IMPROVING HPV VACCINATION – WHY WE MUST AND HOW WE CAN DO BETTER

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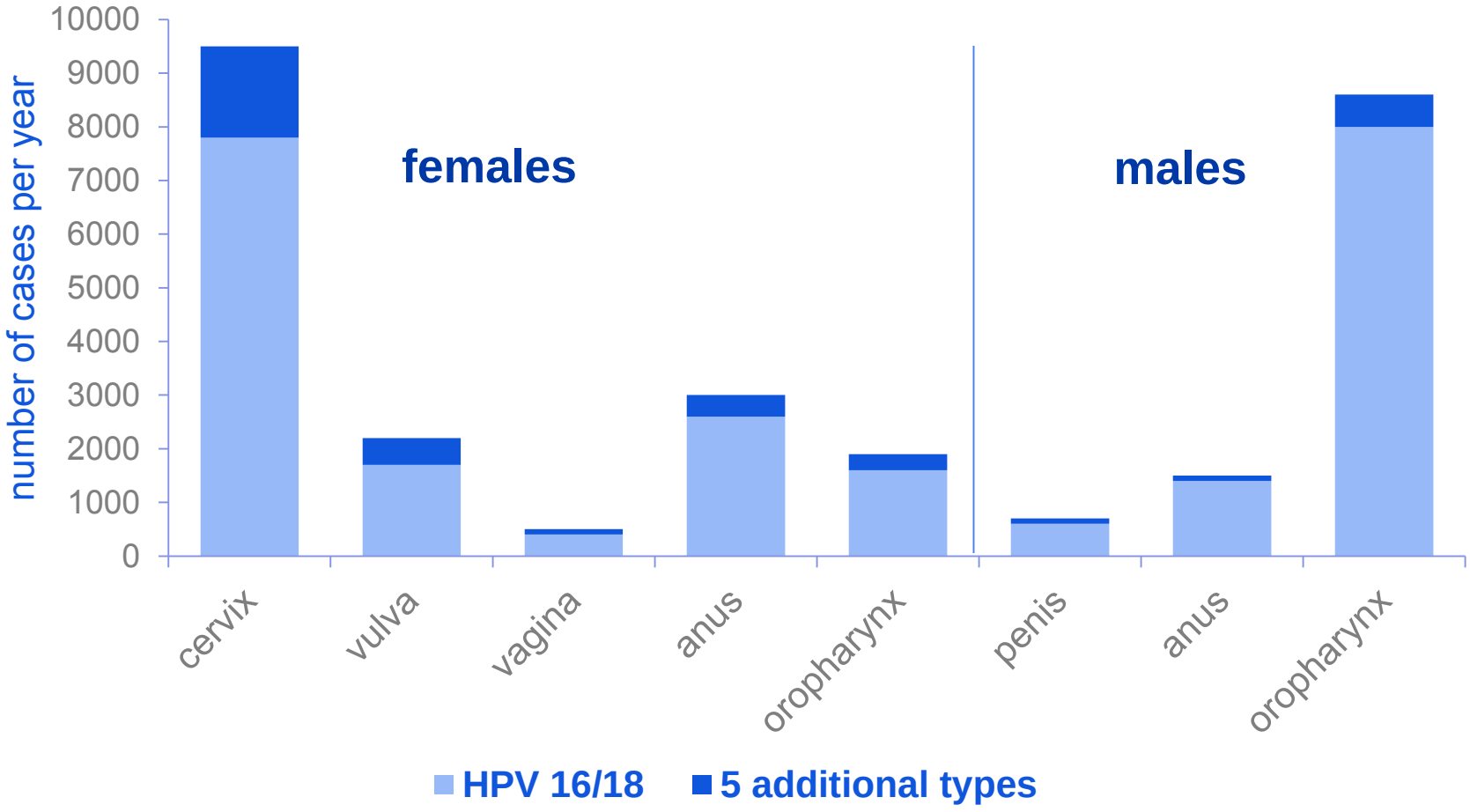
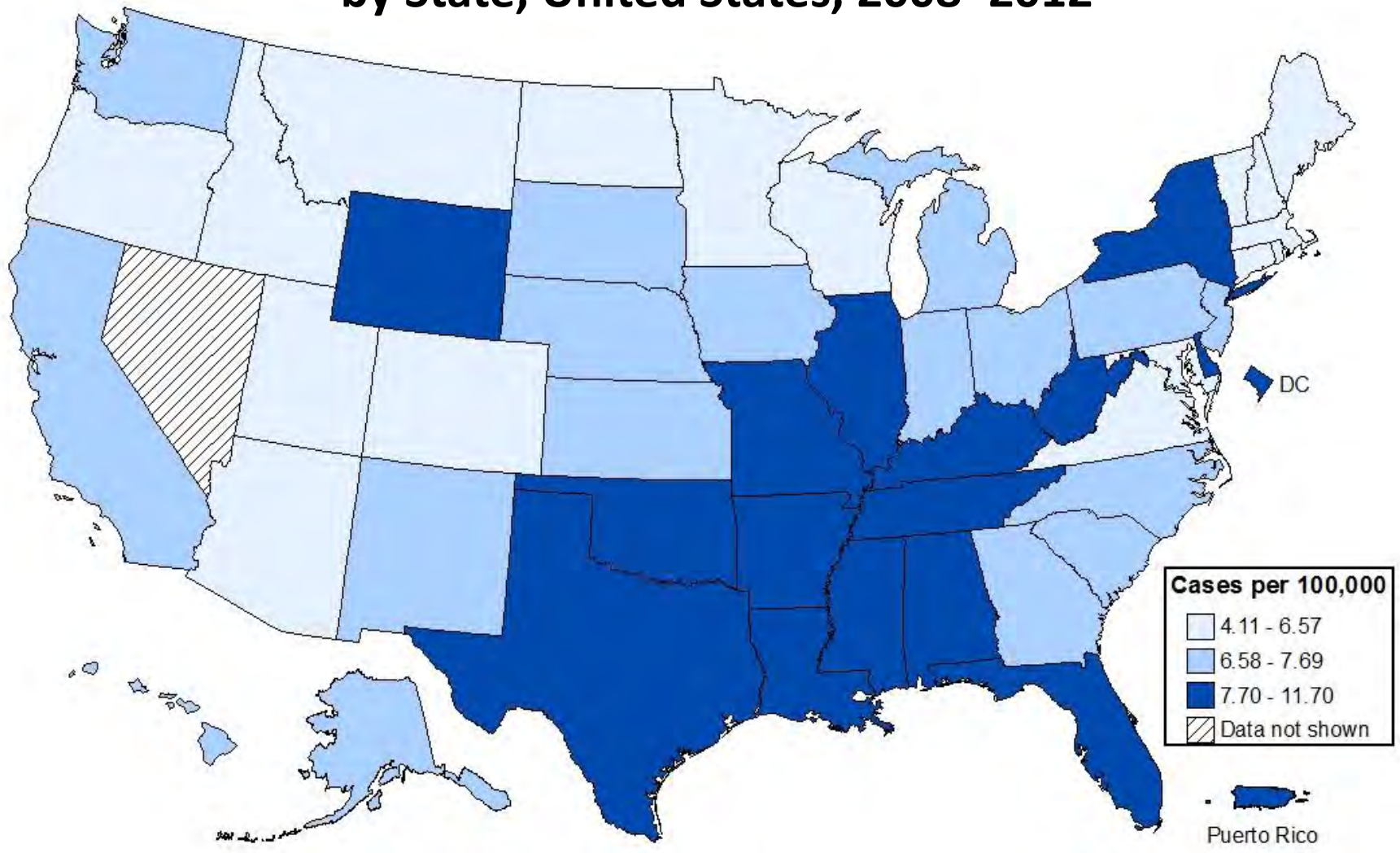
Estimated numbers of HPV-associated cancers attributable to HPV 16/18 and 5 additional types in 9-valent vaccine, United States



