Increasing Adolescent Vaccination Uptake

with an emphasis on HPV Vaccine

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Objectives

After viewing this presentation, audience members should expect to:

1. Be able to describe the adolescent immunization platform.
2. Feel comfortable discussing HPV vaccine effectiveness and safety with families.
3. Have one or more evidence-based strategies for increasing vaccination rates that can be incorporated into daily practice
4. Have new ideas about the ‘vaccine conversation’

Outline

- Adolescent Immunization Recommendations and Current Rates
- HPV Infection and Disease
- HPV Vaccine
- Evidence-based strategies for increasing immunization rates
- Communicating with parents and patients

ACIP Adolescent Immunization Schedule ("Adolescent Platform")

Vaccines	11-12 yrs	13-15 yrs	16-18 yrs
HPV	3-dose series		
Tdap	1 dose		
MCV4	1st dose		booster
Influenza	Annual immunization		

Range of recommended ages for all children

Range of recommended ages for catch-up immunization

Tdap: tetanus, diphtheria, and acellular pertussis vaccine
MCV4: meningococcal conjugate vaccine
ACIP: Advisory Committee on Immunization Practices

NIS-Teen Coverage Results

Vaccine	2008	2009	2010	2011	2012	2013	2014
Tdap after 10 years of age	40.8%	55.6%	68.7%	78.2%	84.6%	86.0%	87.6%
≥3 doses HepB	87.9%	89.9%	91.6%	92.3%	92.8%	93.2%	91.4%
≥2 doses MMR	89.3%	89.1%	90.5%	91.1%	91.4%	91.8%	90.7%
≥2 dose of Varicella (no disease history)	34.1%	48.6%	58.1%	68.3%	74.9%	78.5%	81.0%
≥1 MCV4	41.8%	53.6%	62.7%	70.5%	74.0%	77.8%	79.3%
HPV ≥1 dose	37.2% (17.9%)	44.3% (26.7%)	48.7% (32.0%)	53.0% (34.8%)	53.8% (33.4%)	57.3% (37.6%)	60.0% (39.7%)
Among Males			1.4%	8.3%	20.8%	34.6%	41.7%

Establishing Adolescent Immunization Platforms

Society for Adolescent Health and Medicine position statement[1]

- 11 to 12 year visit: primary immunization platform
- 14 to 15 year visit: catch up on missed vaccines or complete multi-dose regimens
- 17 to 18 year visit: update vaccinations that were missed or are newly recommended

Middleman AB, et al. *J Adolesc Health*. 2006;38:321-327.
IDSA. *CID* 2007:44:e104-e108.

Building an Adolescent Immunization Platform

Puts focus on disease prevention among this age group

Presents opportunities for improved comprehensive care that includes other health issues (e.g., screening and prevention of risk behaviors)

Creates parental/healthcare professional expectation of compliance with established adolescent immunization visits

Understanding the Burden

HPV INFECTION & DISEASE

HPV Infection

Most females and males will be infected with at least one type of HPV at some point in their lives

- Estimated 79 million Americans currently infected
- 14 million new infections/year in the US
- HPV infection is most common in people in their teens and early 20s

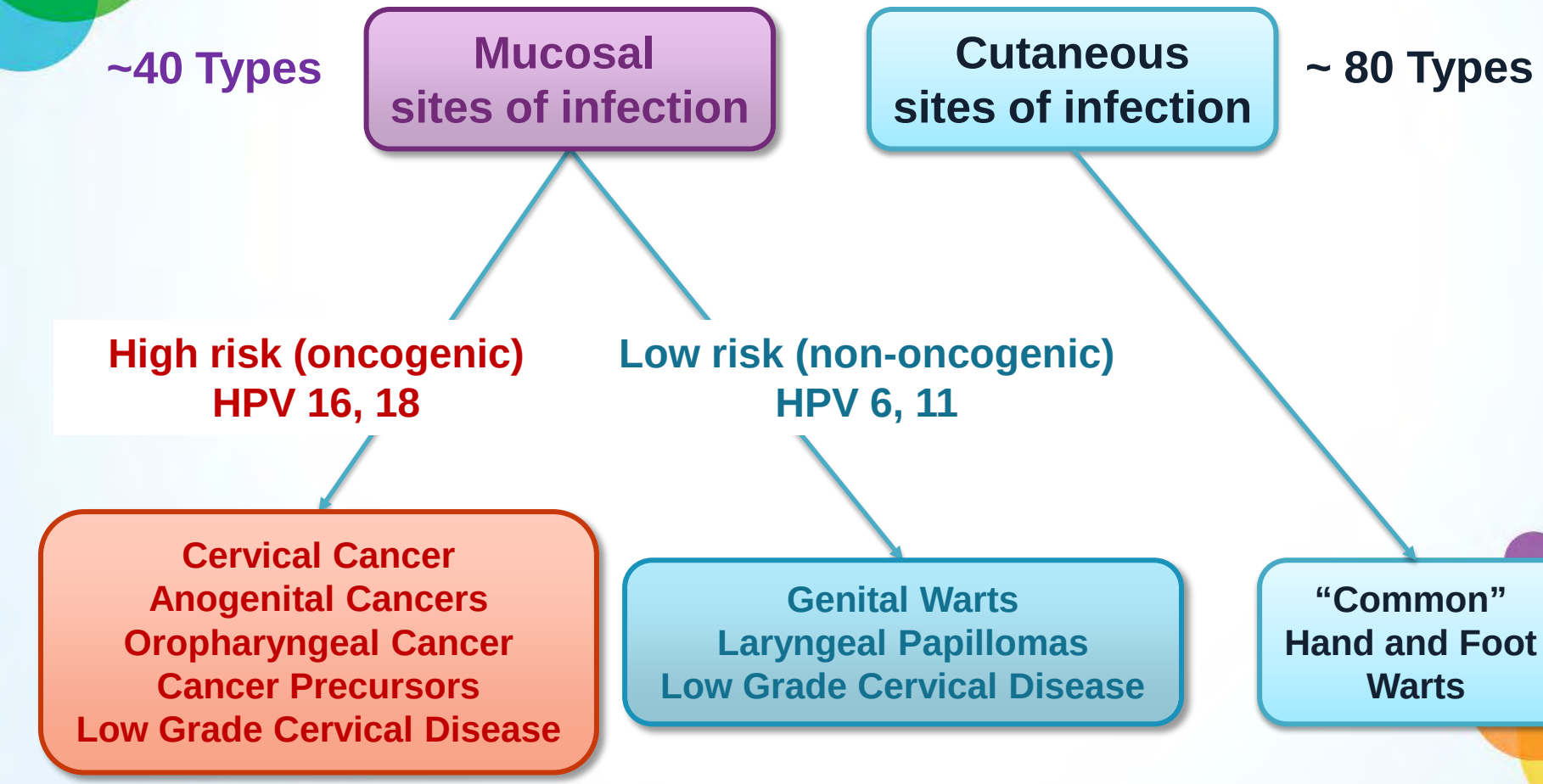
Most HPV infections are asymptomatic

Jemal A et al. J Natl Cancer Inst 2013;105:175-201

MAJOR POINT NUMBER ONE

EVERYONE GETS THIS VIRUS

HPV Types Differ in their Disease Associations



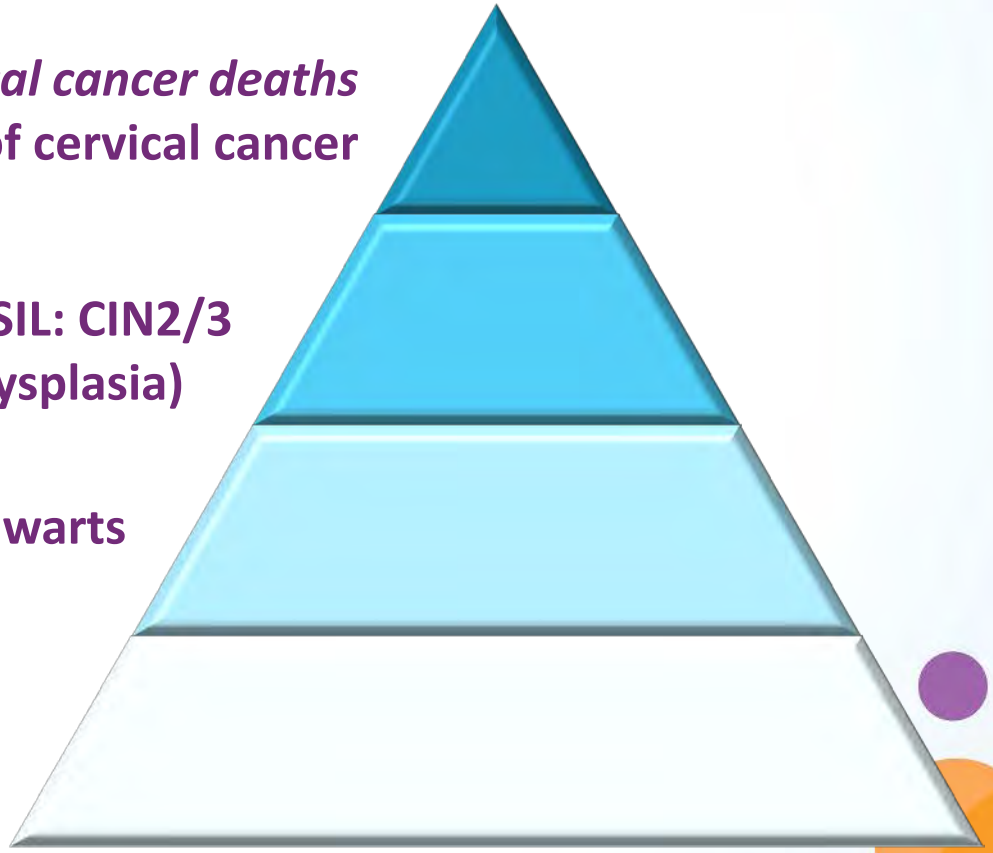
Without vaccination, annual burden of genital HPV-related disease in U.S. females:

