

■ HPV Vaccination Quality Improvement: Physician Perspective

Discussion of efforts to raise HPV vaccine coverage using quality improvement from a physician's perspective

Alix Casler, M.D., F.A.A.P.

Chief of Pediatrics
Medical Director of Outpatient Pediatrics
Orlando Health Physician Associates

Director, Quality Improvement Curriculum
University of Florida Pediatrics Residency at
Orlando Health

Assistant Professor of Pediatrics
UCF and FSU Colleges of Medicine



Disclosures

Speaker and consultant: Merck

Educational Goals

Participants in this conversation will:

- Understand the relevant principles behind an effective QI project in medical practice.
- Recognize relevant barriers to QI in primary care pediatrics.
- Become familiar with methods applied to a successful QI project to increase HPV vaccination rates in a large, multi-office pediatric group in Central Florida.
- Develop strategies to apply within their own primary care pediatric practices in their QI efforts to increase HPV vaccination rates.

What is Quality?

Transition in Health Care

HEDIS

MEANINGFUL USE

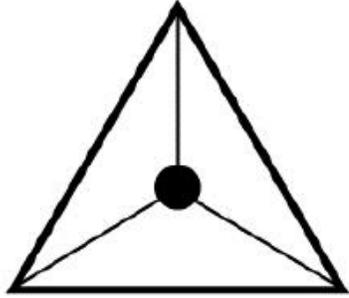
MACRA

ACO METRICS

CORE MEASURES

What is Quality?

The TRIPLE AIM



IHI *Triple Aim*

Definition

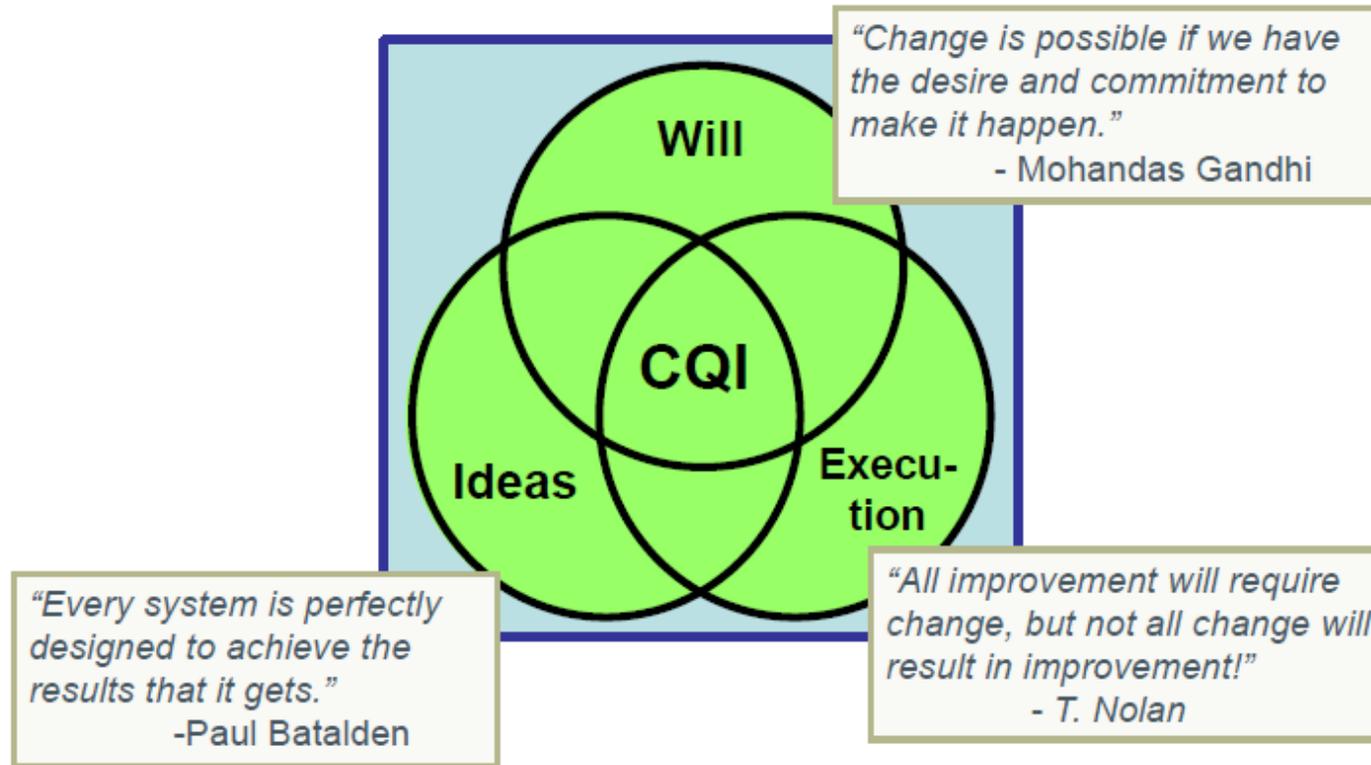
- System designs that simultaneously improve three dimensions:
 - Improving the health of the populations;
 - Improving the patient experience of care (including quality and satisfaction); and
 - Reducing the per capita cost of health care.