Viens et al, http://www.cdc.gov/mmwr/volumes/65/wr/mm6526a1.htm

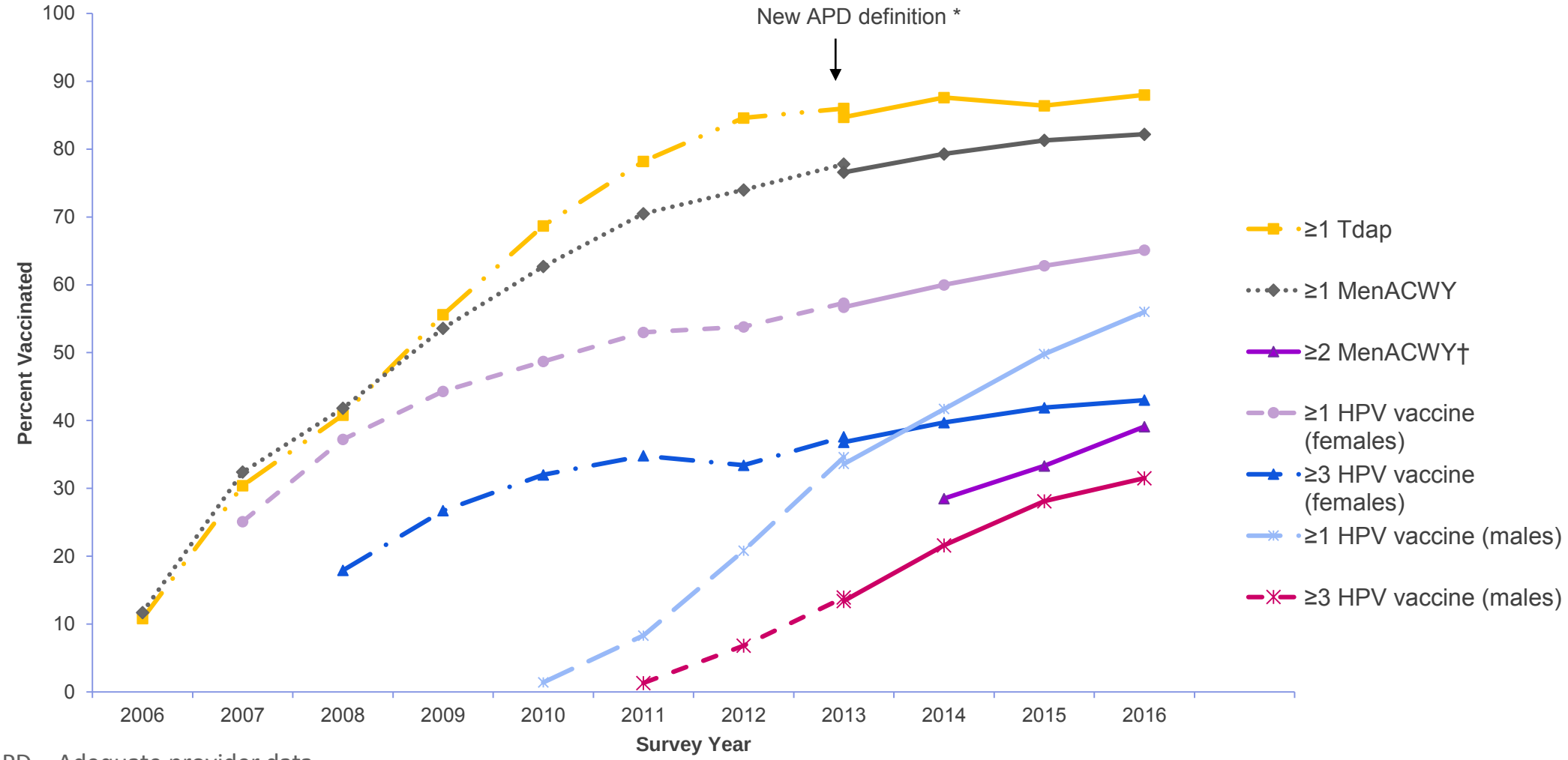
HPV-Associated Cervical Carcinoma Rates by State, United States, 2008–2012



Rate are per 100,000 persons and age-adjusted to the 2000 US standard population.
Data are from population-based registries participating in CDC's National Program of Cancer Registries or NCI's Surveillance, Epidemiology, and End Results Program, meeting USCS publication criteria for all years 2008–2012, and cover about 99% of the US population. Rates were suppressed if the data did not meet USCS publication criteria or if there were fewer than 16 cases.
HPV-associated cancers were defined as cancers at specific anatomic sites with specific cellular types in which HPV DNA frequently is found. All cancers were confirmed histologically. Cervical cancers (ICD-O-3 site codes C53.0–C53.9) were limited to carcinomas (ICD-O-3 histology codes 8010–8671, 8940–8941).
Adapted from: Viens et al. Human Papillomavirus- Associated Cancers—United States, 2008–2012. MMWR 2016;65(26):661-666.


