or moderate illness. We expect that they can be vaccinated at the next well visit, but some children may not return and even those who do are left vulnerable to disease in the interim.

Idea for Test

Our policy will be that all children due for vaccinations should be screened for contraindications and that only true contraindications/precautions should prevent immunizations.

For all children, the MAs will do the following (consider only doing this for children 2 and under, if it is too difficult to do for all children):

1. Add a vaccine contraindication screening checklist or tool to paper charts when charts are pulled for the day’s visits or scan to the EMR. The Immunization Action Coalition has screening that can be found at www.immunize.org (http://www.immunize.org/catg.d/p4060.pdf). Your practice may also choose to develop your own screening to best fit your needs.
2. As soon as possible when the patient arrives, MAs check the immunization schedule and child’s records to see if any vaccines are due.
3. Have an MA go over the questions with the parents and review answers to catch any potential contraindications.

4. If a true contraindication is present, do not vaccinate. Instruct the parent to schedule another appointment for the vaccine (or a well-child check if one is due). If a precaution is present, inform the physician for a decision as to proceeding with vaccination.

5. If no true contraindication or precaution to vaccines is present, the provider will administer the vaccine(s) due that day and document per practice protocols.

6. If parents refuse, this will be tracked on the Vaccine Refusal Board.

**Barriers:**
- Some parents may not want to vaccinate their child who has a mild illness, even though it is not a true contraindication in most cases.
- If MAs are not use to filling out this checklist and providers are not used to reviewing them, it could feel like an onerous step.

**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.*

**How we will measure our rates:**

1. Aaron (the project manager) will review all charts of patients 2 years and younger who come into the office for any reason over a 2-week period (up to 20 patients who arrive for any reason).

2. Ashley (the nurse) will check the charts for each of the 20 patients and record the following:
   - What vaccines (if any) were due
   - Whether a contraindication screening was administered
   - What contraindications/precautions were noted
   - What vaccines (if any) were administered

The table shows our current situation and our goal. Twenty charts were reviewed.

<table>
<thead>
<tr>
<th></th>
<th>Baseline Number (percentage)</th>
<th>Goal Number (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation of a screening for contraindications</td>
<td>10/20 (50%)</td>
<td>20/20 (100%)</td>
</tr>
<tr>
<td>Vaccine given when a true contraindication was found (not precaution)</td>
<td>1/20 (5%)</td>
<td>0/20 (0%)</td>
</tr>
<tr>
<td>Vaccine given when no true contraindication is present</td>
<td>15/20 (75%)</td>
<td>18/20 (90%)</td>
</tr>
</tbody>
</table>
## Tasks and Tools

<table>
<thead>
<tr>
<th>People</th>
<th>Tasks</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr B.</td>
<td>Designate when we start</td>
<td></td>
</tr>
<tr>
<td>Aaron (project manager)</td>
<td>Download contraindication screening tool from immunize.org</td>
<td><a href="http://www.immunize.org">www.immunize.org</a> or <a href="http://www.immunize.org/catg.d/p4060.pdf">http://www.immunize.org/catg.d/p4060.pdf</a> or develop for your practice</td>
</tr>
<tr>
<td>Aaron (project manager)</td>
<td>Download lists of contraindications, precaution and conditions incorrectly perceived as contraindications to vaccination (i.e., vaccines may be given under these conditions)</td>
<td><a href="http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html">http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html</a> (Table 4-1 and Table 4-2)</td>
</tr>
<tr>
<td>Aaron (project manager)</td>
<td>Place screening questionnaires in all charts. Post contraindication/precaution and conditions incorrectly perceived as contraindications to vaccination</td>
<td></td>
</tr>
<tr>
<td>Dr B.</td>
<td>Meet with the participating practitioners to discuss how to use the screening questionnaires and follow only true contraindications</td>
<td><a href="http://www.immunize.org">www.immunize.org</a>, <a href="http://www.immunize.org/catg.d/p4060.pdf">http://www.immunize.org/catg.d/p4060.pdf</a> or develop for your practice <a href="http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html">http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html</a> (Table 4-1 and Table 4-2)</td>
</tr>
<tr>
<td>Aaron (project manager)</td>
<td>Meet with all the RN and MAs and talk about this at weekly staff meeting and go over the need to screen for needed vaccines and flag the screening questionnaires</td>
<td></td>
</tr>
<tr>
<td>Ashley, RN</td>
<td>Review charts to determine which patients need vaccines</td>
<td>By checking the appointment list</td>
</tr>
<tr>
<td>Dr B.</td>
<td>Review charts to determine if all patients due for vaccines received them. If so, were any contraindications present? If not, were only true contraindications followed?</td>
<td>By reviewing charts and comparing notes to contraindication tables</td>
</tr>
<tr>
<td>Dr B. Aaron</td>
<td>Measurement as described above</td>
<td>EMR or paper charts</td>
</tr>
<tr>
<td>Ashley, RN</td>
<td>Post a tally sheet so we can see how many parents refused the MA, and also refused the physician.</td>
<td>Print out the sheet and hang in med room</td>
</tr>
</tbody>
</table>
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?