4,000 cervical cancer deaths
10,846 new cases of cervical cancer

330,000 new cases of HSIL: CIN2/3
(high grade cervical dysplasia)

1 million new cases of genital warts

1.4 million new cases of LSIL: CIN1
(low grade cervical dysplasia)



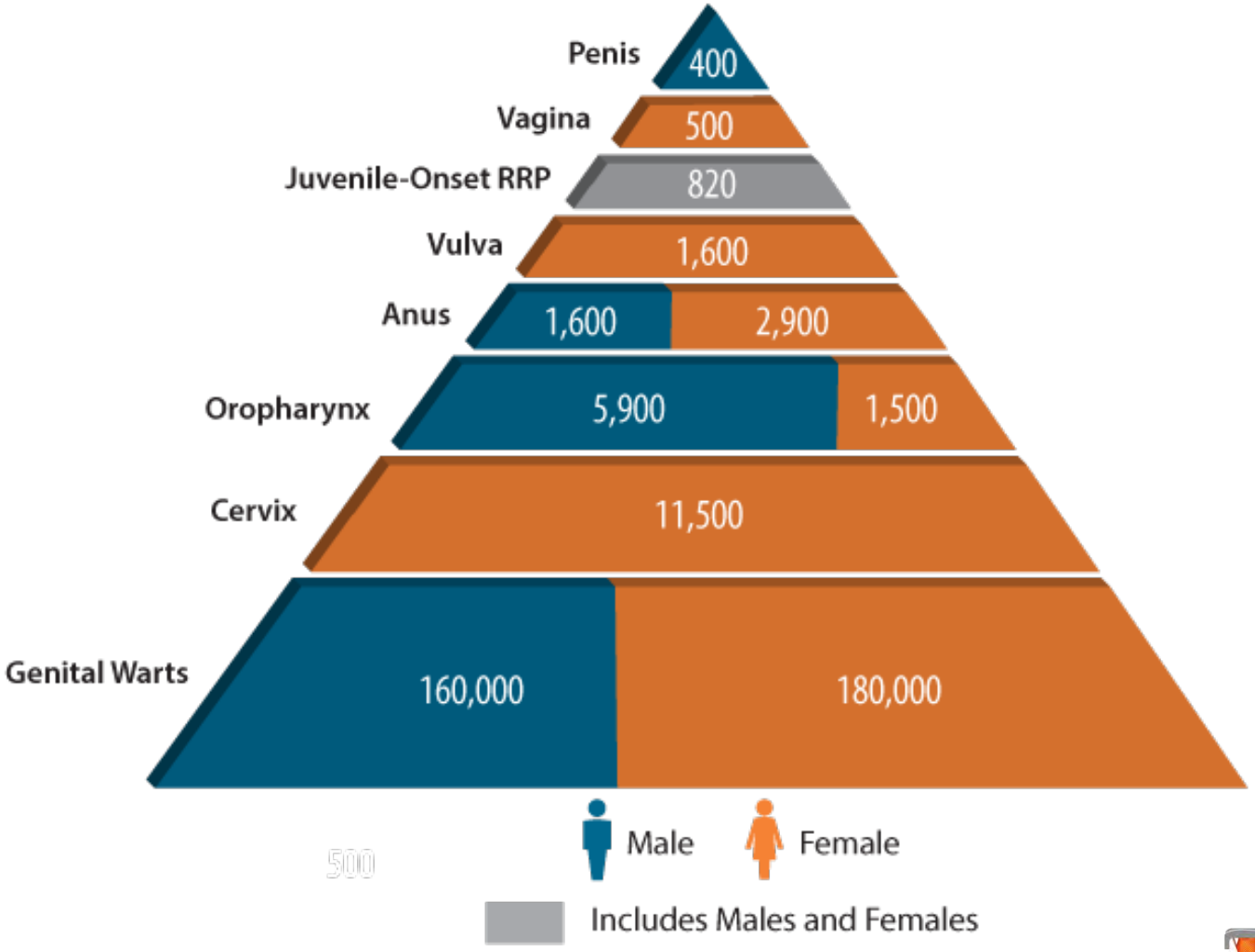
3 million cases and $7 billion

American Cancer Society. 2008; *Sex Transm Dis*. 2004;

Schiffman *Arch Pathol Lab Med*. 2003; Koshiol Insinga, Pharmacoeconomics, 2005

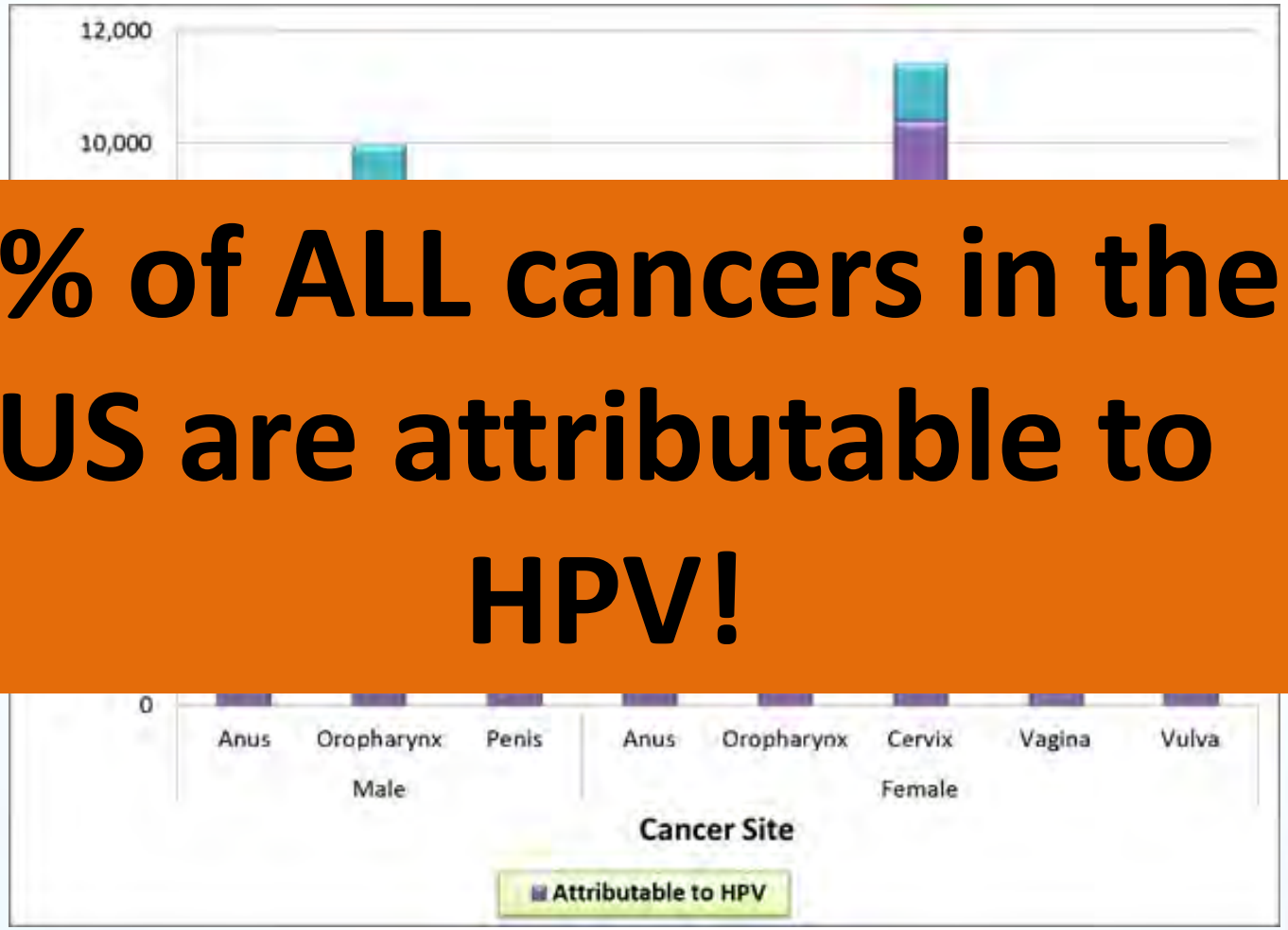
HPV YOU ARE THE KEY TO CANCER PREVENTION

Numbers of Cancers and Genital Warts Attributed to HPV Infections, U.S.



CDC. Human papillomavirus (HPV)-associated cancers. Atlanta, GA: US Department of Health and Human Services, CDC; 2013. Available at http://www.cdc.gov/cancer/hpv/statistics/cases.htm

How Many Cancers Are Linked with HPV Each Year?



5% of ALL cancers in the US are attributable to HPV!