HPV vaccine is cancer prevention.
Talk to the doctor about vaccinating your 11–12 year old sons and daughters against HPV.
#UCanStopHPV

Estimated Vaccination Coverage among Adolescents Aged 13-17 Years, NIS-Teen, United States, 2006-2016



* APD = Adequate provider data

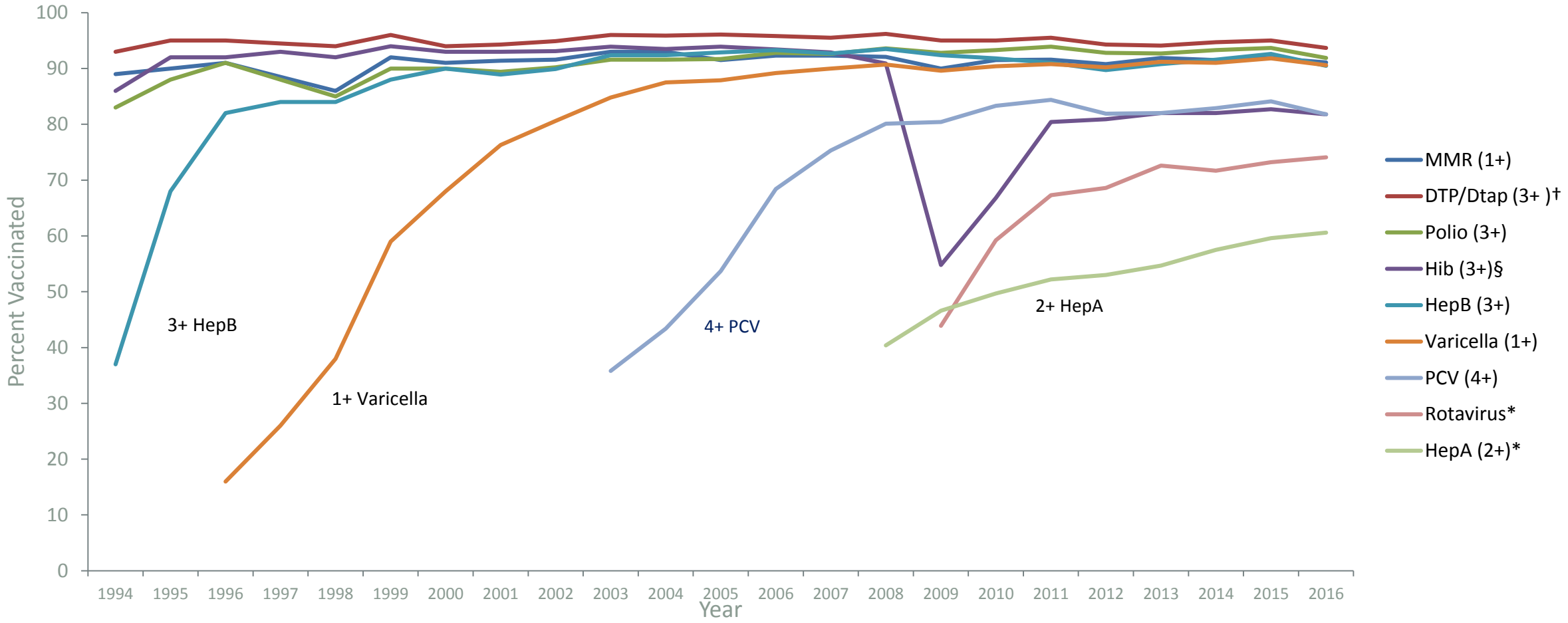
†≥2 doses MenACWY among adolescents aged 17 years

Estimated HPV vaccination coverage among adolescents 13-17 years of age National Immunization Survey-Teen, United States, 2016

	United States
Females	
≥1 HPV	65.1% (63.3-66.8%)
HPV UTD	49.5% (47.6-51.4%)
Males	
≥1 HPV	56.0% (54.3-57.7%)
HPV UTD	37.5% (35.8-39.2%)
All adolescents	
≥1 HPV	60.4% (59.2-61.6%)
HPV UTD	43.4% (42.1-44.7%)

UTD: up to date. HPV UTD includes those with ≥3 doses, and those with 2 doses when the first HPV vaccine dose was initiated before age 15 years and time between the first and second dose was at least 5 months minus 4 days.

Estimated Vaccine Coverage among Children 19-35 Months, National Immunization Survey, United States, 1994-2016



The *Healthy People* 2020 target for coverage is 90% for all vaccines with the exception of rotavirus (80%) and HepA (85%).

† DTP (3+) is not a Healthy People 2020 objective. DTaP (4+) is used to assess Healthy People 2020 objectives.

§ Reflects 3+ doses through 2008, and Full Series (3 or 4 doses depending on type of vaccine received) 2009 and later.

