Improving HPV Vaccination Rates in a Large Pediatric Practice: Implementing Effective Quality Improvement

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Disclosures

• Speaker and consultant: Merck
• Speaker and consultant: Sanofi Pasteur
Learning Objectives

After this session the participants will:

• Define a method to track and report their HPV vaccination rates.
• Understand Implementation Science and its application to improvement in vaccination rates.
• Select specific, relevant strategies to apply to their organization in a deliberate, planned intervention.

The National Problem: Inadequate HPV Vaccination

HPV vaccine coverage from 2011-2015 has not increased adequately.

<table>
<thead>
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<th>Year</th>
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<td>20.8</td>
<td>12.7</td>
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<td>34.6</td>
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<td>41.7</td>
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<td>52.2</td>
<td>41.9</td>
<td>49.8</td>
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MMWR: NIS teen data 2011-2015
The National Problem: Inadequate HPV Vaccination

- HPV vaccination coverage for ≥1 dose could easily have reached 92.6%.
- Every year that increases in coverage are delayed, another 4,400 women will go on to develop cervical cancer.

MMWR July 26, 2013 / 62(29);591-595
MMWR July 31, 2015 / 64(29);784-792.
Description of the Practice

• **Orlando Health Physician Associates:**
  - Large multi-specialty healthcare group
  - 22 pediatricians, 2 pediatric ARNPs, 80 pediatric staff, 11 offices.
  - Over 57,000 active pediatric patients
  - Over 23,000 patients aged >=11 years.
  - NCQA level three Patient Centered Medical Home (PCMH).
Our Problem (2013):
Low Rates, Large Variation

This NIS data is 2012 data, reported in 2013

Critical Components

- Know your rates.
- Set specific goals.
- Identify areas of weakness and/or opportunity.
- Implement effective and sustainable process improvement.
Science of Improvement

Knowledge for Improvement

Improvement occurs when we learn how to combine subject matter knowledge and the science of improvement in creative ways to develop effective ideas for change.

Improving Medical Care Requires System Redesign

"Change is possible if we have the desire and commitment to make it happen."
- Mohandas Gandhi

"Every system is perfectly designed to achieve the results that it gets."
- Paul Batalden

"All improvement will require change, but not all change will result in improvement!"
- T. Nolan

The definition of Insanity is doing the same thing over and over and expecting to get a different result.
Readiness for Organizational Change

\[ R = MC^2 \]

Readiness = Motivation x General Capacity x Innovation-Specific Capacity

Readiness is the extent to which an organization is both Willing and Able to implement change

Implementation and Improvement Science

- QI Research: hypothesis and control group
- QI: PDSA (measure small, incremental change).
- Implementation Science: Strategic Parallel Processing (a larger scale alternative).
- Keep it simple with an eye to workload.
- Scalability
- Sustainability

Plan, Implement, Evaluate: The 10 Steps of Getting to Outcomes*

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<tr>
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<th>Plan</th>
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<tbody>
<tr>
<td>1</td>
<td>Assess Needs/Resources</td>
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<tr>
<td>2</td>
<td>Identify Goals</td>
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<tr>
<td>3</td>
<td>Identify Best Practices</td>
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<tr>
<td>4</td>
<td>Fit</td>
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<td>5</td>
<td>Capacities</td>
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<td>6</td>
<td>Implement</td>
</tr>
<tr>
<td>7</td>
<td>Process Evaluation</td>
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<tr>
<td>8</td>
<td>Outcomes Evaluation</td>
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<td>9</td>
<td>CQI</td>
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<tr>
<td>10</td>
<td>Sustainability</td>
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Applying Best Practices

Critical Components of a Vaccination Quality Improvement Project

• Set specific goals. (AIM)
• Know your rates. (MEASURE)
• Identify areas of weakness and/or opportunity.
• Implement effective and sustainable process improvement.
The Project Aim

What are we trying to accomplish?

The project AIM is:
Not just a vague desire to do better
A commitment to achieve measured improvement
in a specific system
with a definite timeline
with numeric goals

What, How Much, By When???

Your AIM Must be Specific

Operational Definitions

“Would you tell me, please, which way I ought to go from here,” asked Alice?

“That depends a good deal on where you want to get to,” said the Cat.

“I don’t much care where” — said Alice.

“Then it doesn’t matter which way you go,” said the Cat.

The Model for Improvement

“In God we trust. All others bring data.”

W.E. Deming

“All improvement will require change, but not all change will result in improvement!”


The PDSA Cycle for Learning and Improvement

On the basis of what is learned from any PDSA cycle, a change might be:

- Implemented (adopt)
- Dropped (abandon)
- Modified (adapt)
- Increased in scope (expand)
- Tested under other conditions
The Approach: Vaccination Rates Revealed

- Departmental HPV vaccination rates reviewed September 2013
- Individual physician rates shared privately at first (September 2013).
- Individual physician rates subsequently shared with the department.
- Rates published monthly at first, now quarterly.

The Approach: Goal-Setting

How much? By when?