...The QUADRUPLE AIM

The Missing Aim



Improving Medical Care Requires System Redesign



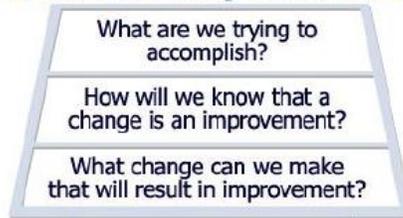
The definition of Insanity is doing the same thing over and over and expecting to get a different result

The Science of Improvement

A Model for Learning and Change ¹

When you combine the 3 questions with the...

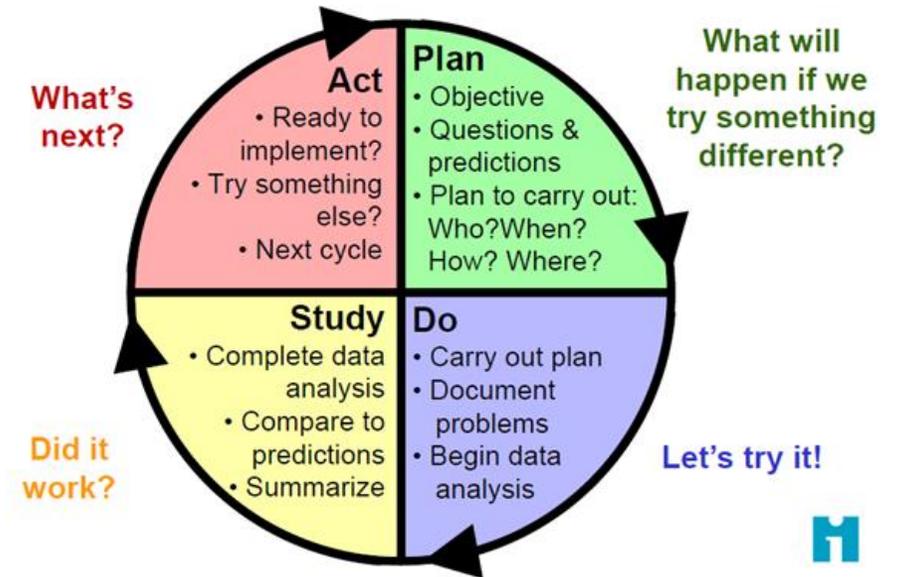
Model for Improvement



PDSA cycle, you get...



...the Model for Improvement.



Langley, et al, *The Improvement Guide*, 2009



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



Question 1: What are We Trying to Accomplish?

Model for Improvement



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*

Question 2: How Do We Know that a Change is an Improvement?

Model for Improvement



“When you can measure what you are speaking about and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind.”

-Lord Kelvin, May 3, 1883

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

W. E. Deming

Critical Components of a Vaccination Improvement Project

- Set specific goals. (AIM)
- Know your rates. (MEASURE)
- Identify areas of weakness and/or opportunity and what to do about them. (INTERVENTION)
- Implement effective and sustainable process improvement. (TEST)
 - *Keep it simple with an eye to workload.*
 - *Scalability*
 - *Sustainability*

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).

* At outset of the project, second half 2013



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 **current metrics c/w HEDIS



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 and Staff Education

Key Points:

- Multiple competing priorities.
- Unawareness of HPV disease impact and of ACIP recommendation for routine 11-12 year vaccination.
- Discomfort.
- The need for “scripting.”
- **UNTAPPED RESOURCE AND ENERGY IN STAFF: IMPLICATIONS OF EMPOWERMENT**

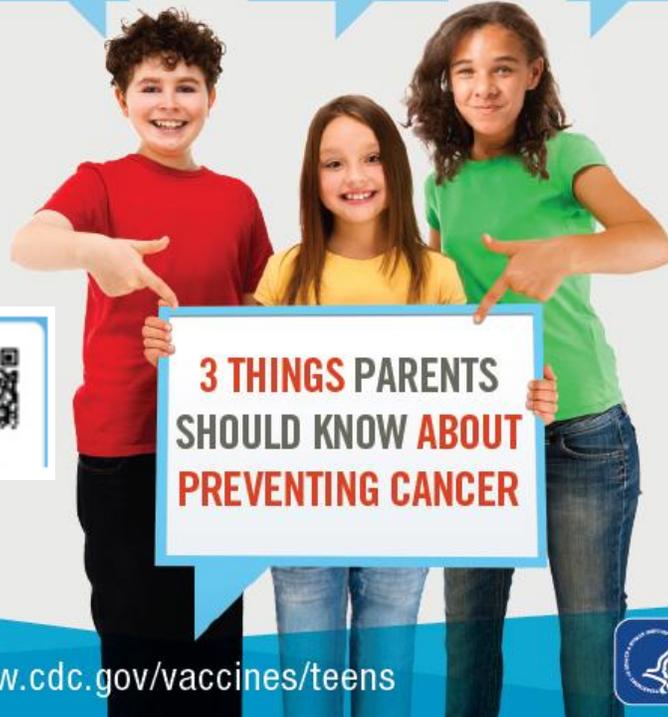
Tools: Distributed at Offices Placed on Pediatrics Desktop



HPV vaccination is the best way to **PREVENT** many types of **CANCER**.

HPV vaccination is **RECOMMENDED** at ages 11 or 12.

HPV vaccination is **REDUCING** HPV DISEASE.



www.cdc.gov/vaccines/teens



More ways to remember:
Schedule change, and time flies. But when you sign up for the 2 to Complete Reminder Program, we'll help you stay on track. We'll text, e-mail or mail you reminders to make the 1st and 2nd appointments.

To sign up for dose reminders:

- Use the [text message reminder program](#)
- Text 2toComplete to 43888 at the time of the 1st dose
- Scan QR code with your smartphone

***TO COMPLETE* TEXT MESSAGE REMINDER PROGRAM TERMS AND CONDITIONS**



Tips and Time-savers for Talking with Parents about HPV Vaccine

Recommend the HPV vaccine series the same way you recommend the other adolescent vaccines. For example, you can say "Your child needs those shots today," and name all of the vaccines recommended for the child's age.

Parents may be interested in vaccinating, yet still have questions. Taking the time to listen to parents' questions helps you save time and give an effective response. CDC research shows these straightforward messages work with parents when discussing HPV vaccine—and are easy for you or your staff to deliver.



- CDC RESEARCH SHOWS:** The "HPV vaccine is cancer prevention" message resonates strongly with parents. In addition, studies show that a strong recommendation from you is the single best predictor of vaccination.
- TRY SAYING:** HPV vaccine is very important because it prevents cancer. I want your child to be protected from cancer. That's why I'm recommending that your daughter/son receive the first dose of HPV vaccine today.
- CDC RESEARCH SHOWS:** Disease prevalence is not understood, and parents are unclear about what the vaccine actually protects against.
- TRY SAYING:** HPV can cause cancers of the cervix, vagina, and vulva in women, cancer of the penis in men, and cancers of the anus and the mouth or throat in both women and men. There are about 26,000 of these cancers each year—and most could be prevented with HPV vaccine. There are also many more precancerous conditions requiring treatment that can have lasting effects.
- CDC RESEARCH SHOWS:** Parents want a concrete reason to understand the recommendation that 11–12 year olds receive HPV vaccine.
- TRY SAYING:** We're vaccinating today so your child will have the best protection possible to begin before the start of any kind of sexual activity. We vaccinate people well before they are exposed to an infection, as is the case with measles and the other recommended childhood vaccines. Similarly, we want to vaccinate children well before they get exposed to HPV.
- CDC RESEARCH SHOWS:** Parents may be concerned that vaccinating may be perceived by the child as permission to have sex.
- TRY SAYING:** Research has shown that getting the HPV vaccine does not make kids more likely to be sexually active or start having sex at a younger age.
- CDC RESEARCH SHOWS:** Parents might believe their child won't be exposed to HPV because they aren't sexually active or may not be for a long time.
- TRY SAYING:** HPV is so common that almost everyone will be infected at some point. It is estimated that 79 million Americans are currently infected with 14 million new HPV infections each year. Most people infected will never know. So even if your son/daughter waits until marriage to have sex, or only has one partner in the future, he/she could still be exposed if their partner has been exposed.
- CDC RESEARCH SHOWS:** Emphasizing your personal belief in the importance of HPV vaccine helps parents feel secure in their decision.
- TRY SAYING:** I strongly believe in the importance of this cancer-preventing vaccine, and I have given HPV vaccine to my son/daughter/grandchild/niece/nephew/friend's children. Experts (like the American Academy of Pediatrics, cancer doctors, and the CDC) also agree that this vaccine is very important for your child.
- CDC RESEARCH SHOWS:** Understanding that the side effects are minimal and emphasizing the extensive research that vaccines must undergo can help parents feel reassured.
- TRY SAYING:** HPV vaccine has been carefully studied by medical and scientific experts. HPV vaccine has been shown to be very effective and very safe. Like other shots, most side effects are mild, primarily pain or redness in the arm. It is also given very quickly, and HPV vaccine has not been associated with any long-term side effects. Since 2006, about 57 million doses of HPV vaccine have been distributed in the U.S., and in the years of HPV vaccine safety studies and monitoring, no serious safety concerns have been identified.
- CDC RESEARCH SHOWS:** Parents want to know that HPV vaccine is effective.
- TRY SAYING:** In clinical trials of boys and girls, the vaccine was shown to be extremely effective. In addition, studies in the U.S. and other countries that have introduced HPV vaccine have shown a significant reduction in infections caused by the HPV types targeted by the vaccine.
- CDC RESEARCH SHOWS:** Many parents do not know that the full vaccine series requires 3 shots. Your reminder will help them to complete the series.
- TRY SAYING:** I want to make sure that your son/daughter receives all 3 shots of HPV vaccine to give them the best possible protection from cancer caused by HPV. Please make sure to make appointments on the way out, and put those appointments on your calendar before you leave the office today!