Provider motivation and skill

Parental acceptance

Systems support

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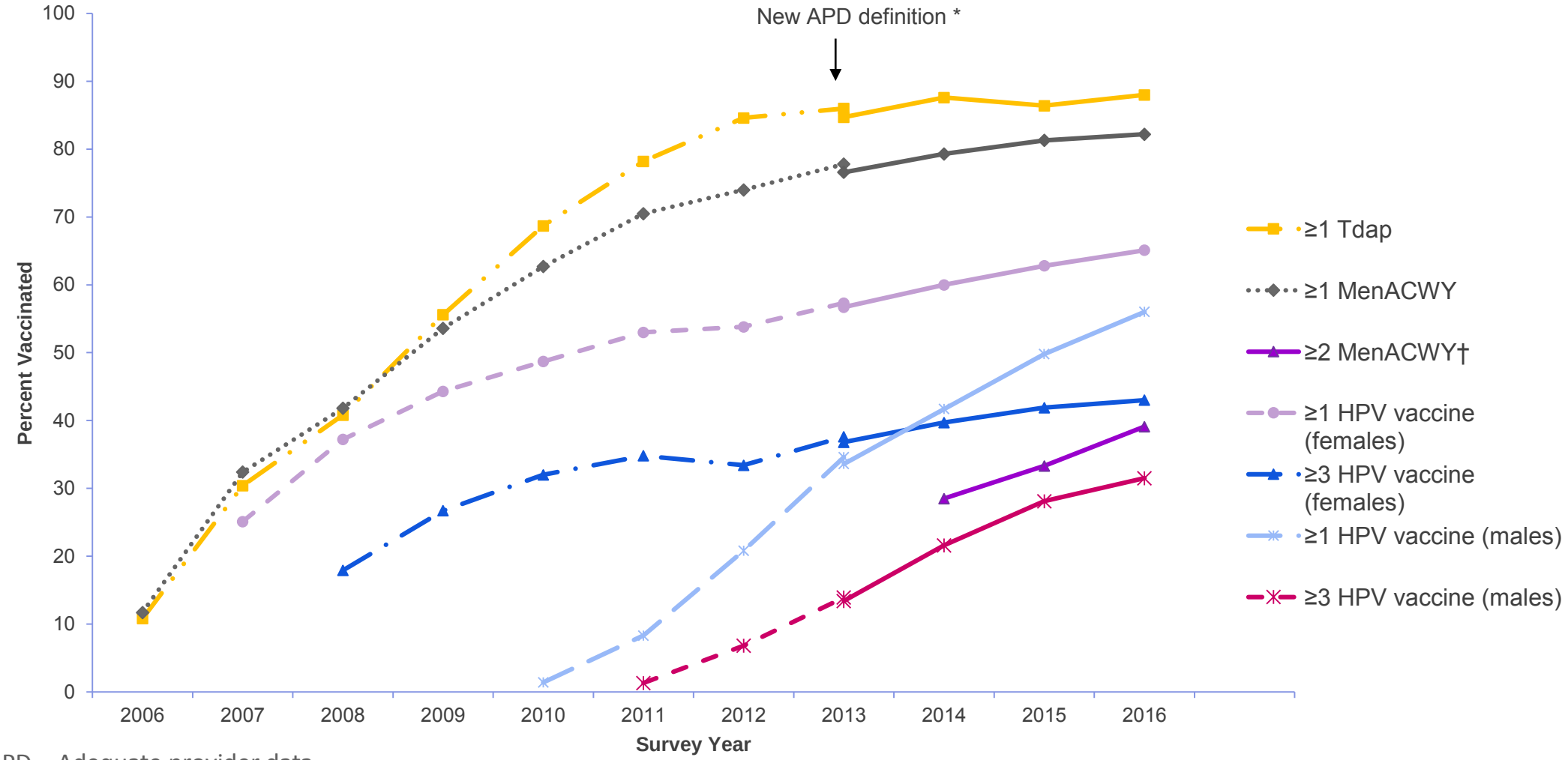

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Lack of provider motivation and skill

Lack of parental acceptance

Barriers

Why Is HPV Vaccine Coverage So Low?

Parents

- Parents are not offered vaccination
- Parents perceive vaccine as optional or unnecessary at that time
- Parents perceive that their providers discouraged vaccination
- Parents want information about vaccine safety
- Parents do not understand the reason to vaccinate at 11 to 12 years of age

Providers

- Providers are reluctant to give multiple shots at one visit
- Providers introduce HPV vaccination at age 11 years but do not recommend it strongly
- Providers recommend vaccination based on their estimation of sexual activity
- Providers have limited experience with HPV and underestimate risk
- Providers perceive HPV as more emotionally charged than other vaccines
- Delaying vaccination leads to nonvaccination

Both providers and parents know they are often unaware of the timing of sexual debut.

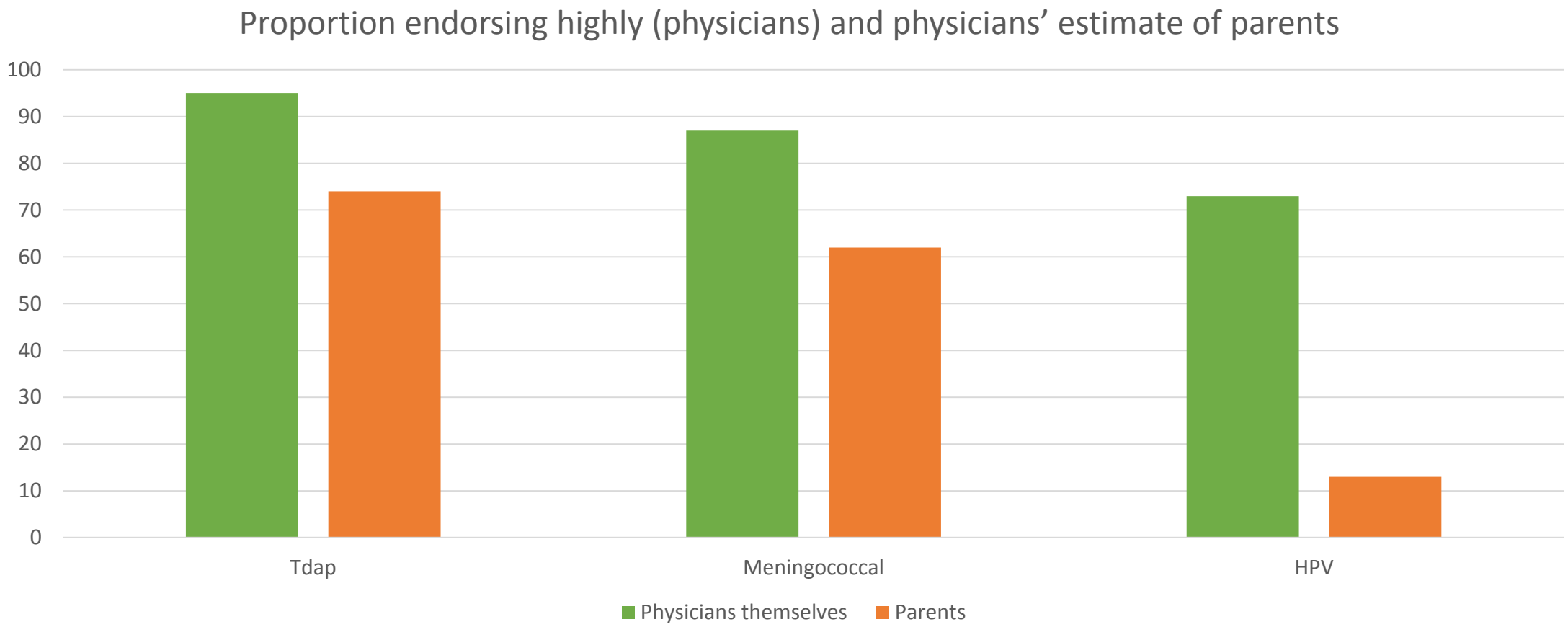
Perkins RB et al. Pediatrics 2014;134:e666-e674