- 2013: Show Improvement
- 2015: Meet highest NIS Teen national immunization rates*
- 2017: Meet Healthy People 2020 goals (80%)*

* for all patients 11-18
The Approach: Interventions

- Data verification and “clean-up”
- Physician education
- Staff education
- Physician incentives
- Pre visit planning
- Electronic follow up orders for doses 2 and 3
- Schedule doses 2 and 3 at the time of first dose
- Reminder Calls
- Manufacturer Tools
- Clinical Summaries
- Other

Physician Education Program

Key Points:

- Multiple competing priorities.
- Physician unawareness.
- Physician discomfort.
- The need for “scripting.”

- Physician unawareness of routine 11-12 vaccination recommendation and its implications for clinical practice.
Health Care Provider Recommendations and Same-Day HPV Vaccination Rates

According to data from a market research study conducted by Merck in 2013 using online surveys of mothers of previously vaccinated or unvaccinated 11- to 18-year-old daughters and/or sons and who received a recommendation about same-day HPV vaccination (n=355):

- ~80% (n=285) of mothers receiving a same-day recommendation had their son or daughter vaccinated that day.

\(^{a}\)GARDASIL®9 (Human Papillomavirus 9-valent Vaccine, Recombinant) is indicated in boys 9 through 15 years of age only.

\(^{b}\)HPV=human papillomavirus.

\(^{a}\)Online surveys were conducted by Merck from February 2013 to May 2013, with mothers of previously unvaccinated and vaccinated sons and/or daughters 11 to 18 years of age who did not have negative perceptions of vaccines (N=1,702). Of the mothers surveyed, 790 had a discussion about HPV vaccination with their child’s health care professional. Mothers were asked to choose the response that best described the time frame in which the HCP said their son/daughter should get HPV vaccine. Mothers were instructed to choose one of the following options: that same day, within the next year, more than a year, or no time frame mentioned. 355 reported that the doctor gave a same-day recommendation. Of the 355 mothers who received a same-day vaccination recommendation, 285, or approximately 80%, had their son or daughter vaccinated that same day.

1. Data available on request from Merck, Professional Services-DAP, WP1-27, PO Box 4, West Point, PA 19486-0004. Please specify information package VACC-1095982-0001.
Staff Education Program

Key Points:

- Multiple competing priorities.
- Staff unawareness.
- General discomfort.

- UNTAPPED RESOURCE AND ENERGY IN STAFF: IMPLICATIONS OF EMPOWERMENT

Physician Incentives

- Competition
- Wine
- Quality Bonus Structure
Daily Pre-visit Planning

Electronic Order Sets
Subsequent Doses Scheduled

- Second and third doses were scheduled the day dose one was administered.
- These appointments:
  - Print on patients’ clinical summaries
  - Generate reminder phone calls
  - Can be tracked if “no show” or cancelled
  - Can be reminded using manufacturer tools
- All practices committed to keeping schedules open at least six months ahead

Electronic Order Sets
Clinical Summaries

- Patients receive a printed clinical summary
  - Diagnoses
  - Allergies
  - Meds
  - Vitals
  - Vaccines given
  - Orders
  - Follow-up appointments

Appointment Reminder Calls
Appointment Reminder Tools

Lessons Learned Phase One

- Highest rated interventions:
  - Physician and staff education programs
  - Scheduling subsequent doses real time
  - Manufacturer-supplied tools, especially magnets and cling posters

- Reveals:
  - Transparency, Competition, Reward: THE WHY?
  - Staff involvement: a critical resource
Phase Two

- Sustainability meetings
  - Patient/Parent Surveys
  - Focused physician education

Sustainability Meetings

- Annual lunch meetings at each office.
- Review rates and progress toward goals.
- Review vaccine safety and efficacy with an eye toward personalizing disease prevention efforts.
- Practice responding to patient and parent questions and concerns.
- Re-supply of resources.
Phase Two cont’d.

- Patient/Parent and Office Surveys:
  - Identify best practices.
  - Resident QI project.

- Focused physician education:
  - Improved scripting.
  - Spread of best practices.
Scripting

- Sandwich recommendations (Men, HPV, Tdap)
- “Same day same way:” no different than any other vaccine.
- Avoid tendency to offer TMI.
- Stress cancer-prevention.
- Be prepared with concise, accurate responses to questions: “CLEAR RECOMMENDATION”
  - CDC talking points
  - “Seat belt” analogy (prior to any risk)
  - Avoid profiling
  - Personalize your message
Tdap and MCV4 Rates

<table>
<thead>
<tr>
<th>Year*</th>
<th>Tdap %</th>
<th>Men %</th>
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<tbody>
<tr>
<td>2013</td>
<td>74</td>
<td>73</td>
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<tr>
<td>2014</td>
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</tr>
<tr>
<td>2015</td>
<td>86</td>
<td>85</td>
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*Measured for August of each year

Take-Away: TO DO LIST

- KNOW YOUR RATES!
- Set specific goals
- Define a specific process
  - Define a CHAMPION
  - Physician and staff education
  - Incentives
  - Process Improvement
Are YOU Ready?

THANK YOU