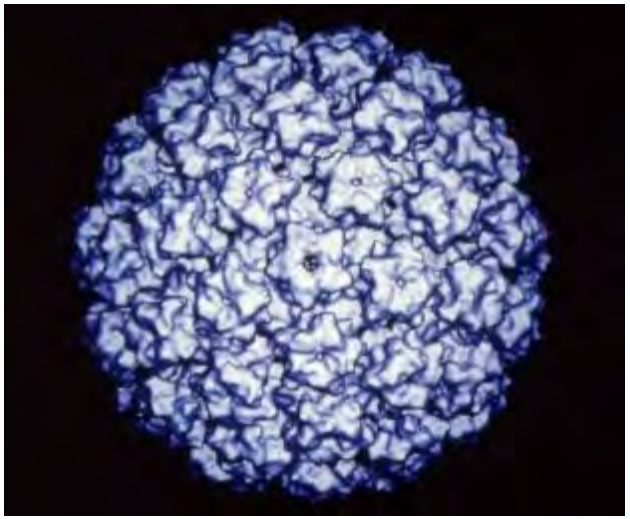
MAJOR POINT NUMBER TWO

THE BURDEN OF DISEASE FROM HPV IS FAR GREATER THAN FOR ALMOST ANY OF THE OTHER VACCINES WE GIVE IN THE US

HPV VACCINE

HPV Prophylactic Vaccines

- Recombinant L1 capsid proteins that form "virus-like" particles (VLP)
- Non-infectious and non-oncogenic
- Produce higher levels of neutralizing antibody than natural infection
- Antibody response is higher for kids age 11-12 than older adolescents



HPV Virus-Like Particle

Adverse Events Following Any Dose of HPV Vaccine Among Females

Adverse Event	HPV4 Vaccine	Adjuvant placebo	HPV2 Vaccine	Adjuvant placebo
Pain	84	75	92	87
Swelling	25	16	44	21
Erythema	25	18	48	24
Temp 100-101	4	--	13	14
Temp >102	.4	.4		
Nausea	7	7		
Malaise	1.4	1.2	55	54

FDA product approval data, CDC

Key Messages About HPV Vaccine Safety

- Safety studies for HPV vaccine similar to safety reviews of MCV4 and Tdap vaccines
- More than 100 MILLION doses have been given
- The safety of this vaccine has been scrutinized more than any other vaccine because of the "controversy."
    - Not just in the US but in many countries
    - NO unusual safety concerns have been found
    - Media reports are unfounded – not linked to the vaccine

Garland et al, Prev Med 2011; Ali et al, BMJ 2013; Markowitz JID 2013; Nsouli-Maktabi MSMR 2013

Institute of Medicine Report
Adverse Effects of Vaccines: Evidence and Causality

IOM reviewed possible associations between adverse health events and eight vaccines

- Evidence "favors acceptance" of a causal relationship between HPV vaccine and anaphylaxis (yeast and latex components)
- Evidence "convincingly supports" a causal relationship between the injection of a vaccine and syncope

Inadequate evidence was found for causal relationships between HPV vaccination and 12 other specific health events studied

Syncope can occur among adolescents who receive vaccines, including HPV vaccine. The ACIP recommends providers observe patients for 15 minutes after vaccination

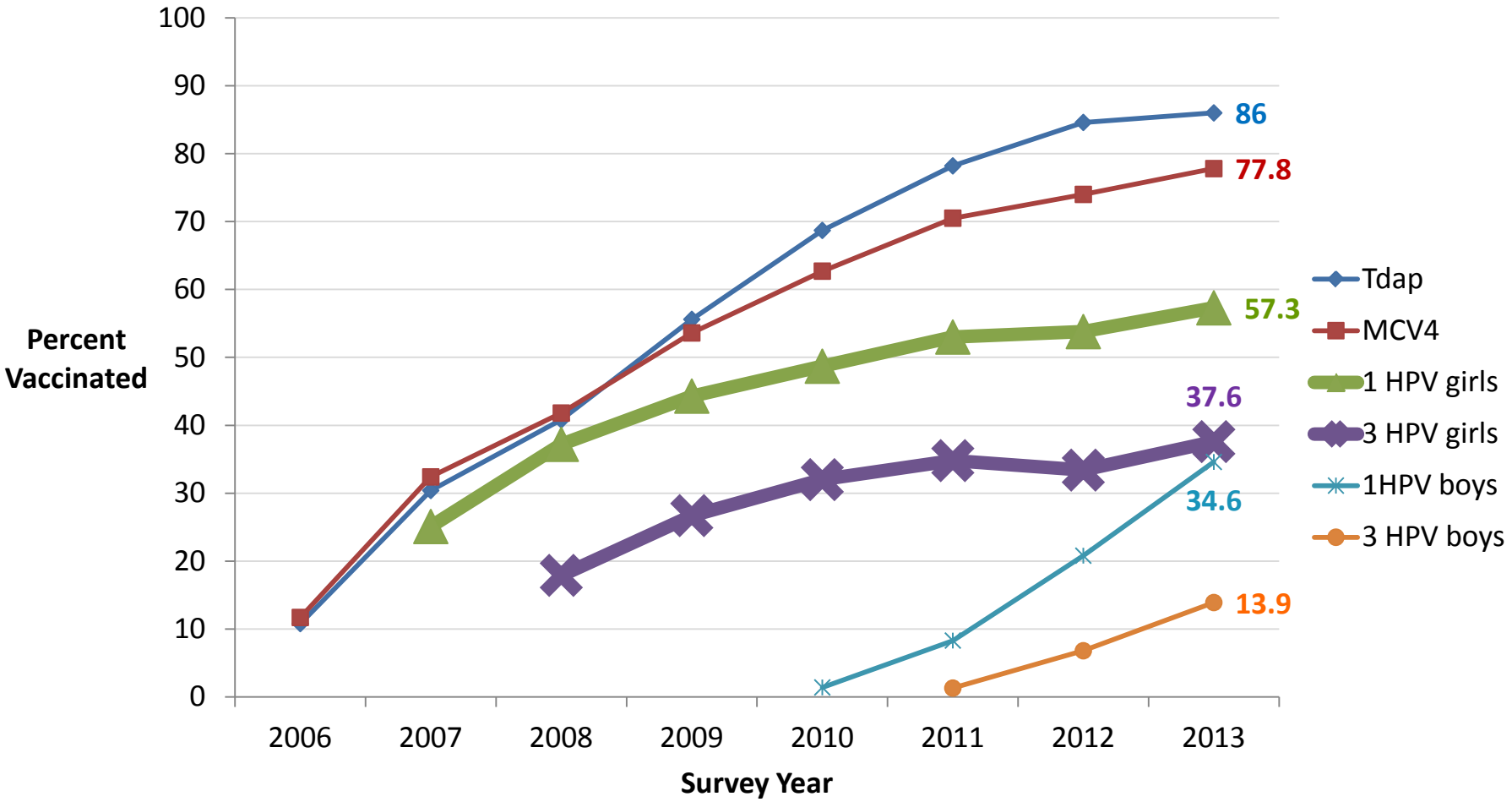
Institute of Medicine. Adverse Effects of Vaccines: Evidence and Causality. Washington DC. The National Academies Press, 2012.

MAJOR POINT NUMBER THREE

BECAUSE IT IS MADE WITH NEWER TECHNOLOGY, THIS IS ONE OF THE SAFEST AND MOST EFFECTIVE VACCINES WE HAVE

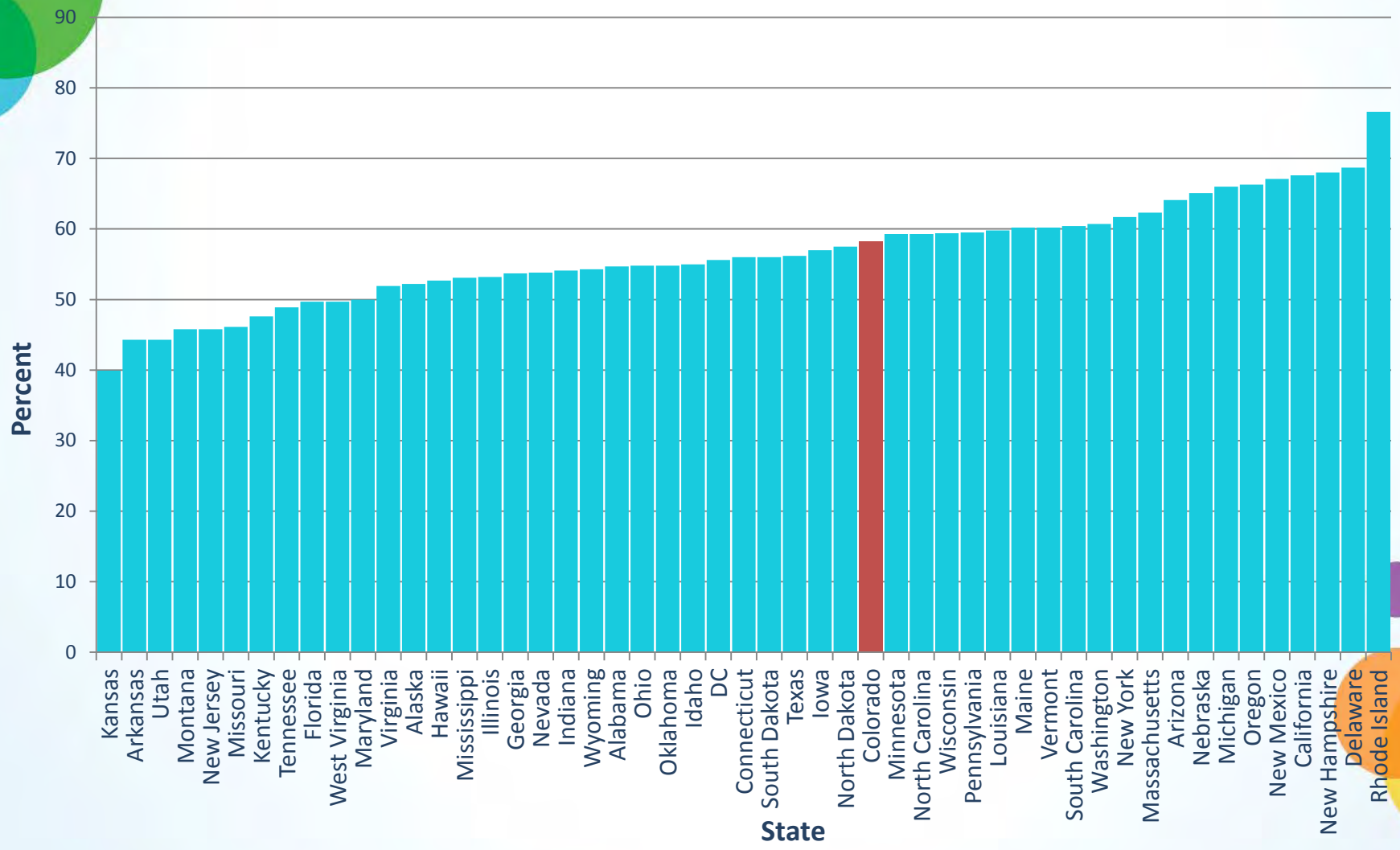
HPV VACCINE COVERAGE

Adolescent Vaccination Coverage United States, 2006-2013

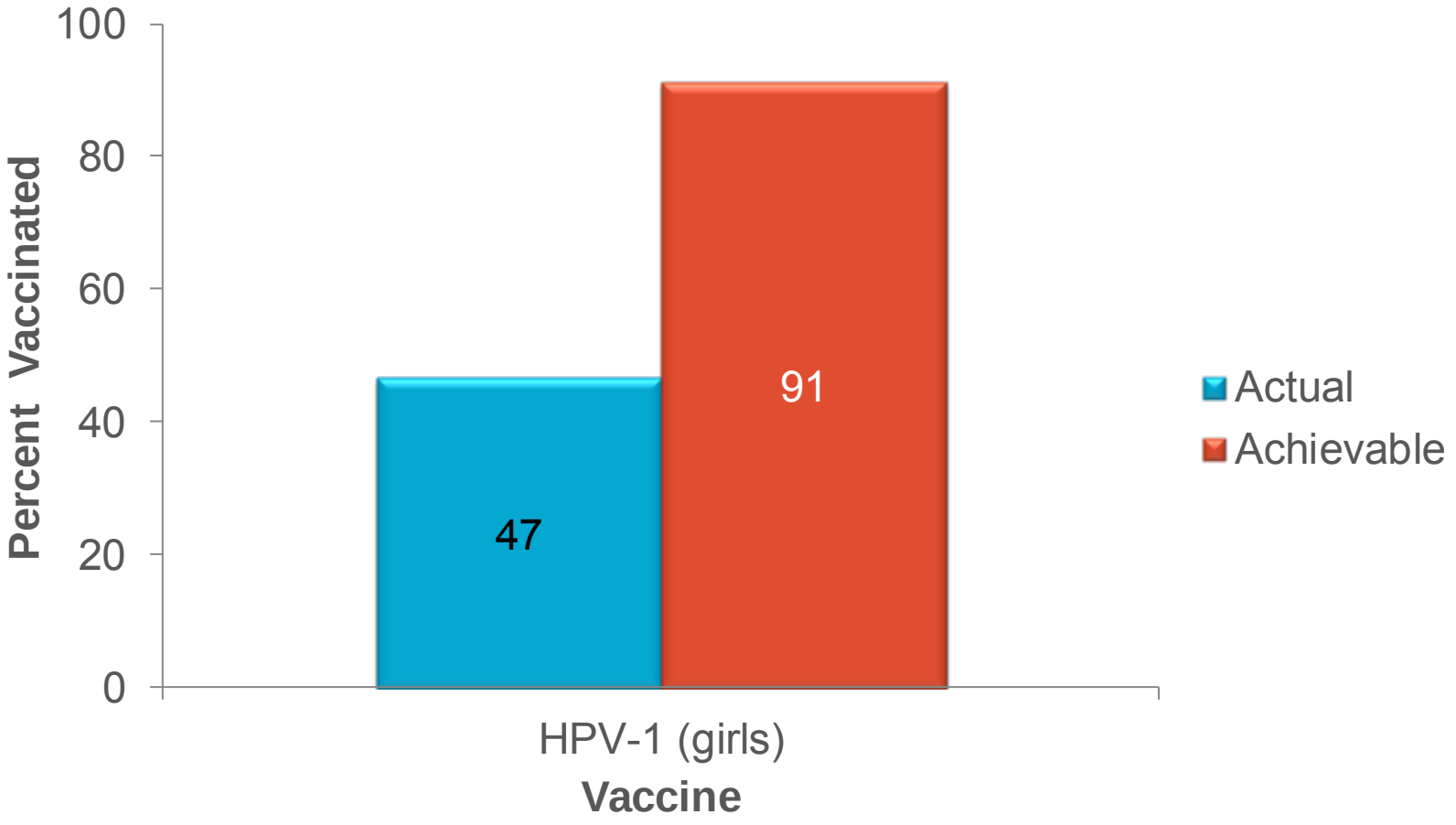


MMWR 2014; 63(29);625-633.

HPV Vaccine Series Initiation
Girls 13-17 Years, by State, 2013



Impact of Eliminating Missed Opportunities by Age 13 Years in Girls Born in 2000



Missed opportunity: Healthcare encounter when some, but not all ACIP-recommended vaccines are given. HPV-1: Receipt of at least one dose of HPV.

MMWR. 63(29);620-624.

26 million: number of girls under 13 years of age in the United States

168,400: number who will develop cervical cancer if none are vaccinated

54,100: number will die from cervical cancer if none are vaccinated

For each year we stay at 30% coverage instead of achieving 80%

4,400: number of future cervical cancer cases we will not prevent

1,400: number of cervical cancer deaths we will not prevent

Adapted from Chesson HW et al, Vaccine 2011;29:8443-50

MAJOR POINT NUMBER FOUR

THERE ARE MANY PEOPLE IN THE US WHO WILL DIE IF CURRENT RATES STAY WHERE THEY ARE – ALMOST ALL OF THESE ARE PREVENTABLE DEATHS

What's new?

- **9-valent vaccine**
  - Includes 5 additional HPV types
  - Prevent 90% of cervical cancer
- **Possibility of two dose recommendation in the near future**
  - 0 and 6-12 months later

http://www.cdc.gov/vaccines/acip/meetings/downloads/slides-oct-2013/03-HPV-Luxembourg.pdf

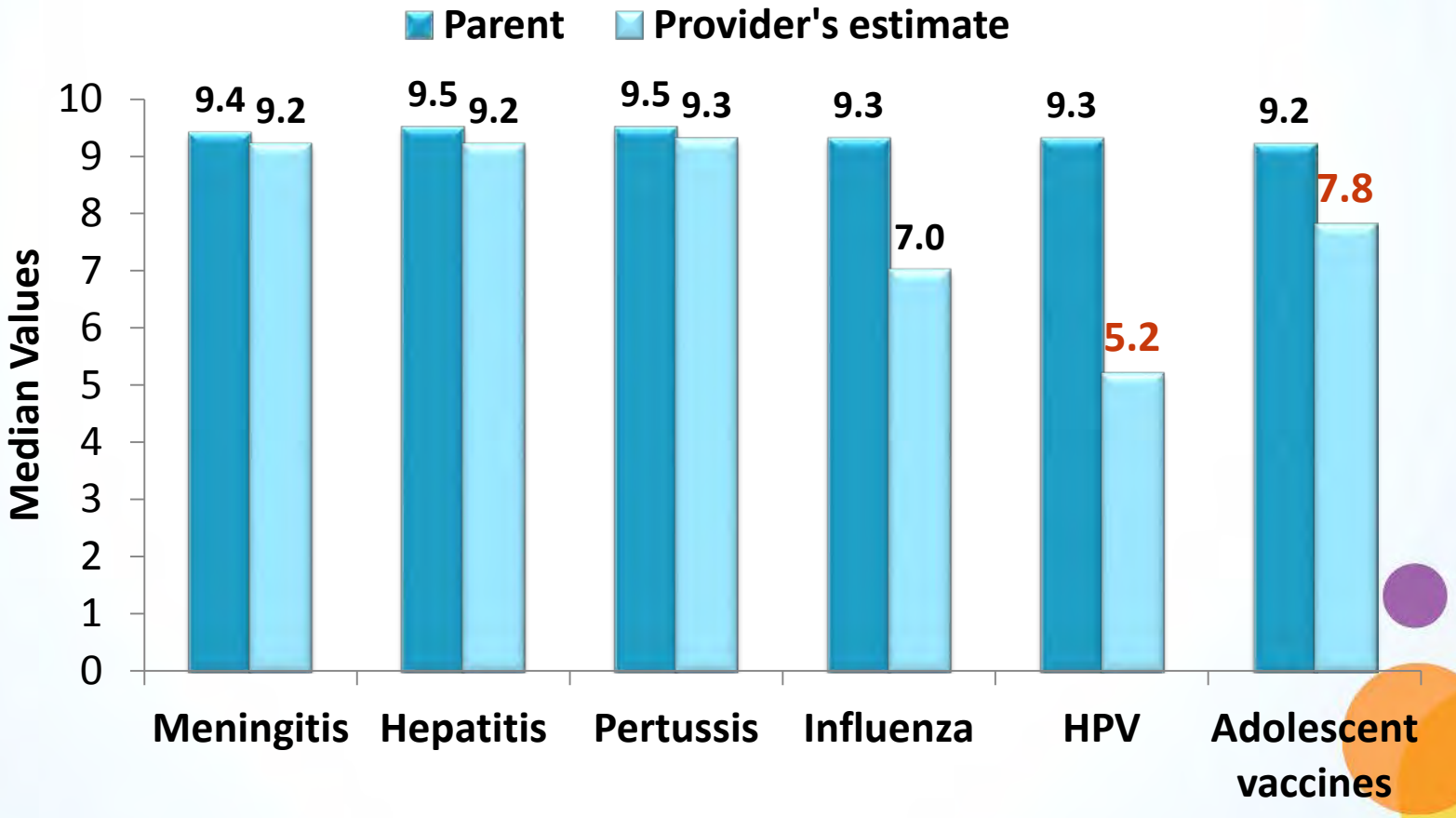
SO WHAT CAN WE DO?