Reasons for Not Vaccinating Adolescents with HPV Vaccine, Unvaccinated Adolescents* Aged 13-17 Years, NIS-Teen, United States, 2015

Parents of Girls		Parents of Boys	
	% (95% CI)		% (95% CI)
Not needed/necessary	19.6 (16.8-22.8)	**Not needed/necessary**	20.6 (18.2-23.3)
Not sexually active	13.9 (10.7-17.8)	**Not recommended**	17.7 (15.3-20.3)
Safety concerns/ side effects	13.4 (11.3-15.8)	**Lack of knowledge**	12.9 (11.2-15.0)
Lack of knowledge	11.7 (9.2-14.8)	**Safety concerns/ side effects**	9.3 (7.7-11.1)
Not recommended	9.5 (7.7-11.6)	**Not sexually active**	8.3 (7.0-9.9)

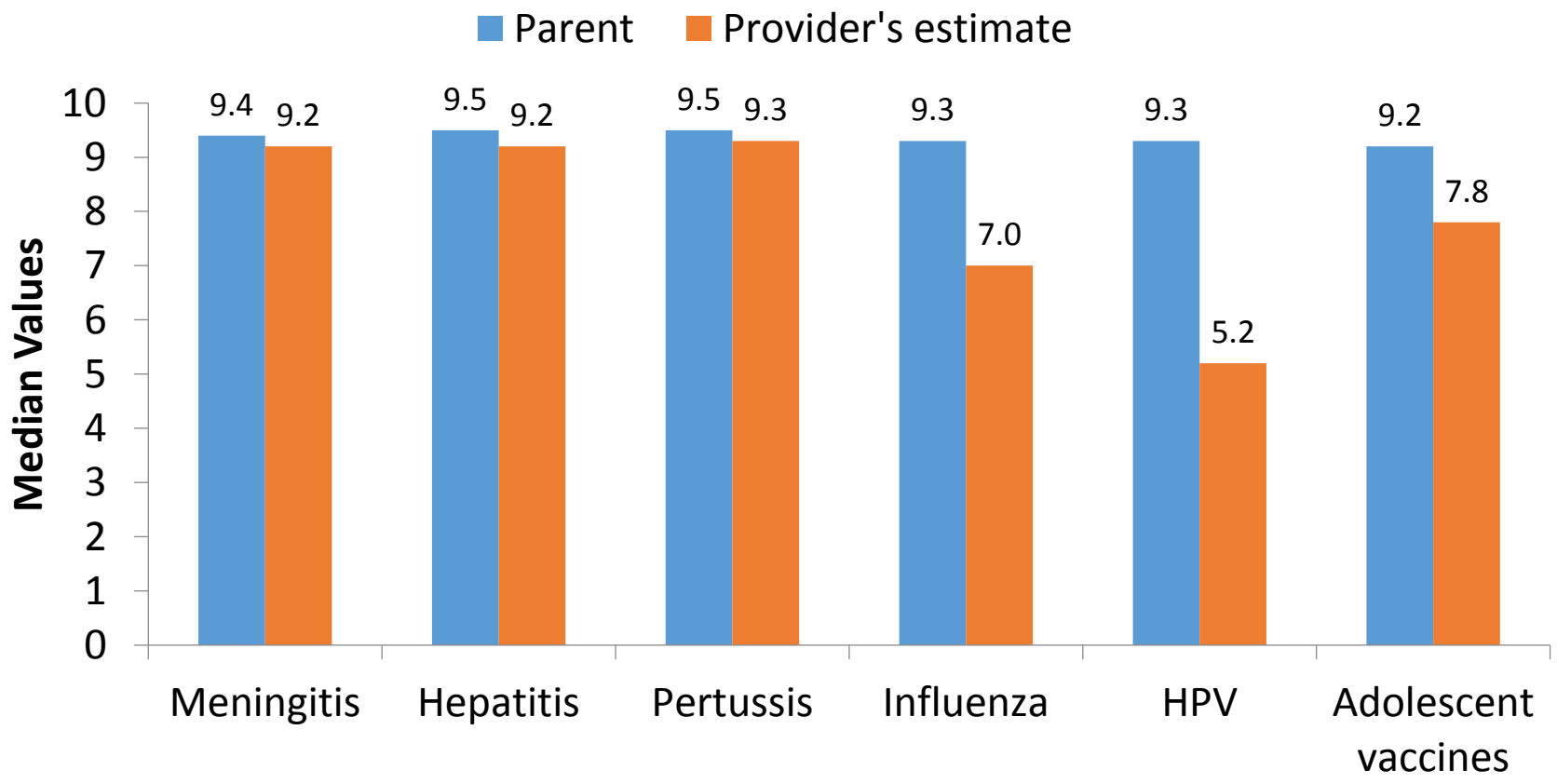
* Analysis limited to adolescents with zero HPV vaccine doses, whose parents reported that they were not likely to seek HPV vaccination for their adolescent in the next 12 months

Physicians' Perceptions of Adolescent Vaccine Endorsement for Patients Ages 11-12, 2014