www.cdc.gov/vaccines/imz/teens | PreteenVaccines@cdc.gov



Daily Pre-visit Planning

09:10a	PEDC	324	XXXXXXXXXXXX	HAV w/flu not no	XXXXXXXXXXXX
08/10/2015	ILNP	02/08/2014	27949575	18 MONTH CHECK**	MCHAT well handout
09:40a	PEDC	324	XXXXXXXXXXXX	all shots UTD	XXXXXXXXXXXX
08/10/2015	ILNP	04/08/2000	27949578	15 YR WCC**	XXXXXXXXXXXX
*BMI PHQ smoking wellness nutr/activ asthma control XXXXXXXXXXXX					
10:00a	PEDC	324	XXXXXXXXXXXX	all shots UTD	XXXXXXXXXXXX
08/10/2015	ILNP	12/08/2000	27949580	14 YR WCC**	XXXXXXXXXXXX
ADHD F-up * PHQ smoking wellness nutr/activ					
10:40a	PEDC	324	XXXXXXXXXXXX	men(1) HPV(1)	XXXXXXXXXXXX
08/10/2015	ILNP	07/07/2003	XXXXXXXXXXXX	12 YEAR CHECK**	HAV(1) var(2) Tdap(1)
PHQ smoking wellness nutr/activ NEW PATIENT TO DR. CASLER BUT NOT PHYSICIAN ASSOCIATES					
01:10p	PEDC	324	XXXXXXXXXXXX	men(2)	XXXXXXXXXXXX
08/10/2015	ILNP	10/01/1997	27949599	17 YEAR CHECK**	XXXXXXXXXXXX
defer PHQ smoking wellness					

Electronic Order Sets*

History Builder Orders

Problem - based Rx Med Admin Immun Lab Rad Procs Findings FU/Ref Instruct Supplies

Well child visit

Items Selected Select Default Items

Send To Retail Pharmacy

To Be Done: To Be Performed Priority

Rx | Med Admin | Immun | Lab | Rad | Procs | Findings | FU/Ref | Instruct | Supplies

Name
Vitamin D 400 UNIT/ML Oral Liquid
Medication Administration
Acetaminophen 160 MG/5ML Oral Suspension
Immunization Administration
DTaP
DTaP-IPV/Hib (Pentacel)
Fluarix Quadrivalent 0.5 ML Intramuscular Suspension
Hep B (Recombivax)
Hepatitis A
HPV (Gardasil)
IPV
Meningo (Menactra)
MMR

INJECT 0.5 ML Intramuscular

INJECT 0.5 ML Intramuscular

deferred per parent

N.B. We, sadly, do NOT have clinical decision support in our EMR

Well child visit

Items Selected Select Default Items

Send To Retail Pharmacy

To Be Done: To Be Performed

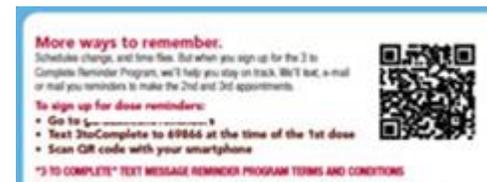
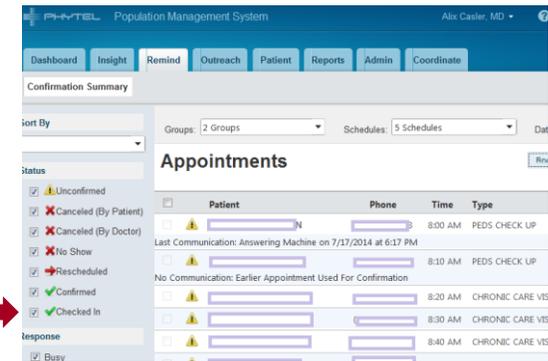
Rx | Med Admin | Immun | Lab | Rad | Procs | Findings | FU/Ref

Name
Findings
Clinical Quality Assessment Adolescent
Visual Acuity
Follow-ups and Referrals
Follow up in 3 months for Physical
Pediatric Dentist Referral
Pediatric Follow-up for flu shot in the fall
Pediatric Follow-up in 4 months
Pediatric Important Follow-up for HPV vaccine #2 in 2 months
Pediatric Important Follow-up for HPV vaccine #3 in 6 months
Instructions
Eliminate sugar drinks from your child's diet

*Now updated with Gardasil 9 and two dose series follow-up orders.

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



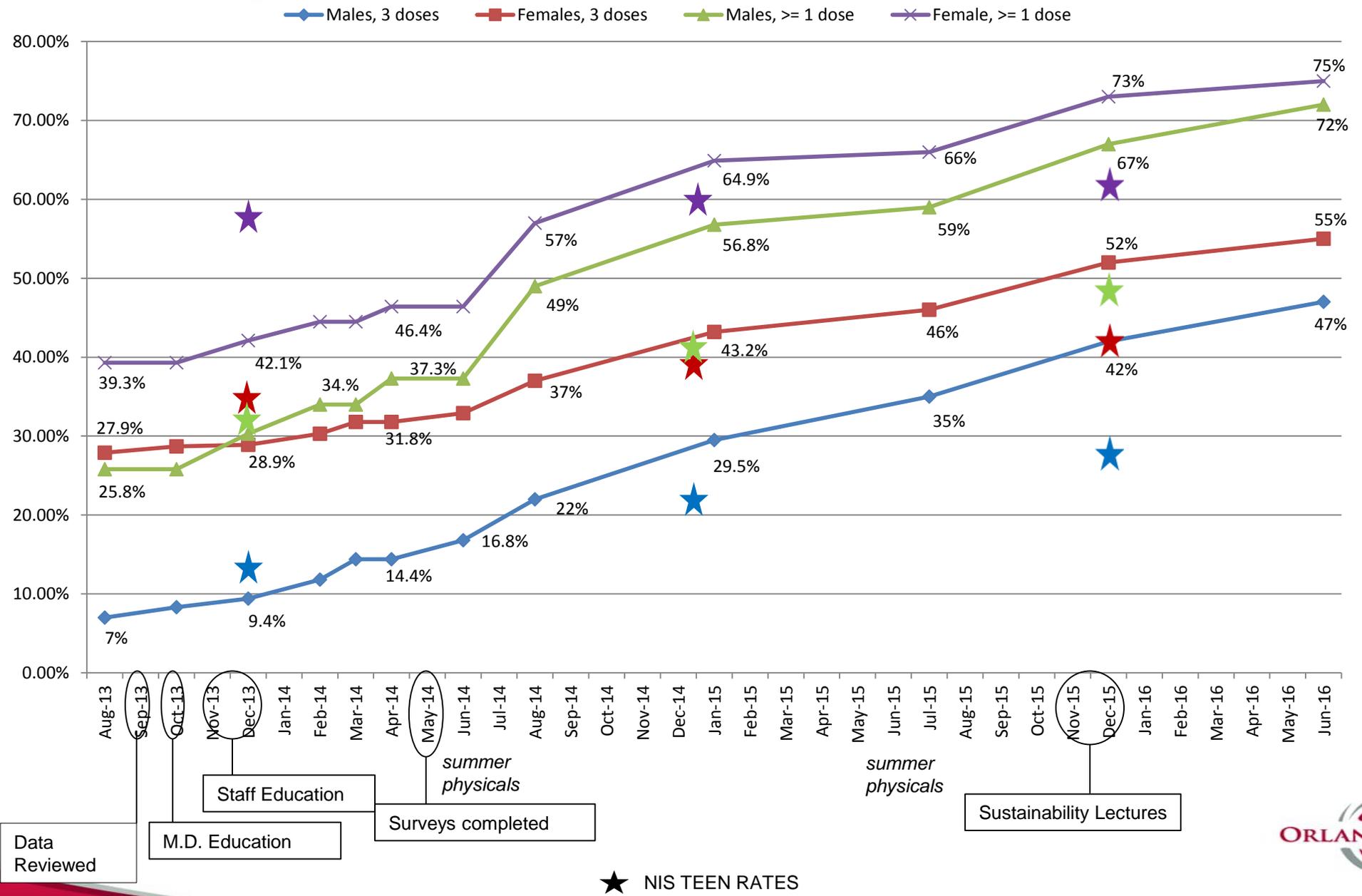
Physician Incentives



- Competition
- Wine
- Quality Bonus Structure



Orlando Health Physician Associates HPV Rates Patients Aged 13-17, 2013-2016



Phase Two

- 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.

- Focused quality improvement efforts
 - Resident QI Projects
 - Targeted at offices with lower rates
 - Application of evidence-based best practices

Lessons Learned

- Practices are very busy:
 - Multiple competing priorities require that HPV vaccination earn its place in the ranking
 - Need for scalable, sustainable interventions that fit or even simplify current work flows
- 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

Thank You