- By the month’s end, 100% of the patients ages 2-24 months will have been properly screened for contraindications and will receive all vaccines due, for which no true contraindications were present.
- Providers generally catch contraindications, but some providers may hesitate to provide vaccines when conditions are present that they have considered a contraindication, but are not necessarily. These may include:
  - Diarrhea
  - Minor upper respiratory tract illnesses (including otitis media) with or without fever
  - Mild to moderate local reactions to a previous dose of vaccine
  - Exposure to an infectious disease
  - Current antimicrobial therapy
  - Being in the convalescent phase of an acute illness
  - History of nonanaphylactic allergy to egg

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.

Only Becky and Cara (MAs) used the new process this week while working with Dr B and Dr C and it went pretty well. Angie (RN) worked really hard to make herself available ASAP (Angie is an Immunization Champion). One doctor was very hesitant to vaccinate a baby with an ear infection, but eventually decided it was in the best interested of her patient.

Study

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

Many of the children who came in for well-visits did not have any contraindications, so it’s hard to see much change in our numbers. We were able to measure how many children were screened, but had a small number of cases where any conditions existed or conditions present may have been perceived as a contraindication. It may take a few months to see improvements. It is hard to wait to see the progress.

- Should we change the measure?
- Should we only measure children who come in for a sick visit, as there would likely be more false contraindications?
- Should we just be patient?

Last week, 2 parents didn’t want their children getting a vaccine because of their perceived contraindication. One agreed after education was provided.

<table>
<thead>
<tr>
<th></th>
<th>Baseline Number (percentage)</th>
<th>Week 1 Number (percentage)</th>
<th>Goal Number (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation of a screening for contraindications</td>
<td>10/20 (50%)</td>
<td>14/20 (70%)</td>
<td>20/20 (100%)</td>
</tr>
<tr>
<td>Vaccine given when a true contraindication was found</td>
<td>1/20 (5%)</td>
<td>0/20 (0%)</td>
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<td>Vaccine given when no true contraindication is present</td>
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</table>
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.

- **Measure:** We will continue with the same measures for at least another cycle.
- **Train:** There was a little confusion about who should administer the contraindications screening, and how to document that it had been done in the EMR. The staff held a meeting and restated that MAs should go over the screening with the parents and alert physicians to any concerns.
- **Motivate:** Dr C was reluctant to vaccinate her patients who weren’t in for well-check visits, but reviewing the literature and the table of conditions incorrectly perceived as contraindications to vaccination, she was able to get on board and recommend vaccinations at sick and return visits. We decided that ALL the staff need to see the info on office rates so everyone will see and remember WHY we are doing this. Aaron’s going to post the chart (sample shown below) every Monday morning. It’s hard to be patient to see the improvement.
- **Follow-up:** We will have a team huddle on Monday mornings after the chart is posted to discuss specific concerns or goals for the week.

Charts of 20 most recently seen patients with vaccines due reviewed

End of Cycle 1