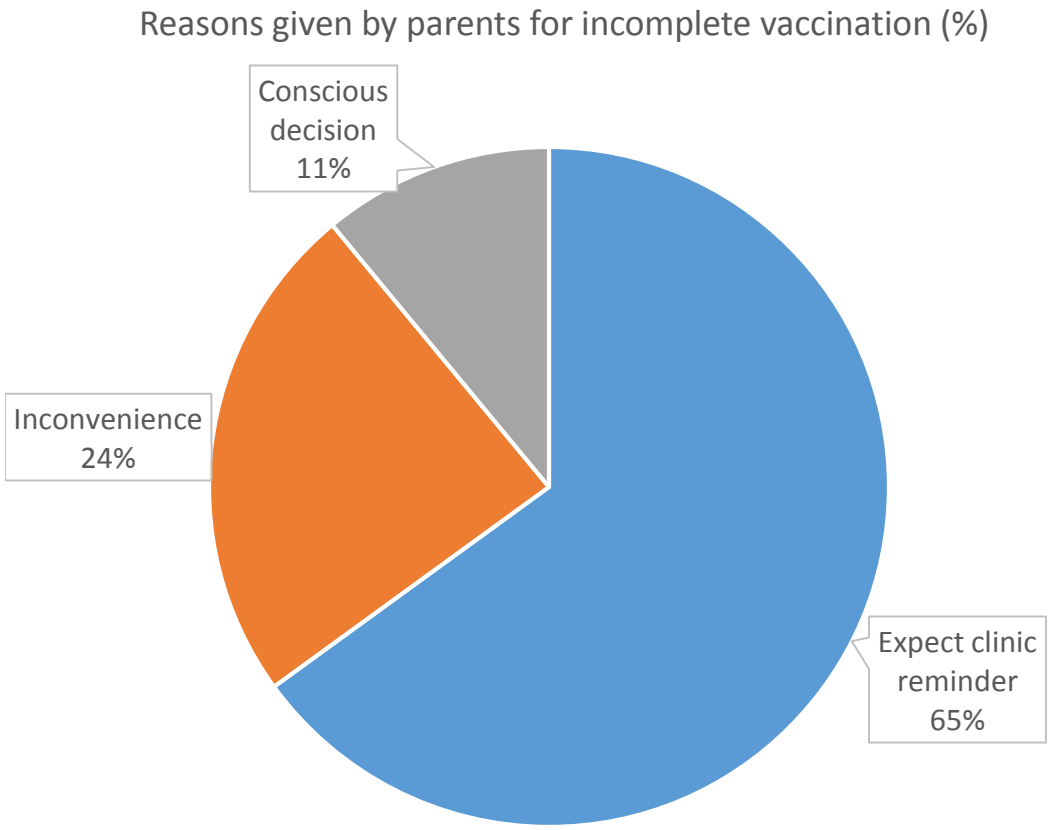
Gilkey MB et al, Preventive Medicine 2015;77:181-185

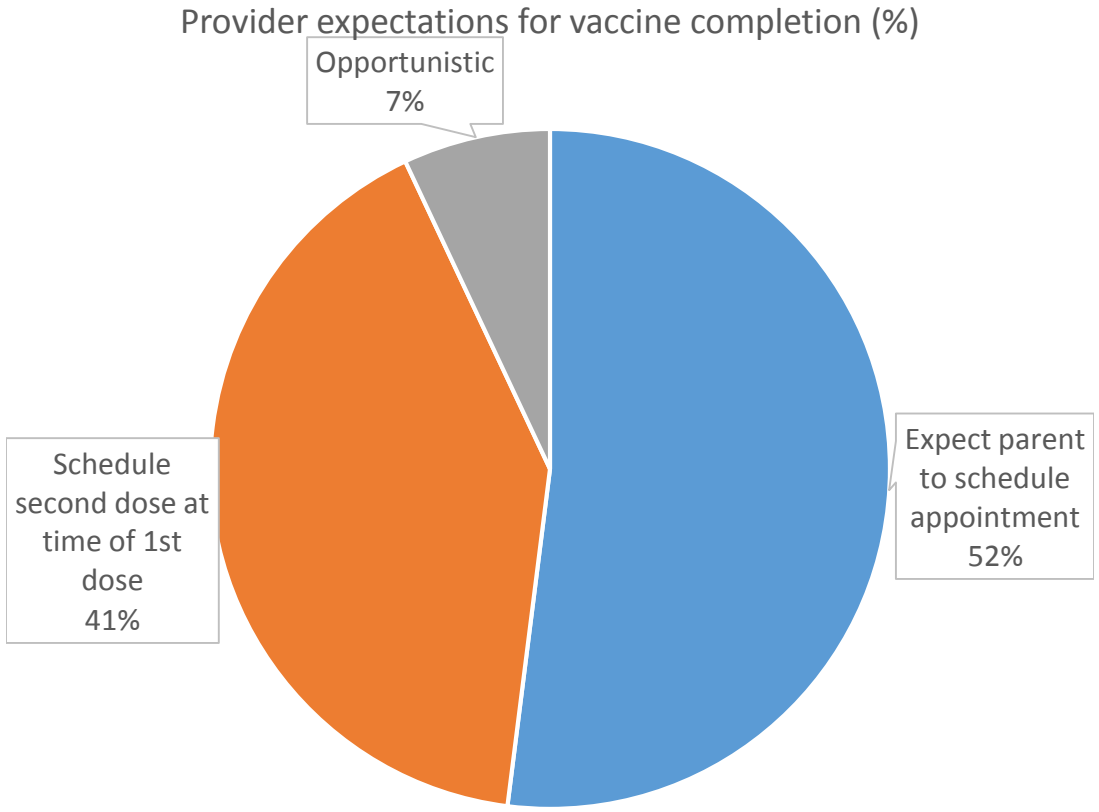
Parent opinions on the importance of vaccines and provider estimates of parental responses



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

Why don’t adolescents finish the HPV vaccine series?





Perkins RB et al. Human Vaccines and Immunotherapeutics, 2016

What can we do about it?

HPV Vaccination: What Works

Parents

- Parents want to prevent cancer
- Parents trust their provider's recommendation
- Parents think benefits outweigh risks
- Parents want a strong recommendation

Providers

- Providers emphasize cancer prevention
- Providers normalize the HPV vaccine and coadminister with other vaccines
- Providers give a strong recommendation

Perkins RB et al. Pediatrics 2014;134:e666-e674

What can healthcare providers do?

- Make an effective recommendation for HPV vaccination as cancer prevention for every 11- or 12-year-old patient
- Assess HPV vaccine coverage for each provider in your practice and develop an office-wide strategy to improve it
- Engage the entire practice – not just the healthcare providers – in committing to improve HPV vaccine coverage
- Implement systems strategies to improve HPV vaccine coverage

Now that Sophia is 11, she is due for vaccinations today to help protect her from meningitis, HPV cancers, and pertussis.