Top Five Reasons for Not Vaccinating Adolescents with HPV Vaccine

2013 Top five reasons for not vaccinating adolescents			
Parents of girls		Parents of boys	
Reason	%	Reason	%
Lack of knowledge	15.5	Not recommended	22.8
Not needed or necessary	14.7	Not needed or necessary	17.9
Safety concern/Side effects	14.2	Lack of knowledge	15.5
Not recommended	13.0	Not sexually active	7.7
Not sexually active	11.3	Safety concern/Side effects	6.9

MMWR July 25, 2014
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6329a3.htm#tab2

Providers underestimate the value parents place on HPV vaccine



Adapted from Healy et al. Vaccine. 2014;32:579-584.

Recommend the same way as you would recommend other adolescent vaccines

"Your child needs three shots today: HPV vaccine, meningococcal vaccine and Tdap vaccine."

"Your child will get three shots today that will protect him/her from many cancers caused by HPV, as well as to prevent tetanus, diphtheria, pertussis and meningitis."

4 Take-home Messages about HPV Vaccine

1. HPV Vaccine is SAFE

   More than 100 MILLION doses have been given. Safety studies findings for HPV vaccine similar to other vaccines

2. HPV Vaccine WORKS

   Vaccination can reduce HPV related cancer by 70 to 90%

3. HPV Vaccine LASTS

   Immunity lasts at least 10 years with no evidence of waning

4. The way you recommend the vaccine is important!

   Strong recommendation for all the vaccines without differentiating HPV from the others

Garland et al, Prev Med 2011; Ali et al, BMJ 2013; Markowitz JID 2013; Nsouli-Maktabi MSMR 2013

STRATEGIES TO INCREASE VACCINATION COVERAGE

Evidence-based Strategies

Recommendations Regarding Interventions to Improve Vaccination Coverage in Children, Adolescents, and Adults

Task Force on Community Preventive Services

Am J Prev Med 2000;18(1S)

Vaccination

Home Visits to Increase Vaccination Rates

Reducing Client Out-of-Pocket Costs

Vaccination Programs in Schools and Organized Child Care Centers

Vaccination Programs in WIC Settings

Client or Family Incentive Rewards

Client Reminder and Recall Systems

Client-held Paper

Increasing Appropriate Vaccination

Diseases that can be prevented by vaccines remain major causes of illness and death for people of all ages in the United States.

- In the U.S., an estimated 800,000 to 1.4 million persons have chronic Hepatitis B virus infection (CDC).
- Flu seasons are unpredictable and can be severe. Between 1976 and 2007, estimates of flu-associated deaths range from a low of about 3,000 to a high of about 49,000 people (CDC).
- In addition to the interventions cited below, the Task Force recommends worksite interventions to promote flu vaccinations among healthcare and non-healthcare workers.

Task Force Recommendations and Findings

This table lists interventions reviewed by the Community Guide, with a summary of the Task Force finding (definitions of findings). Click on an underlined intervention title for a summary of the review.

Enhancing Access to Vaccination Services	
Home Visits to Increase Vaccination Rates	Recommended March 2009

Task Force Recommendations

Enhancing Access	Increasing Demand	Provider- or System Based Intervention
Home visits	Patient or family incentives	Health care system-based interventions
Reducing out-of-pockets costs	Reminder and recall	Immunization information systems
Vaccines in schools and child care centers	Combination community-based interventions	Provider assessment and feedback
Vaccines in WIC settings	School and childcare requirements	Provider reminders
		Standing orders

http://www.thecommunityguide.org/vaccines/index.html

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STANDING ORDERS

Standing Orders

- Single physician order for *all* patients for recommended vaccines
- Stipulate that all patients meeting certain criteria should be vaccinated –age, underlying medical condition

- Components
  1. Nurse/MA tracks immunization history
  2. Nurse/MA identifies eligible patients
  3. Nurse/MA educates patients –alert provider if patient still has questions or wants to talk with the provider
  4. Nurse/MA administers vaccines

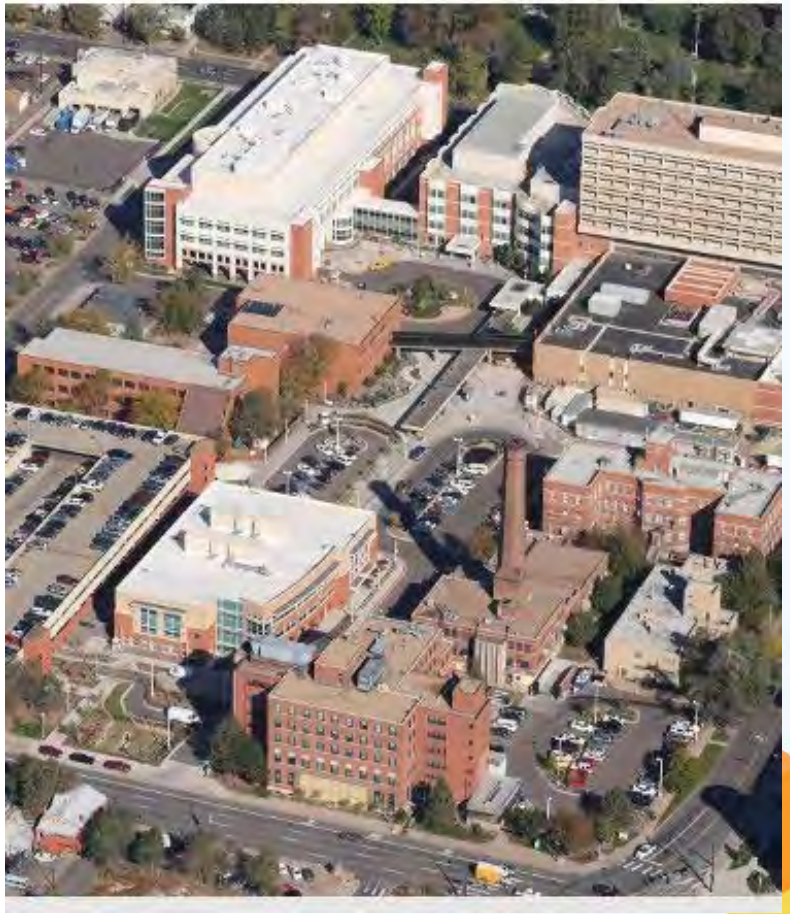
Benefits of Standing Orders

- Shown to be effective in both adults and children
  - For children, use of standing orders is associated with a median increase in vaccination coverage of 28%
  - Most effective evidence-based method
- Overcome administrative barriers and save time

http://www.thecommunityguide.org/vaccines/RRstandingorders.html

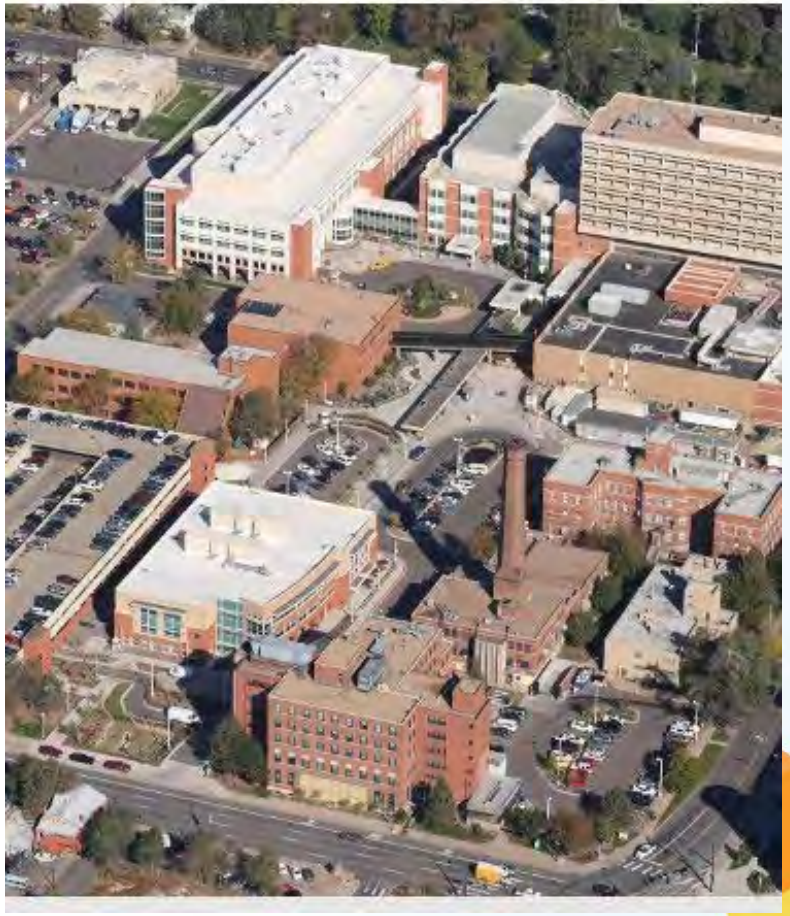
The Denver Health Story

- Large vertically integrated community health system
  - Cares for about 1/3 of all children in Denver
  - 9 community health centers, 16 school-based health centers
- For many years, had ‘typical’ immunization process, with similar rates to national average



The Denver Health Story

- Implemented a system of standing orders predicated on the idea of taking the provider out of the immunization equation from birth to adulthood
- Tdap, HPV, MCV4 presented as a standard “bundle” of adolescent immunizations
- Vaccines given early in visit whenever possible
- Providers involved only if refusal or questions



Adolescent Vaccination Rates

Vaccine	National (2013)	National (2012)	National Below FPL (2012)	Colorado (2013)	Denver Health (2013)
Tdap	**86.0**	84.6	74.0	87.1	**95.9**
MCV4	**77.8**	74.0	69.0	73.6	**93.5**
HPV – Females ≥1	**57.3**	53.8	62.1	58.2	**89.8**
HPV – Females ≥3	**37.6**	33.4	39.0	39.1	**66.0**
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Standing Orders: My Recommendation

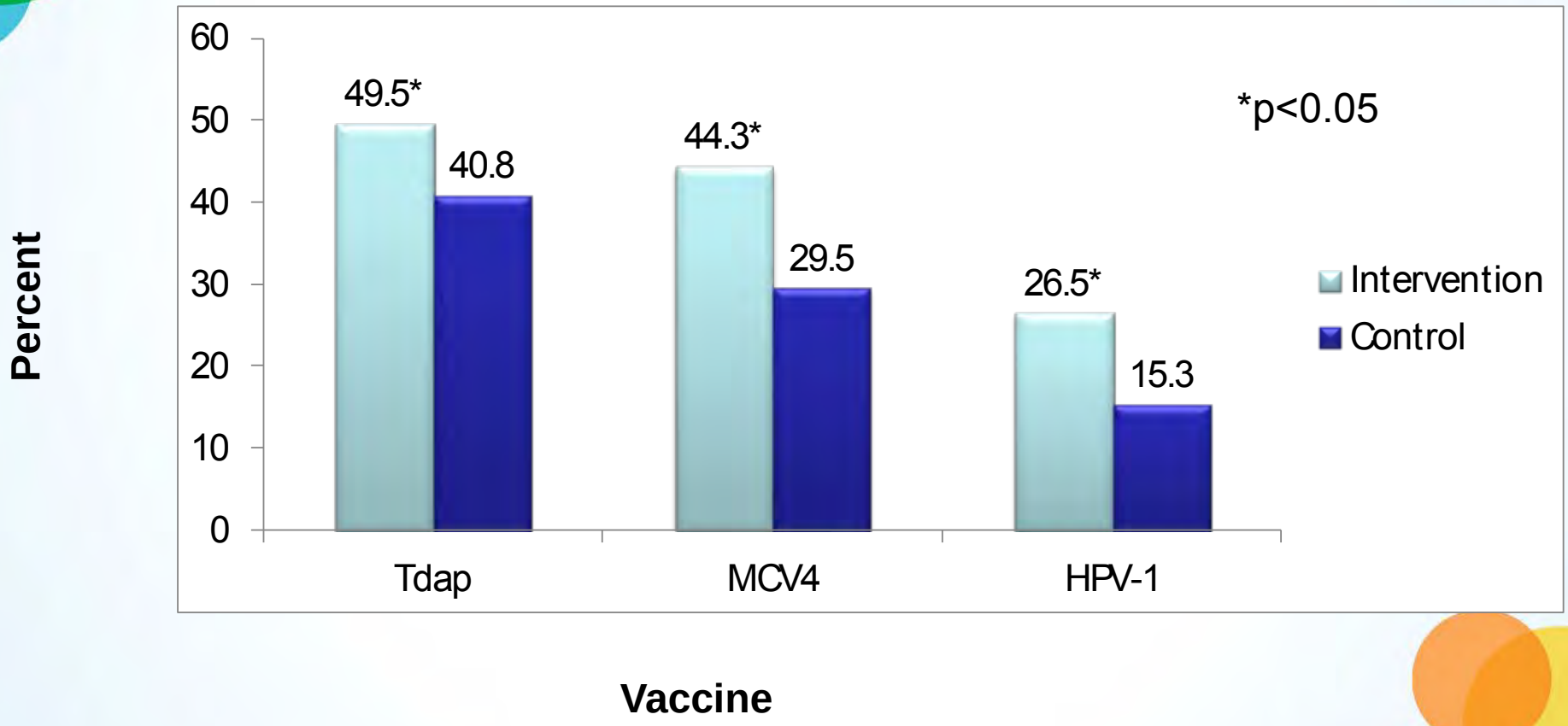
- Consider implementing standing orders for vaccination, particularly for the adolescent immunization ‘bundle’
- Allows more time for focusing other important aspects of preventive and sick visits for those without significant concerns
- Remember that having standing orders is not a substitute for a provider conversation for families with questions

REMINDER/RECALL

Reminder/Recall

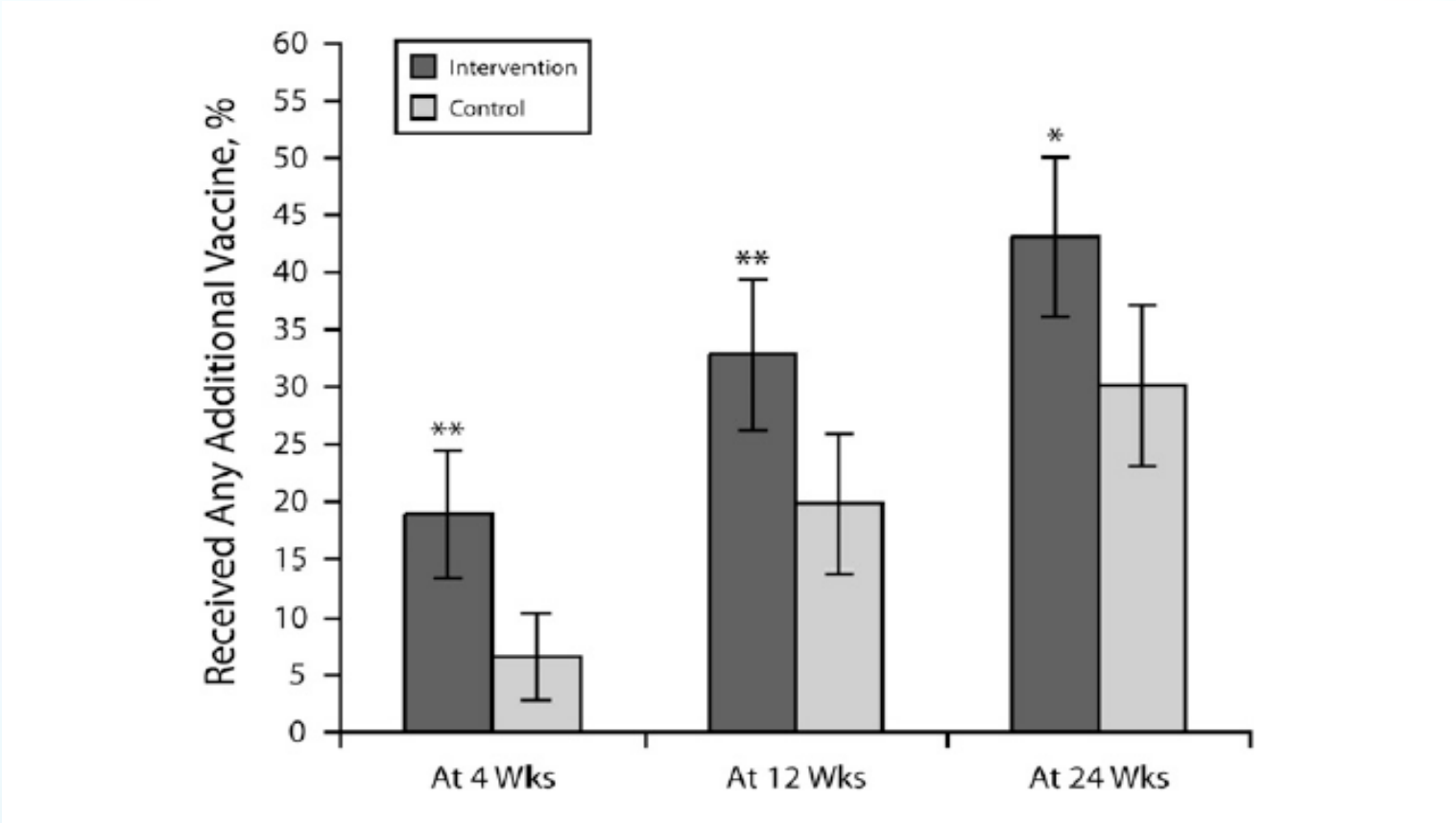
- Reminder: notify families whose children are due soon
- Recall: notify families whose children are overdue
- Postcards, letters, telephone calls, or text messages
- Can be automated using EHRs or Immunization Information System (IIS)
- Reminder/recall conducted in practice settings shown to be very effective in increasing rates

Impact of Reminder/Recall on Vaccination Rates among Adolescents



Suh C et al. Pediatrics 2012;129:e1437-45

Percentages of adolescents 11-18 years of age who received any vaccination at 4, 12, and 24 weeks: Text4Health-Adolescents, New York City, 2009



Stockwell et al. AJPH. 2012;102:e15-e21.

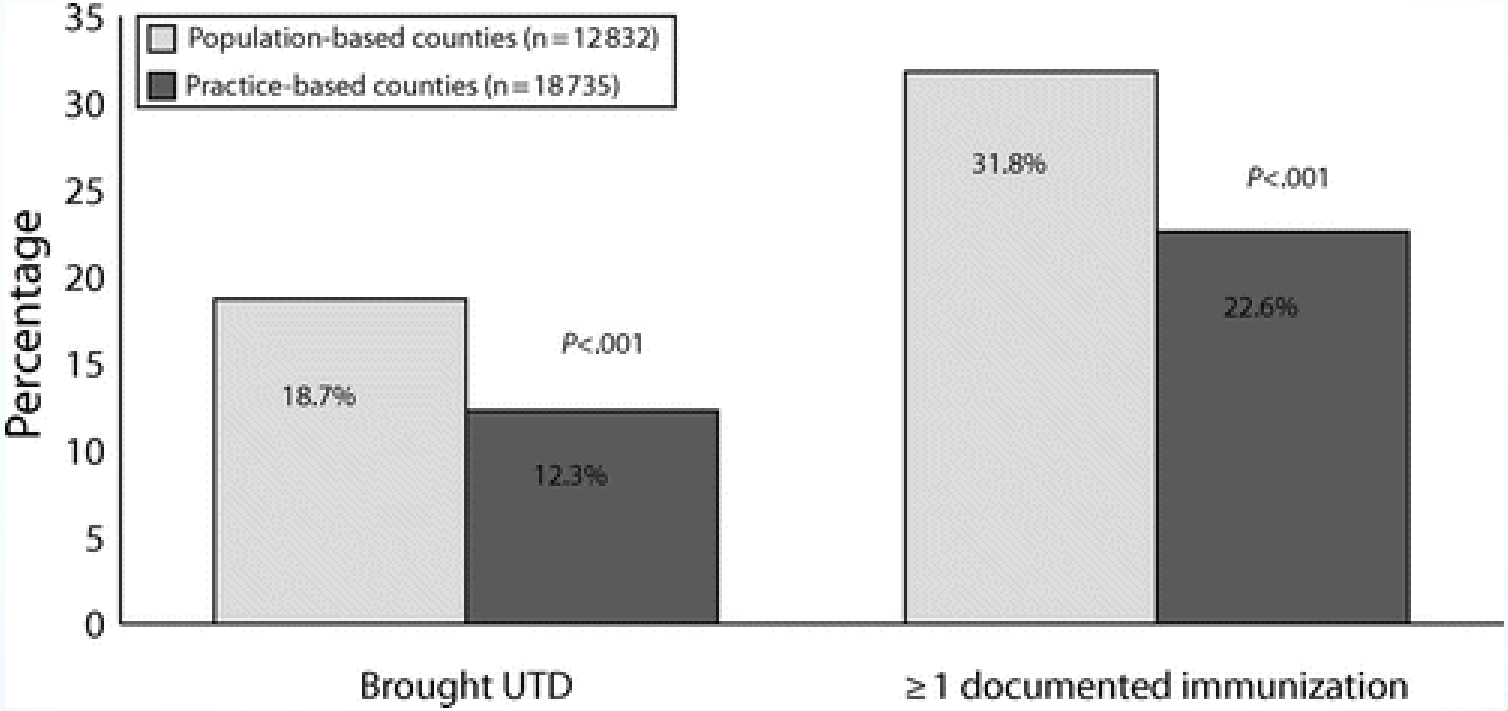
Reminder/Recall

- Only 16% of physicians nationally are conducting
  - Expensive
  - Time-consuming
  - Can be difficult to assess who to remind/recall
- How can we make it easier for providers to do reminder/recall?

Could Reminder/Recall be Conducted Centrally by Public Heath Departments?

- Potential advantages
  - Reducing burden of conducting reminder/recall by practices
  - Reaching children without usual source of primary care

Centralized Reminder/Recall



Kempe A, Saville A, Dickinson LM, et al. Population-based versus practice-based recall for childhood immunizations: a randomized controlled comparative effectiveness trial. Am J Public Health. 2013 Jun;103(6):1116-23.

Centralized Reminder/Recall

- Having the health department, through the IIS, conduct reminder/recall was both more effective and less costly than reminder/recall performed in private practices
- Collaboration in this arena could also lead to other important public/private collaborations

Kempe A, Saville A, Dickinson LM, et al. Population-based versus practice-based recall for childhood immunizations: a randomized controlled comparative effectiveness trial. Am J Public Health. 2013 Jun;103(6):1116-23.

Communicating with Families

How much of a problem is vaccine hesitancy?

- Percentage refusing all vaccines remains small (2-3%)
- Prevalence of under-vaccination ≤2 years of life in 8 managed care organizations increased from 42% in 2004 to 54% in 2008*
- Increasing frequency of requests to “spread-out” the series or refusal of specific vaccines

*Glanz et al, JAMA Pediatr 2013

"Costs" of Vaccine Hesitancy

- Less time on other preventive care
  - Average visit = 18 minutes
  - What is being sacrificed?
- Increased pain or trauma for children
  - 84% of pediatricians think it is more painful for children to bring them back repeatedly for shots rather than give them multiple simultaneously
- Physician burn-out
  - 50% of Peds report their job less satisfying because of having to talk about vaccines with hesitant parents

“Costs” of Vaccine Hesitancy

- Increased levels of under-vaccination
  - Under-vaccinated tend to remain under-vaccinated
  - Outbreaks of Vaccine Preventable Diseases

    Pertussis

    Varicella

    Pneumococcal disease

    MEASLES!!!!

How are Physicians Responding to Requests?

	Frequency Used %		Perceived Effectiveness %
	Often or Always	Sometimes	Very effective
Informing parents that you immunize your own children according to recommended schedule	66	25	20
Explaining that deviating from schedule puts their child at risk for vaccine preventable diseases	68	19	9
Informing parents that 'spreading out' vaccines is against your recommendation	66	20	7
Discussing recent outbreaks of vaccine preventable diseases	60	31	14
Telling parents that you think it is more painful for their child to come back for multiple visits for shots rather than get them all	50	31	9

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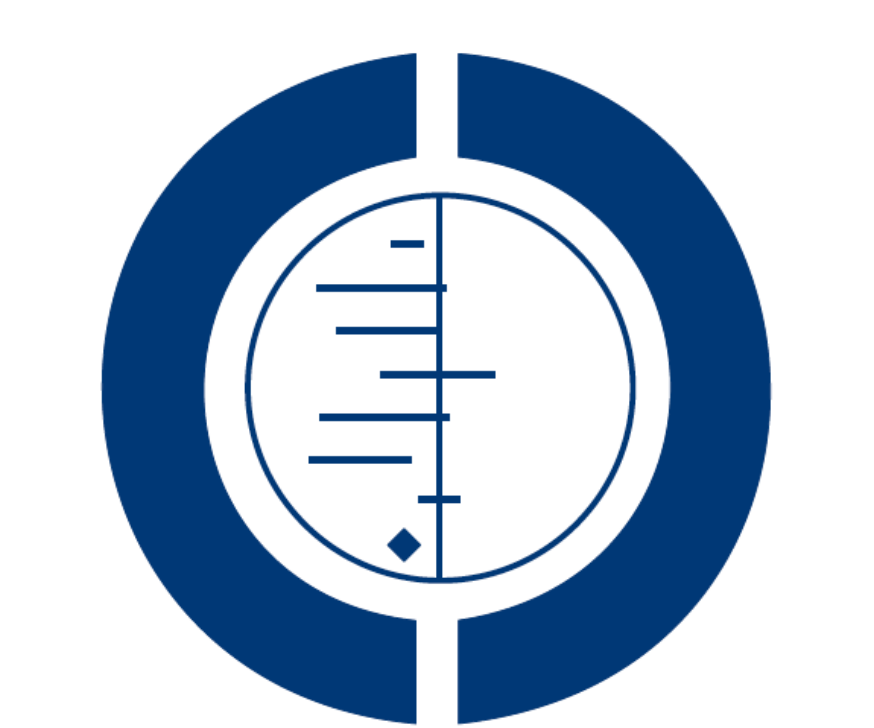
Discussing recent outbreaks of vaccine preventable diseases	60	31	14
Telling parents that you think it is more painful for their child to come back for multiple visits for shots rather than get them all	50	31	9

Strategies for talking with vaccine hesitant parents

Face to face interventions for informing or educating parents about early childhood vaccination (Review)



Cochrane, 2013

"The limited evidence available is low quality and suggests that face to face interventions to inform or educate parents about childhood vaccination have little to no impact on immunization status, or knowledge or understanding of vaccination."

Vaccine, July 2013

Review

A systematic review of interventions for reducing parental vaccine refusal and vaccine hesitancy

Alina Sadaf[a], Jennifer L. Richards[b], Jason Glanz[c], Daniel A. Salmon[d,e], Saad B. Omer[b,f,g,h,*]

4. Discussion

Our systematic review did not reveal any convincing evidence on effective interventions to address parental vaccine hesitancy and refusal. We found a large number of studies that evaluated

Physician Communication Training and Parental Vaccine Hesitancy: A Randomized Trial

Nora B. Henrikson, PhD[a], Douglas J. Opel, MD, MPH[b,c], Lou Grothaus, MS[a], Jennifer Nelson, PhD[a], Aaron Scrol, MA[a], John Dunn, MD, MPH[a], Todd Faubion, PhD[d], Michele Roberts, MPH, MCHES[e], Edgar K. Marcuse, MD, MPH[b,c], David C. Grossman, MD, MPH[a,c,f]

abstract

BACKGROUND AND OBJECTIVES: Physicians have a major influence on parental vaccine decision

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abstract

BACKGROUND AND OBJECTIVES: Physicians have a major influence on parental vaccine decision

CONCLUSIONS: This physician-targeted communication intervention did not reduce maternal vaccine hesitancy or improve physician self-efficacy. Research is needed to identify physician communication strategies effective at reducing parental vaccine hesitancy in the primary care setting.

It’s complicated! No easy solutions!

Why Don't We Know More about How to Communicate with Parents and Patients about Vaccines?

- Tons of research on parents' knowledge, attitudes, beliefs
- Little research on what communication techniques actually *change parents' behavior*
- Research in this area is complicated!
- We've been focused on the 'what' more than the 'how'

SOME IDEAS ABOUT “THE HOW” OF TALKING WITH PEOPLE ABOUT VACCINES

An Interesting Study…

The Architecture of Provider-Parent Vaccine Discussions at Health Supervision Visits

Douglas J. Opel, John Heritage, James A. Taylor, Rita Mangione-Smith, Halle Showalter Salas, Victoria DeVere, Chuan Zhou and Jeffrey D. Robinson

Pediatrics 2013;132;1037; originally published online November 4, 2013;

“Participatory versus Presumptive”

- Participatory: Linguistically provide parents with more decision making latitude
  - “Have you thought about what shots you’d like to get today?”
- Presumptive: Linguistically presuppose that parents would get shots
  - “Well, we have some shots to do today”

Participatory versus Presumptive

- “Among all parents, a larger proportion resisted vaccine recommendations when providers used a participatory rather than presumptive initiation format (83% vs 26%; P < .001).”
- “This finding remained true among vaccine hesitant parents (89% vs 30%; P < .001).”

Participatory versus Presumptive

- Another important result from this study: among parents who initially resisted, 47% agreed to be vaccinated when the physicians continued to discuss the recommendation, addressing their specific concerns, so don't give up!
- Follow up studies are in the works, with an RCT planned

Why might a presumptive style work?

- Most parents perceive decisions about vaccination to be complicated
- As humans, when we make decisions we perceived to be complicated, we tend to have a status quo bias, meaning we go with what is expected or ‘normal’
- By assuming a presumptive tone, parents are made to feel that getting the vaccine is what most people do, that it is the socially acceptable ‘norm,’ and are therefore less likely to resist

Case

- An 11 year old girl is sent to your school-based health center by her PCP for her adolescent vaccines (he doesn't stock vaccines).

Case

- An 11 year old girl is sent to your school-based health center by her PCP for her adolescent vaccines (he doesn't stock vaccines).
- You offer a 'presumptive' recommendation for the vaccines, saying "Great, you're here for your vaccines, we can go ahead and do her tetanus/diphtheria/whooping cough vaccine, her meningitis vaccine, and her HPV vaccine"

Not so fast…

- Her mother says, “We’re okay doing that tetanus shot and the meningitis one, but we’re going to hold off on the HPV vaccine.”

How do you approach this situation?

- Difficult – parents often set in their ways

Conventional Wisdom

- Improve parents' knowledge and they will make the right decision

Vaccine Communication 2.0

- Becoming increasingly clear that simply correcting parents' knowledge gaps – whether through informational brochures, community campaigns, or direct provider conversations – is often not enough to address parents who have concerns about vaccines
- Several investigators are looking at trying to address parents' personal values, rather than (or in addition to) knowledge, attitudes, and beliefs

Motivational Interviewing Techniques for Difficult Vaccine Discussions

- Disclaimer: MI has not been tested and proven effective for convincing parents who are hesitant about vaccination
- HOWEVER, it has been shown to be effective in other health interventions, and the principles that make it effective make sense for vaccine conversations
- Current study testing it for HPV conversations, and providers showing improved self-efficacy

Motivational Interviewing in a Nutshell

- Motivational interviewing is a patient-centered, guiding communication style for enhancing a person's **own** motivation for change or behavioral activation
- The reasons to vaccinate don't come from the provider or outside expert but from the patient or parent

MI Skills

OARS

- Open-Ended Questions
- Affirmations
- Reflection
- Summary

What Usually Happens if the Parent is Resistant or Hesitant?

- The provider might ask the parent why she does not want the vaccine. In this case the parent will begin to argue for all the reasons she does not want her child to be vaccinated. In the process, the patient strengthens her resolve against the vaccination.
- The provider is now left open to falling into additional conversation traps.

Persuasion Trap

Persuasion Trap – when the provider becomes the champion for the vaccine and tries to convince the hesitant or resistant parent of the benefits. This usually ends up in an argumentative type of “yes, but” cycle.

The Lecture Trap

- Lecture (Data Dump Trap)– the tendency here is to provide the full story about some aspect of the vaccine
- Ends up putting people off and raising resistance because it implies that they don't know the full story and you're going to give it to them.
- Also, it can be counter-productive because you end up raising concerns that the patient had not previously considered.

In Summary

- Directive patient/provider recommendations followed by a closed-question work fine for the patient who is ready to be vaccinated or for the patient who expects the provider to tell him or her what to do.
- For patients who are unsure or resistant, a closed-ended question following a recommendation can lead to less productive conversations.

Starting the Conversation the MI Way
Eliciting

- **The provider asks in a non-threatening way to share the parent's concerns.**

Example:

"So you seem to have concerns about the HPV vaccine. Well, that's perfectly understandable – a lot of parents have questions about this one. Would you mind sharing what your particular concerns are?"

"Well, I've heard that it's a vaccine to prevent a disease that's transmitted by having sex, and she is a looooong way from having sex."

Starting the Conversation the MI Way
Engaging and Focusing

- **The provider reflects back what the patient is saying to be sure he/she understands (empathy) and summarizes what has been heard before proceeding, again with permission, to make a recommendation.**

Example:

"I can hear that you are concerned about that she is too young for the HPV vaccine because HPV is transmitted by sexual activity. Well, that's perfectly understandable – a lot of parents are worried about that too. I've thought a lot about this. Is it okay if I go over how I've come to think about this vaccine?"

It is Now That You Makes A Clear Personalized Recommendation

Example:

"I used to think of this vaccine as something to prevent a sexually transmitted disease, but realized it's really about preventing cancer. Almost everyone gets this virus, so I think it's important for everyone."

It is Now That The Provider Makes A Clear Personalized Recommendation

Example:

"Personally, I think this is a really important vaccine. *Having said that, this is a decision that only you can make. What do you think?"*

In Summary

- For parents who initially refuse vaccination, by continuing the conversation in the MI way, you may be more likely to engage parents at any level of motivation—not just those who are ready
- When patients are invited to feel heard, feel respected, and feel assured that they will not be pressured, they may be more likely to explore openly and honestly all of their thoughts about the vaccine
- This type of exploration may lead patients to new ways of seeing the situation and to form different conclusions.
- The movement toward acceptance of the vaccine is not guaranteed but it may be more likely when using MI than when not
- The whole process typically takes only about one to three minutes

Take Home Points

- HPV Vaccine is a highly safe and effective vaccine
- Increasing uptake of HPV vaccine will save lives
- Standing orders are an evidence-based method that can greatly increase vaccination uptake without much involvement of provider
- Reminder/recall also substantially increases rates—a centralized approach using the state IIS more effective, cost-effective and potentially more sustainable
- A presumptive recommendation and motivational interviewing MAY be effective