YOU ARE THE KEY TO CANCER PREVENTION

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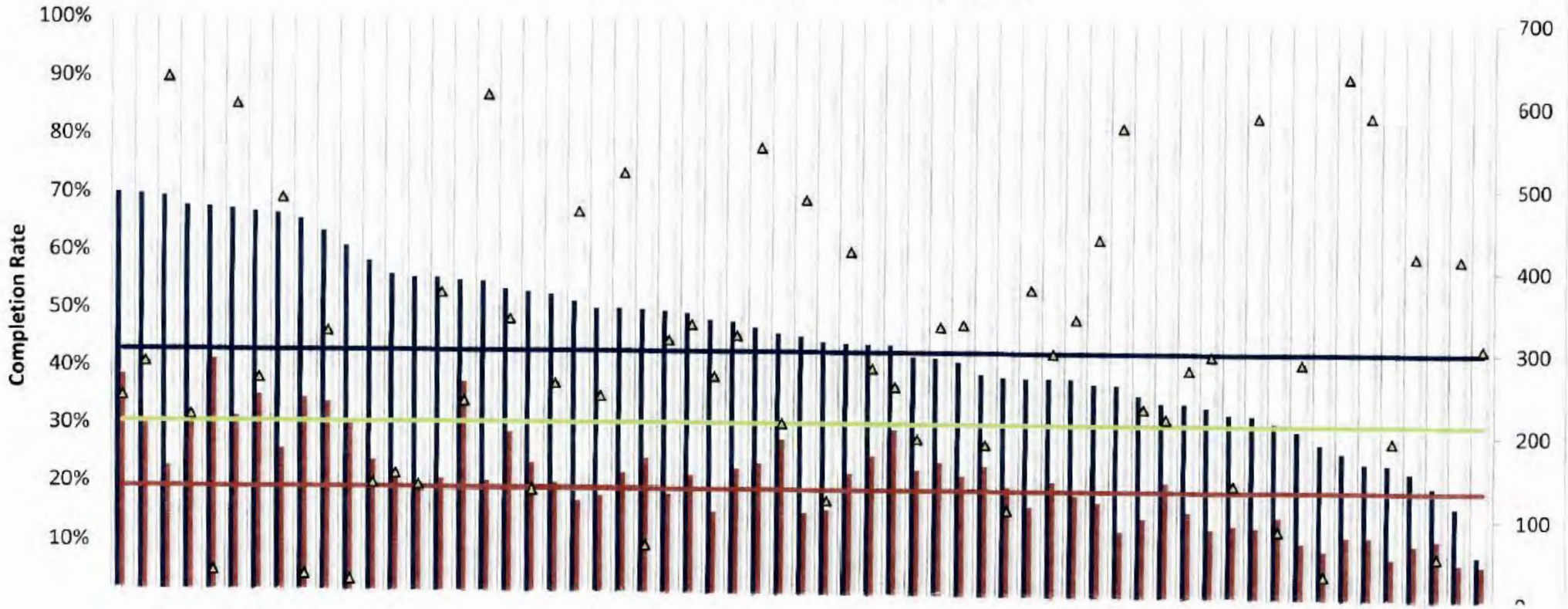
Vaccination Series Started and Completed Rates By Provider

Active Pediatric Providers, Patients Ages 13 - 17



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Systems Strategies to Improve HPV Vaccine Coverage

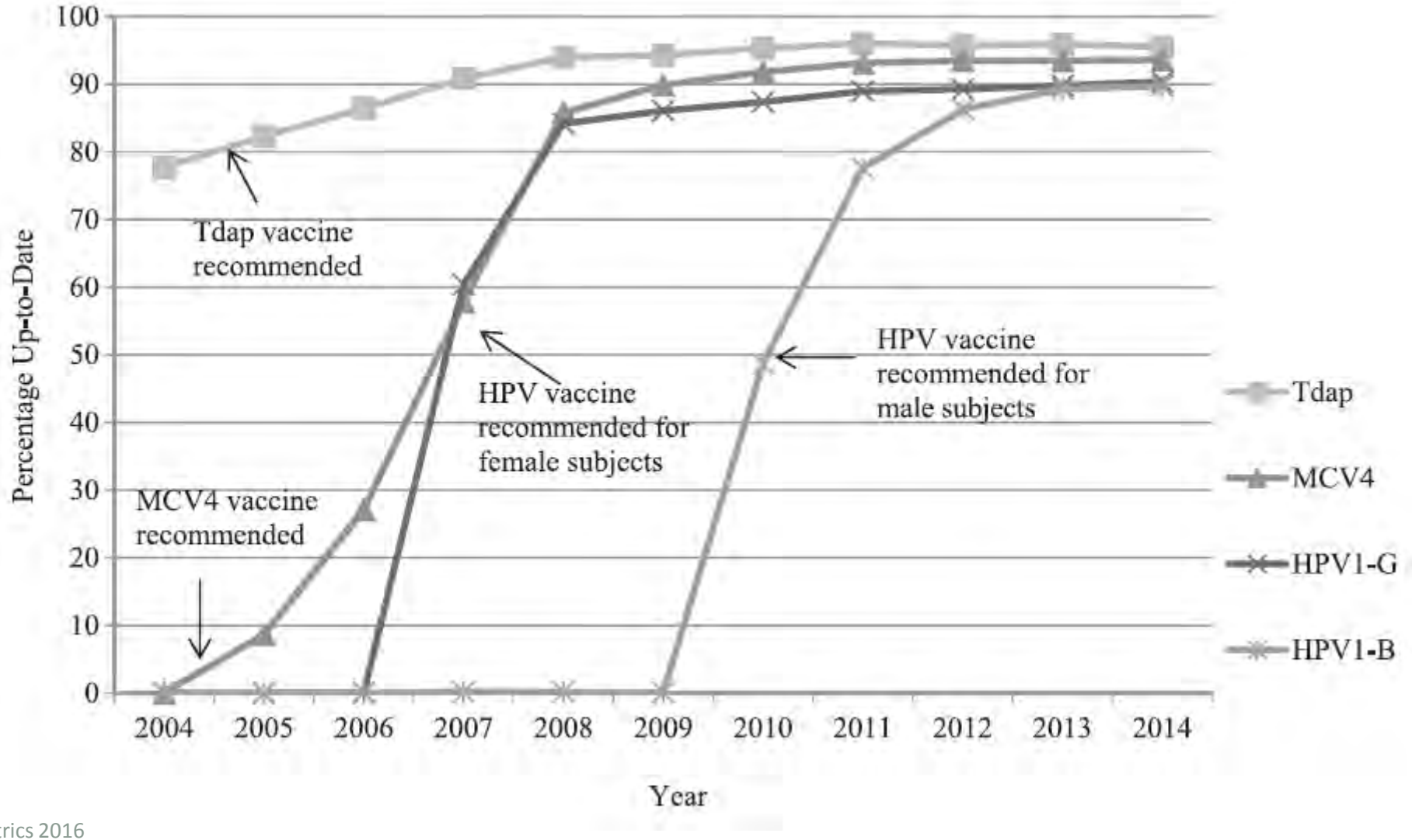
- Establish standing orders for HPV vaccination beginning at age 11-12 years in your practice
- Conduct reminder/recall beginning at 11-12 years of age
- Assess HPV vaccine coverage at every visit and prompt clinical staff to give HPV vaccine at that visit
- Schedule return visit for next dose before the patient leaves the office
- Document each dose in the child's medical record and the state's immunization information system

Tactics for Successful HPV Vaccine Delivery, Denver Health

- Routine use of a robust immunization registry for multiple functions, including recording vaccine history and recommended needed vaccines at every visit
- Medical assistants check vaccine registry for recommended vaccines at every visit
- Standing order for routine immunizations
- Vaccines are given early in the visit when possible
- Education for providers to present Tdap, MCV, and HPV as a standard "bundle" of adolescent immunizations
- Provider-level "report cards" with adolescent vaccination coverage rates
- Vaccination drives at school-based health centers

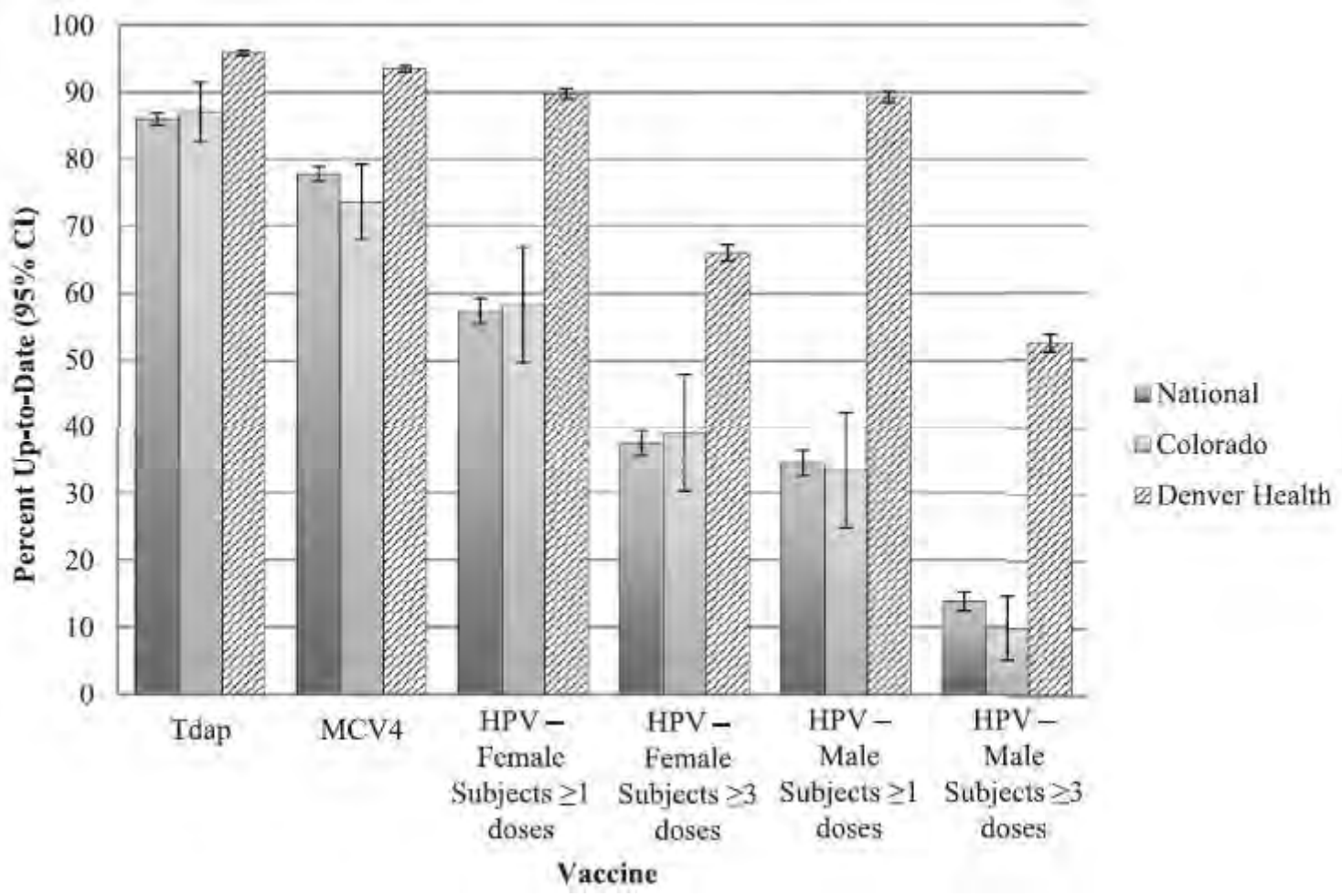
Farmer et al, Pediatrics 2016

Immunization Rates for Adolescents Denver Health, 2004-2014



Farmer et al, Pediatrics 2016

National, State, and Denver Health Immunization Rates, 2013



Farmer et al, Pediatrics 2016

What Can Community- and State-Level Organizations Do?

- Convene and commit to implementing effective strategies
- Immunization programs: AFIX focused on adolescent immunization
- Provider organizations: help members develop the motivation and skills to make an effective recommendation for HPV vaccination
- Cancer programs: motivate immunization providers to prevent cancers caused by HPV in their patients
- Health care payers: use HPV vaccine coverage as a quality measure
- All organizations: increase public awareness and support for HPV vaccination as cancer prevention
- All organizations: promote or implement systems strategies to improve HPV vaccine coverage

Thank you

www.cdc.gov/vaccines
www.cdc.gov/hpv
www.cdc.gov/vaccinesafety

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov