Increasing HPV Vaccine Coverage

Cheyenne Jim

IHS Immunization Program Analyst

Photos courtesy of the Alaska Native Tribal Health Consortium and the Indian Health Service

Advisory Committee on Immunization Practices Recommendation

- Routine HPV vaccination for males and females ages 11-12 years
  - Catch up vaccination for males 13-21 years
    - Can be given to males 22-26 years at high risk
  - Catch up vaccination for females 13-26 years
- Vaccine can be given starting at age 9 years to males and females
- 3 dose series
  - Recommended schedule is 0, 1-2 months, 6 months

CDC. Quadrivalent Human Papillomavirus Vaccine: Recommendations of ACIP. MMWR 2007;56(RR02):1-24.

Licensed HPV vaccines

Characteristics of the three human papillomavirus (HPV) vaccines licensed for use in the United States

Characteristic	**Bivalent (2vHPV)**	**Quadrivalent (4vHPV)**	**9-valent (9vHPV)**
Brand name	Cervarix	Gardasil	Gardasil 9
Virus Like Particles	16, 18	6, 11, 16, 18	6, 11, 16, 18, 31, 33, 45, 52, 58
Manufacturer	GlaxoSmithKline	Merck and Co., Inc.	Merck and Co., Inc.
Volume per dose	0.5 ml	0.5 ml	0.5 ml
Administration	Intramuscular	Intramuscular	Intramuscular
Recommended for	Females	Females and Males	Females and Males

Nine-Valent HPV (9vHPV)

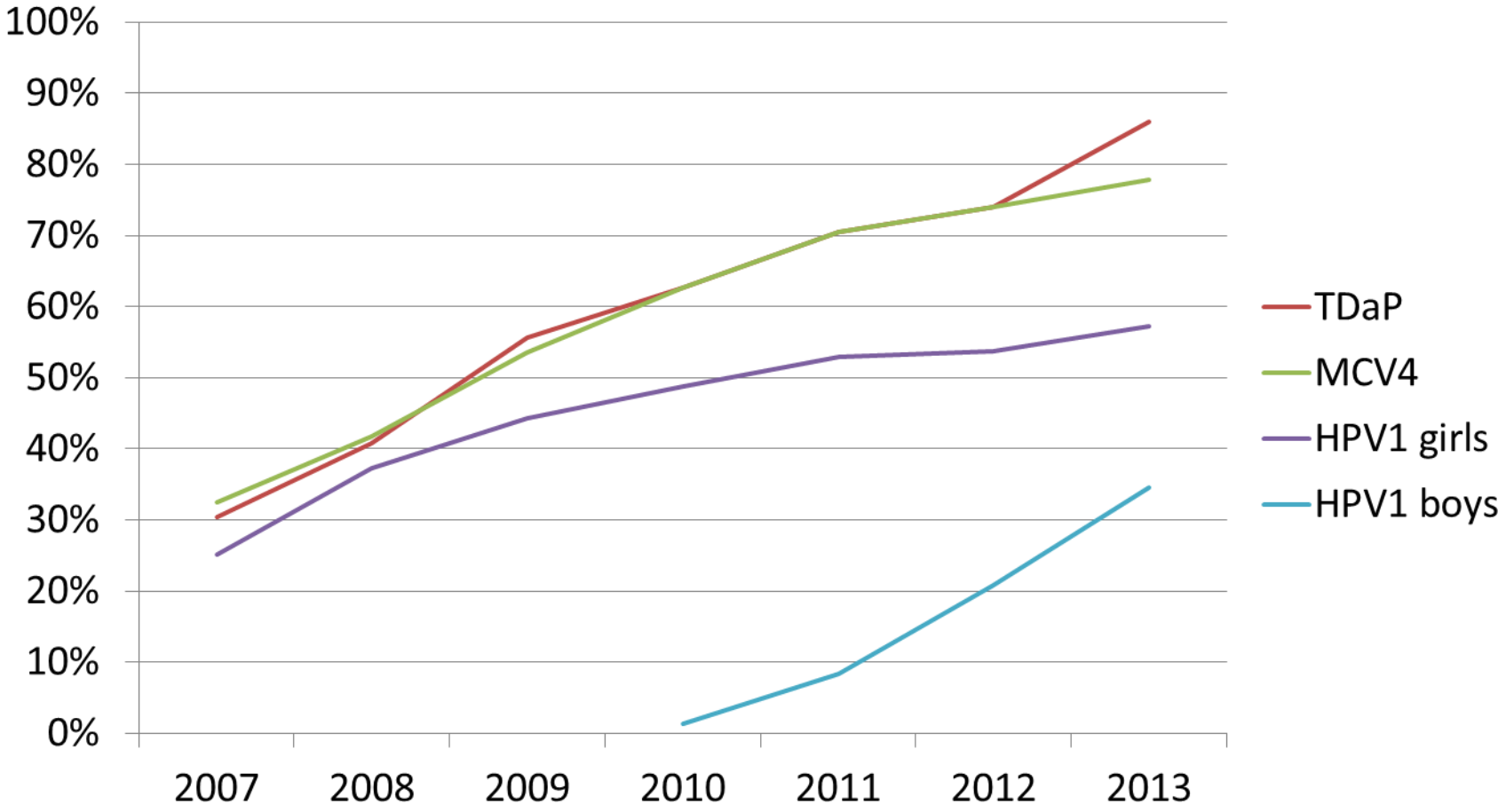
- February 2015 ACIP meeting
  - HPV vaccine recommendation updated to include 9vHPV
  - No HPV vaccine preference stated
- Ideally should complete the series with the same HPV vaccine, BUT can complete series with a different HPV product if not available
- Providers should NOT wait for HPV9 to begin series
- Pending Issues (June ACIP meeting)
  - Booster dose of 9vHPV for those who completed series with different vaccine
  - Discussion re: 2 dose schedules

HPV9 Vaccine Availability

- Currently available for private purchase
- Available through VFC in some states as of May 1st
- State variation in roll out

HPV VACCINE COVERAGE

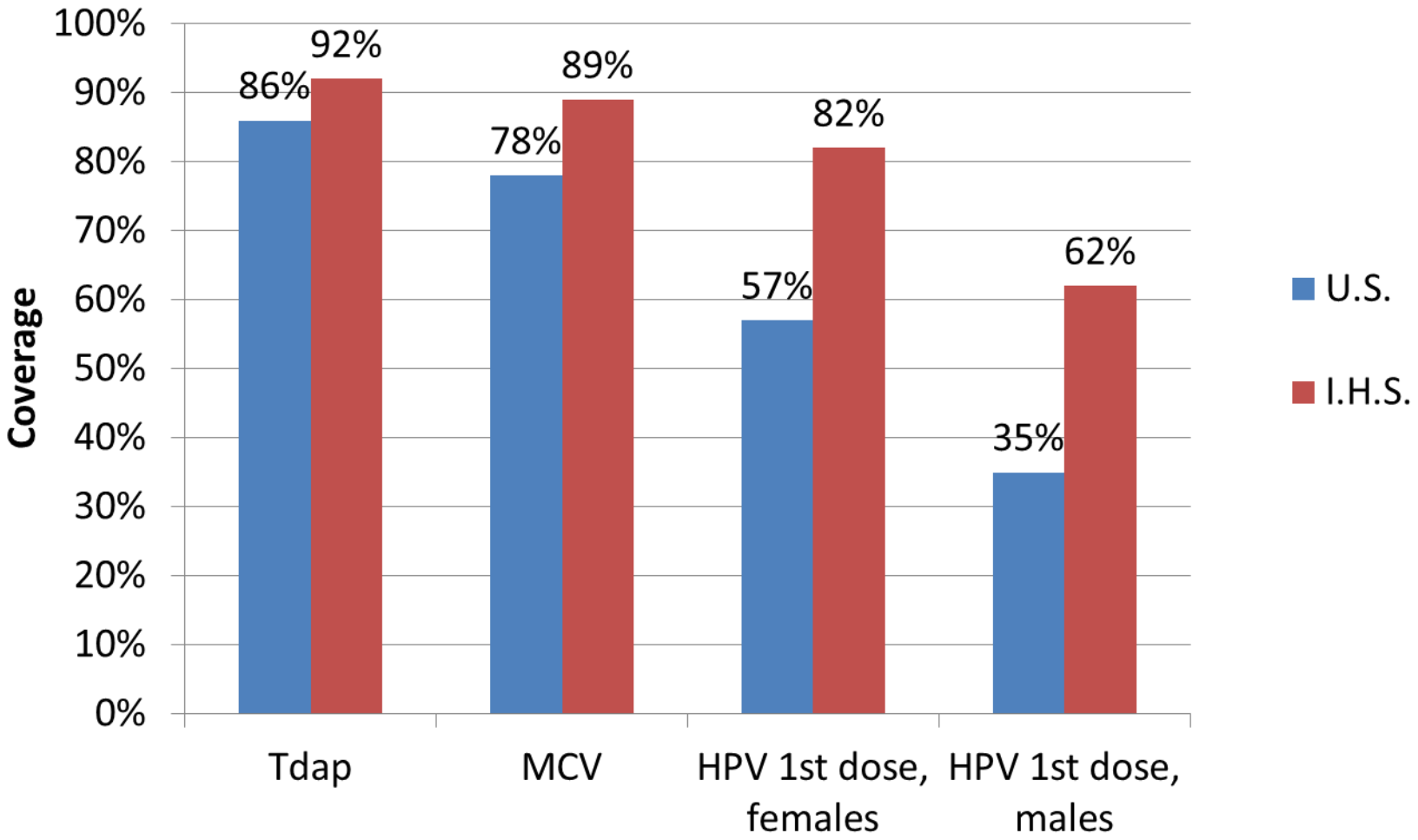
U.S. Adolescent Vaccine Coverage 13-17 Year Olds, 2007-2013



Data Source: National Immunization Survey – Teen. http://www.cdc.gov/vaccines/imz-managers/coverage/nis/teen/index.html

National vs. IHS Vaccination Coverage

2013, Ages 13-17 years



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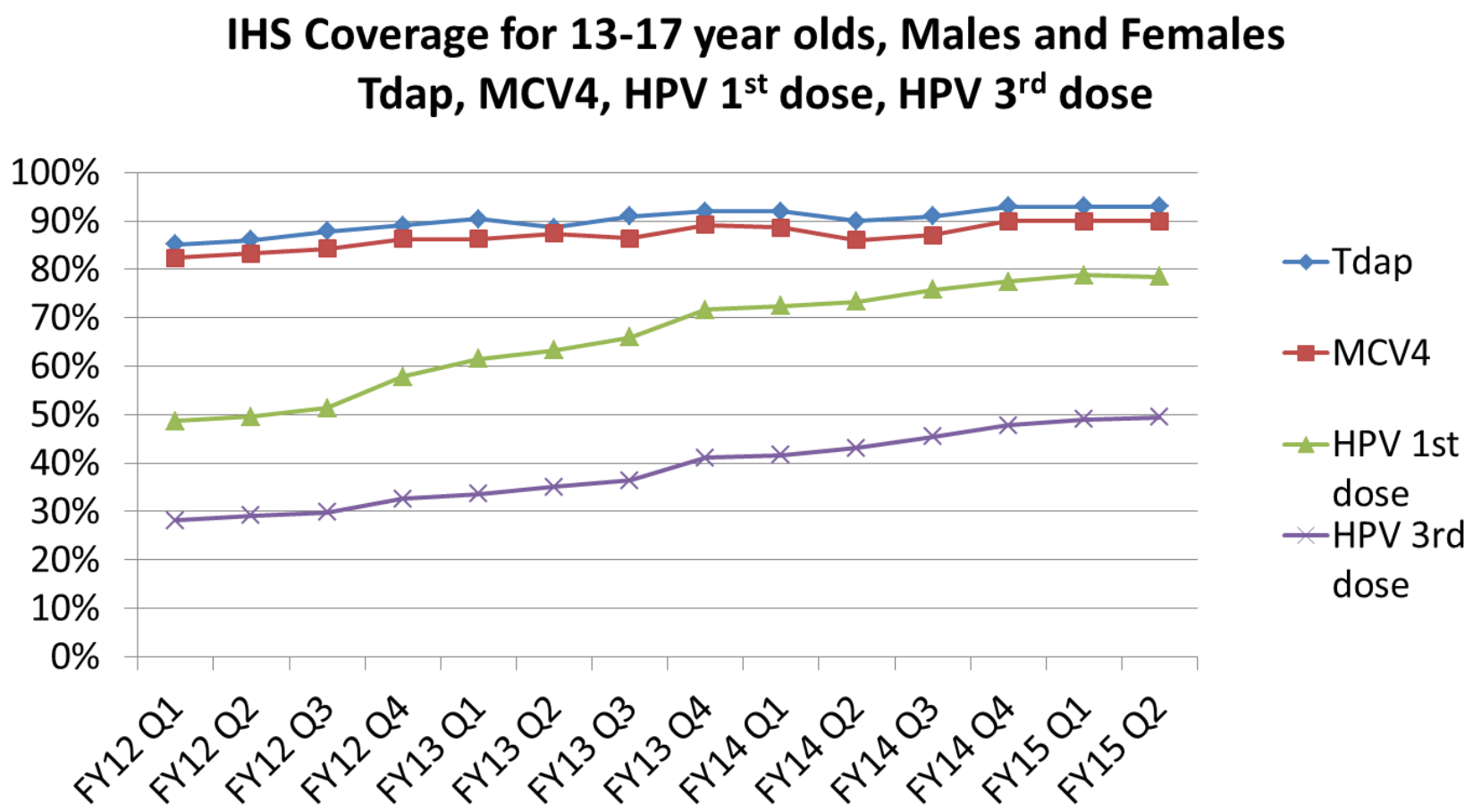
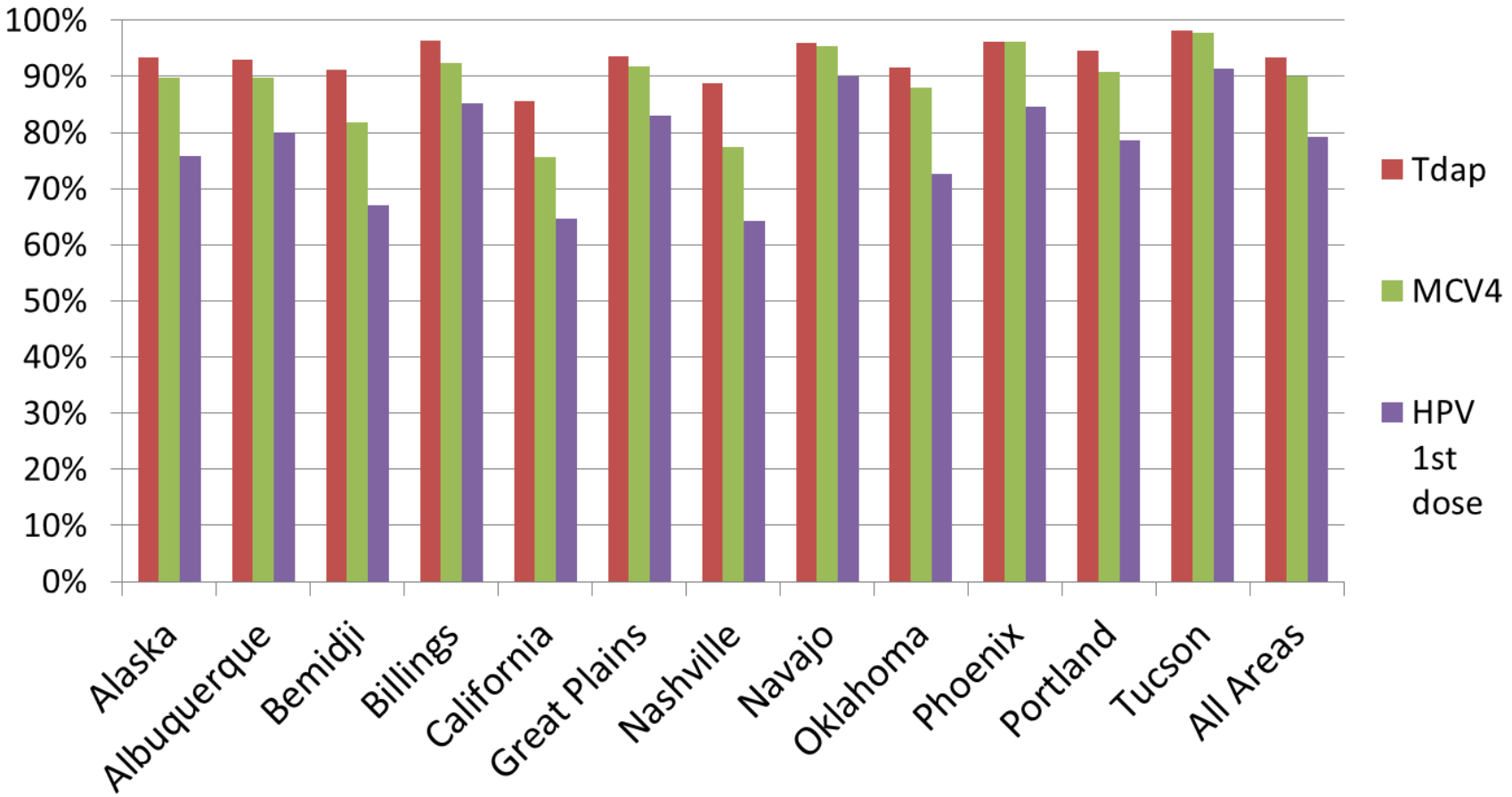


* The Adolescent Immunization Report includes all adolescents meeting the electronically-determined “Active Clinical” user definition – i.e. 2 primary care visits in the last 3 years.

IHS Quarterly Immunization Reports. FY 2015 Quarter 2. Available at: http://www.ihs.gov/epi/index.cfm?module=epi_vaccine_reports

Coverage by IHS Area
Tdap, MCV4, and HPV 1st dose



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IHS HPV VACCINE PROJECT

IHS HPV Vaccine Project

- Five IHS Areas
  - Navajo, Oklahoma City, Nashville, Portland, Great Plains
- 9 Best Practice and 10 Intervention Sites
  - Interviews to identify best practices and barriers
  - Intervention Sites
    - Identify barriers to HPV vaccination
    - Identify and implement best practices
    - Monitor HPV vaccine coverage

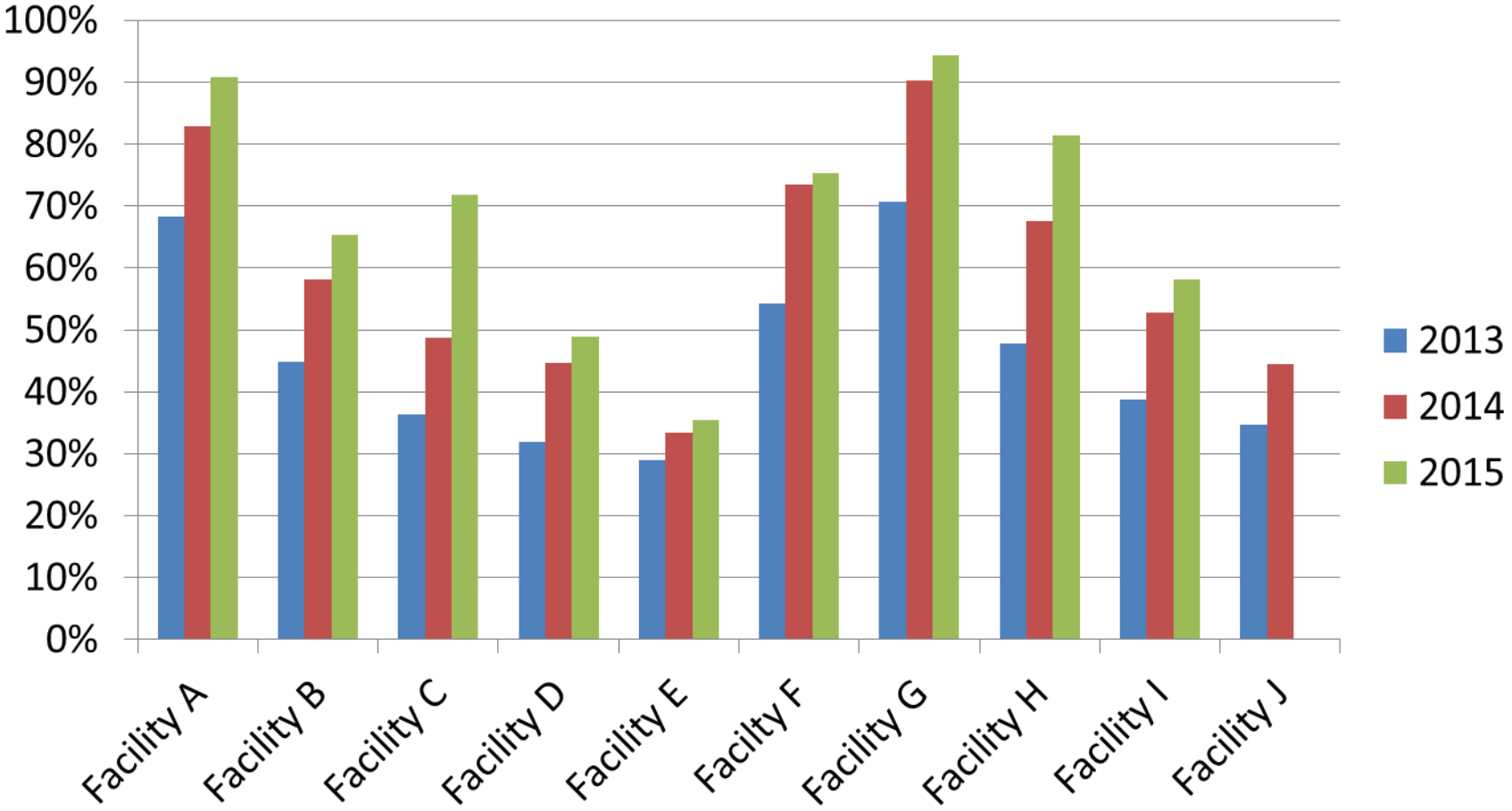
Preliminary Findings

- Reminders already in place at all sites
- All reported simultaneous administration of all recommended adolescent vaccines
  - Tdap, MCV4, and HPV
- Standing orders, reminder/recall strategies in place at most sites
  - Intervention sites reported less consistent implementation
- Best Practice sites more likely to provide nurse-only visits
- Best Practice sites more likely to provide HPV information/education outside the clinic

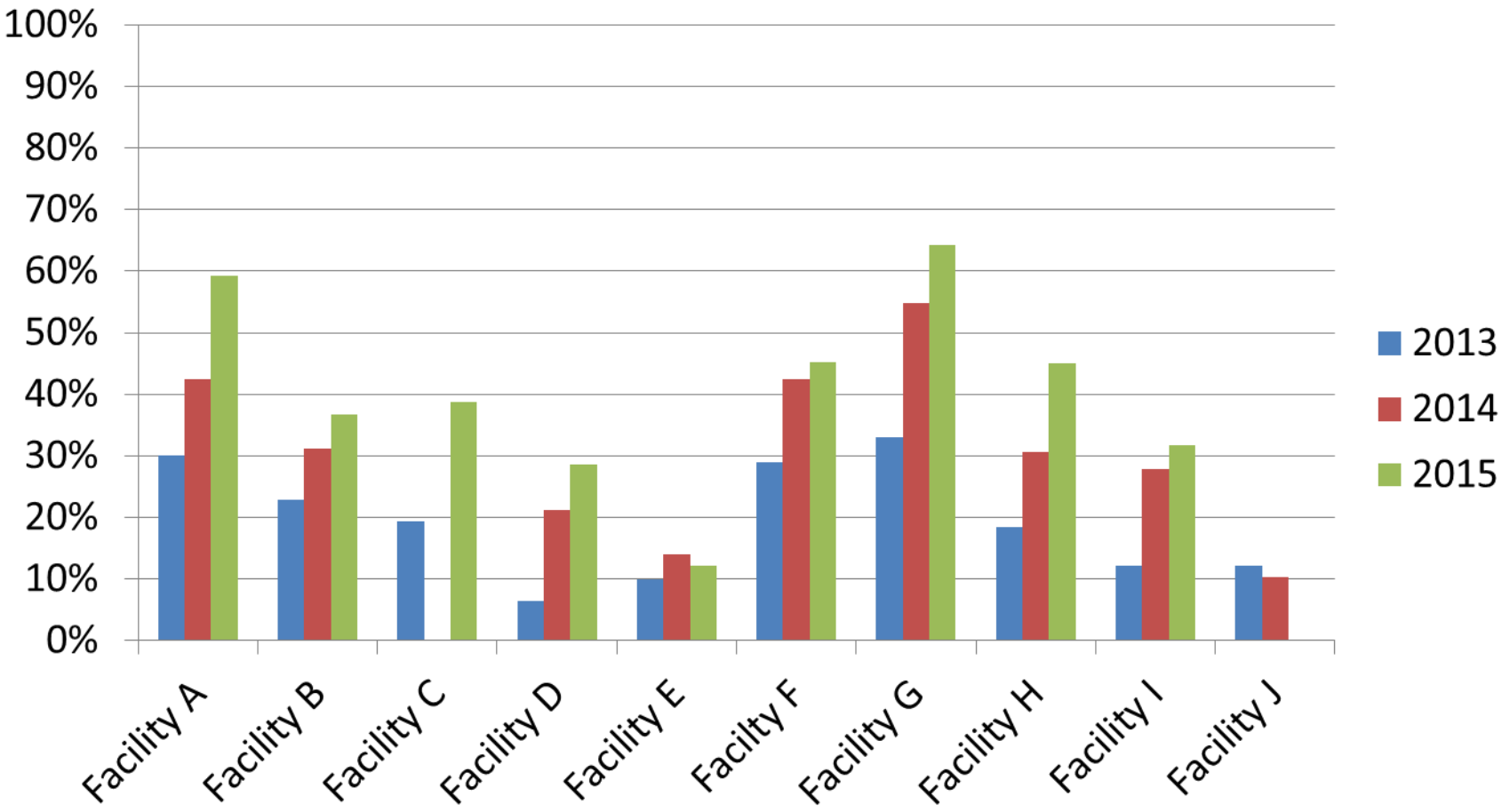
Interventions Implemented

- Missed opportunities and missing data analysis
- Reminder/recall strategies
  - Phone calls, magnets, recording of date for next dose on card for patient
- Provider education
  - Standing orders
  - Making a strong recommendation
- Establish nurse-only immunization clinics
- Information through health fairs, schools, newsletters, other community events
  - Some sites vaccinated outside the clinic

HPV 1st dose Vaccine Coverage, Pre/Post Intervention Males and Females



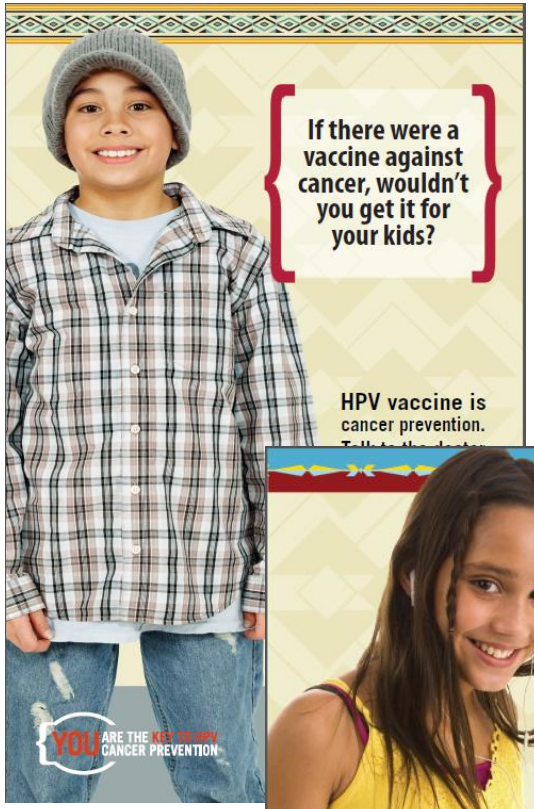
HPV 3rd dose Vaccine Coverage, Pre/Post Intervention Males and Females

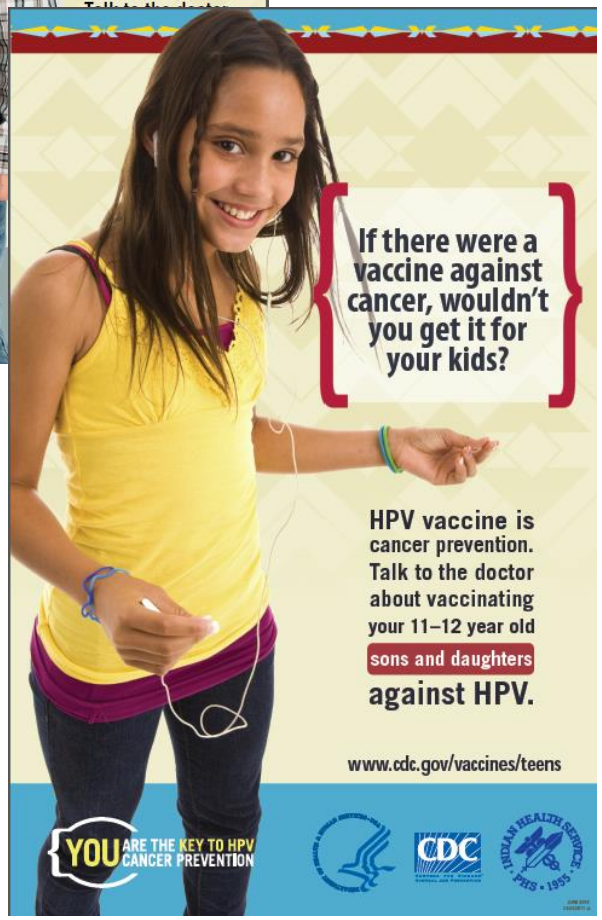


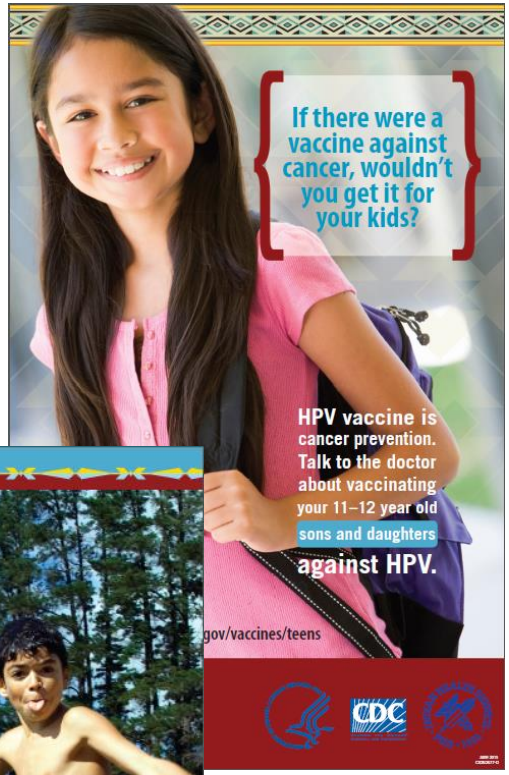
Conclusion

- Multi-faceted approaches including evidence-based practices are key
- Increases in both HPV 1 dose and HPV 3 dose coverage at all intervention facilities
  - Mean increase in HPV vaccine series initiation (dose 1)
    - 21.6% (range 6.4% - 35.4%)
  - Mean increase in HPV vaccine series completion (dose 3)
    - 18.4%% (range 2.2% - 29.1%).

Free Resources







Free Resources

- CDC Education Resources
  - Free posters
    - http://www.cdc.gov/vaccines/who/teens/products/print-materials.html?tab=2#TabbedPanels1
  - You Are The Key
    - http://www.cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html
- Immunization Action Coalition
  - http://www.immunize.org/hpv/
- Minnesota Department of Health
  - Provider videos re: making a strong recommendation
    - http://www.health.state.mn.us/divs/idepc/immunize/hcp/adol/hpvvideos.htm

HPV Vaccine Coverage Improvements: GIMC 2014 to 2015

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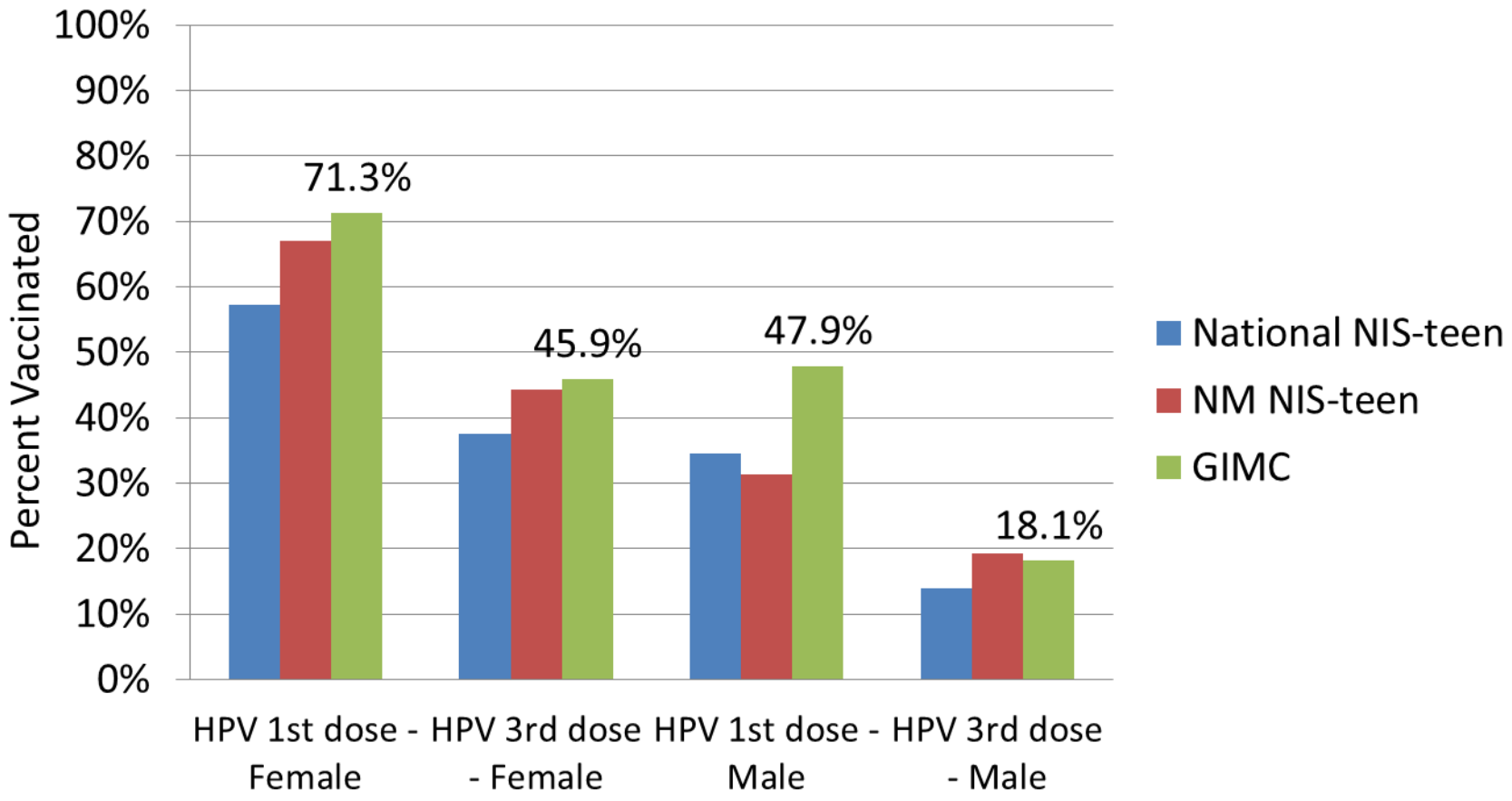
Deputy Chief of Pediatrics
Medical Consultant to the Child Protection Team
Gallup Indian Medical Center (GIMC)
Gallup, New Mexico

Gallup Indian Medical Center

- Indian Health Service (IHS) Hospital & Clinics
- Inpatient, Emergency Department (ED), Urgent Care Clinic (UCC), Pediatrics and Family Medicine Clinics
- Deliveries = ~600-700 per year
- Pediatrics Clinic = ~15,000 visits per year
- Peds & Family Med = Preventive Care Visits
- Demographics = Native American

2013
HPV Vaccine Coverage
13-17 year olds



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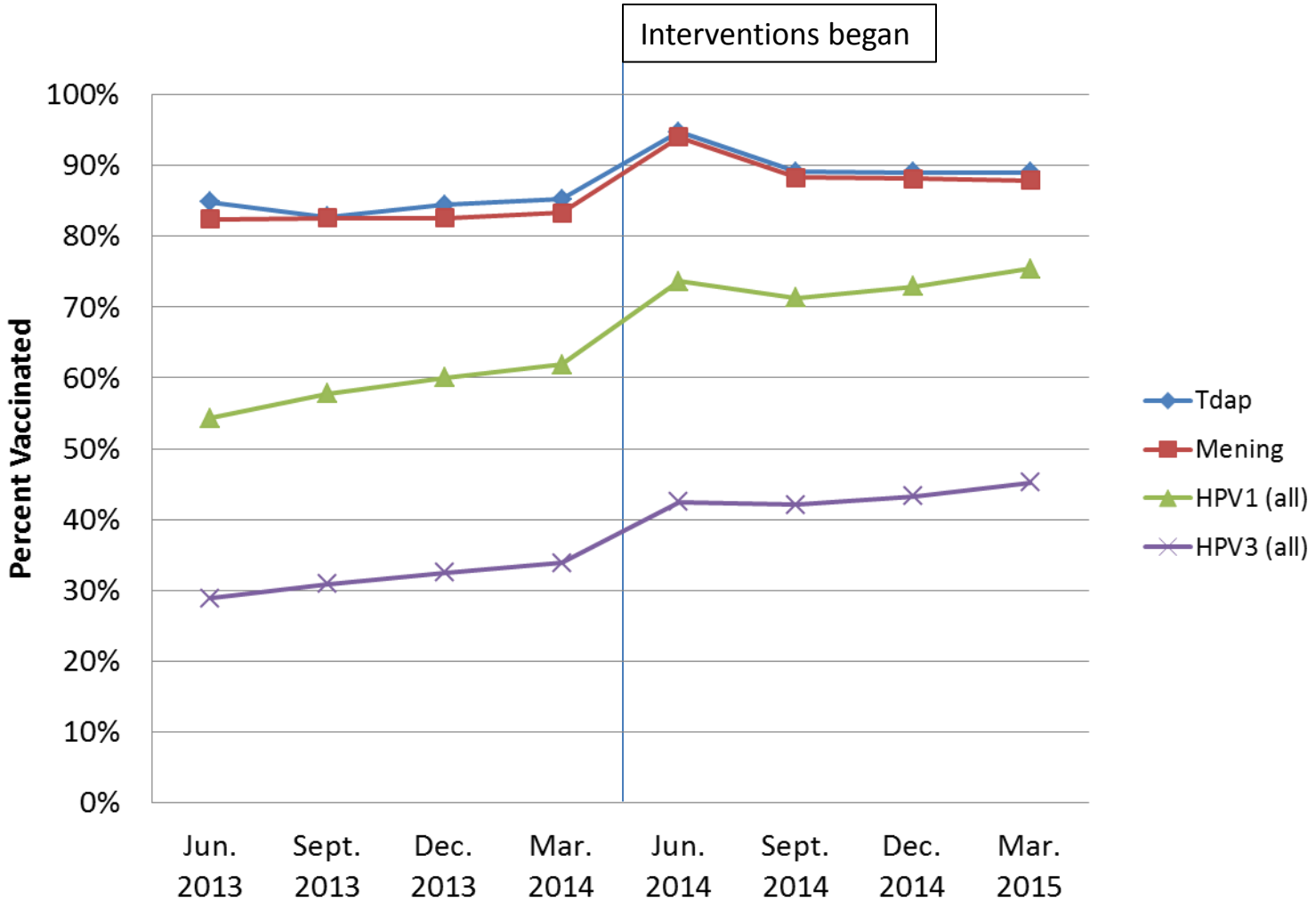
Adolescent Vaccines Coverage Trends GIMC, 13-17 Year-olds



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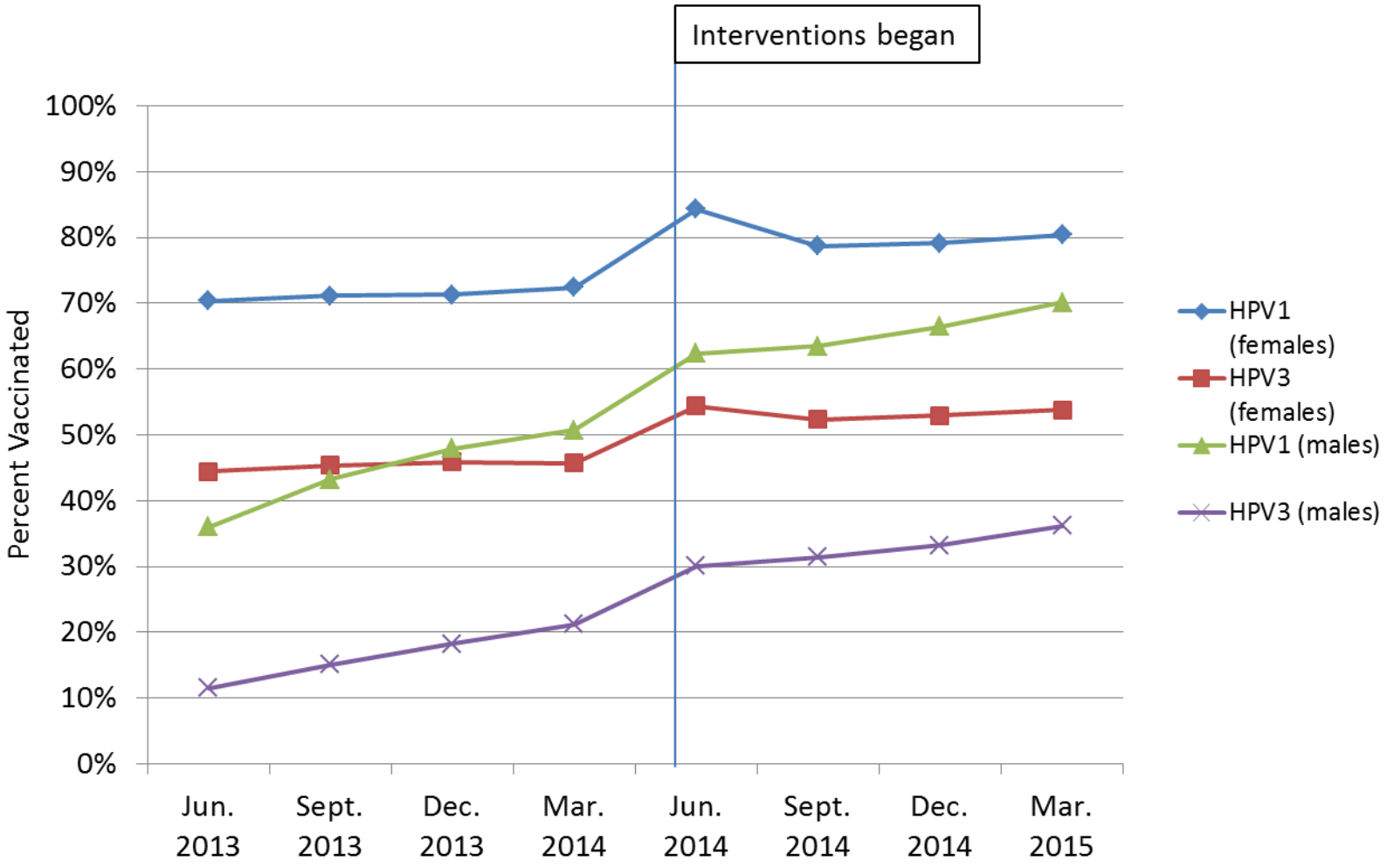

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Reported Barriers to HPV Vaccination (Based on GIMC Practitioner Responses)

- **Patient/Parent barriers**
  - Beliefs that HPV vaccine isn't safe, effective, or necessary
  - Lack of parent/patient awareness about the health benefits
  - Parental opposition due to moral/religious values…
    - Belief = vaccination promotes or condones early sexual activity
  - Parents may be unwilling to allow vaccine at acute care visits
  - Addresses & phone numbers change often (so recall/reminder calls and letters cannot reach families)
- **Provider barriers**
  - Missed opportunities
    - Patients get Tdap and Meningococcal Vaccines, but not HPV
- **Other barriers**
  - Missing vaccines in the GIMC Electronic Health Record (EHR)
    - Past vaccines elsewhere: RMCH, NMSIIS, ASIIS
  - HPV vaccine not required for school entry
    - Parents only wanting 'required' vaccines

Interventions - GIMC

1. Provider education re: HPV Diseases & Vaccine
   - 2 sessions for GIMC staff (physicians, RN/HTs, pharmacists)
   - 1 session for GIMC Public Health Nurses (PHNs)
   - 1 session for Navajo Nation Community Health Representatives (CHRs)
   - Offered CEUs at the provider trainings
2. Docs make strong recommendations for HPV vaccine
   - Recommend all adolescent vaccines be administered during the same visit
   - Avoid the word “optional” when talking about HPV with parents, and adopt the language of “anti-cancer”
   - Engage in conversation with hesitant parents

Interventions - GIMC

3. Missed opportunities

- IHS Immunization Program staff: missed opportunities analysis
- Started administering the vaccine during walk-in visits
- Started HPV vaccination at age 9 years…
  - Get that first dose in early
  - Can pick up the series when they come back at age 11, if they've failed to return for boosters before then.
  - Not every 9-year-old comes in for a PE, but the ones who do would get a head start on others who don't.

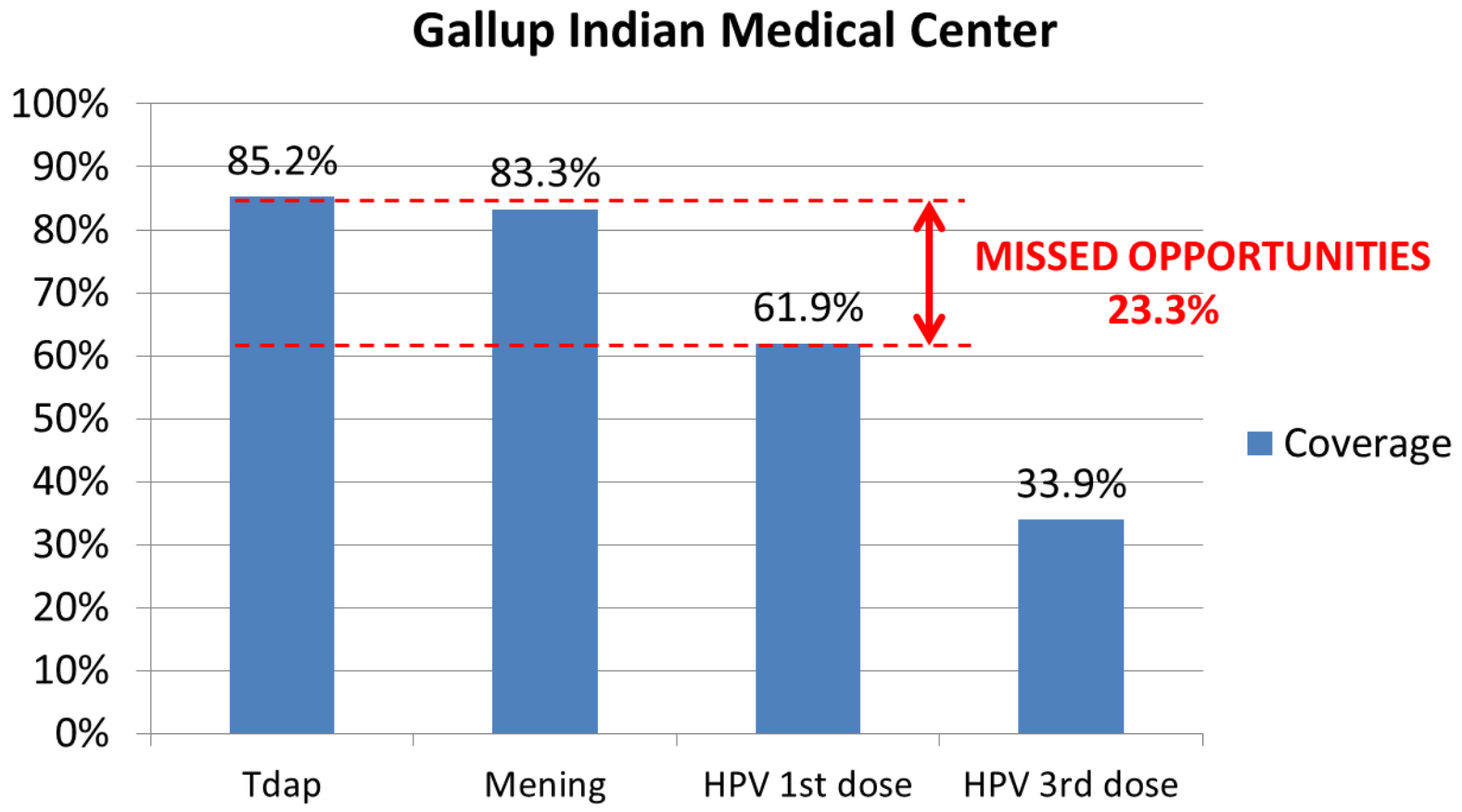
4. Missing data

- Completed missing data analysis
  - Added data from ASIIS and NMSIIS to patient records in GIMC EHR…
    - » Added 1,046 immunization visits not previously entered into Electronic Health Record
    - » 261 visits were for Tdap, 291 were for MCV, and 494 were for HPV

Other Interventions - GIMC

- Reminder calls the day before scheduled immunization-only RN visits for HPV boosters
- Reminder calls for PEs, expectation for shots
- No longer using reminder letters: excessive work, cost, and not much benefit
- Pre-visit planning by Health Techs, using NMSIIS and ASIIS, in addition to GIMC EHR

Adolescent Vaccines Coverage
13-17 year olds
Pre-Intervention, March 2014



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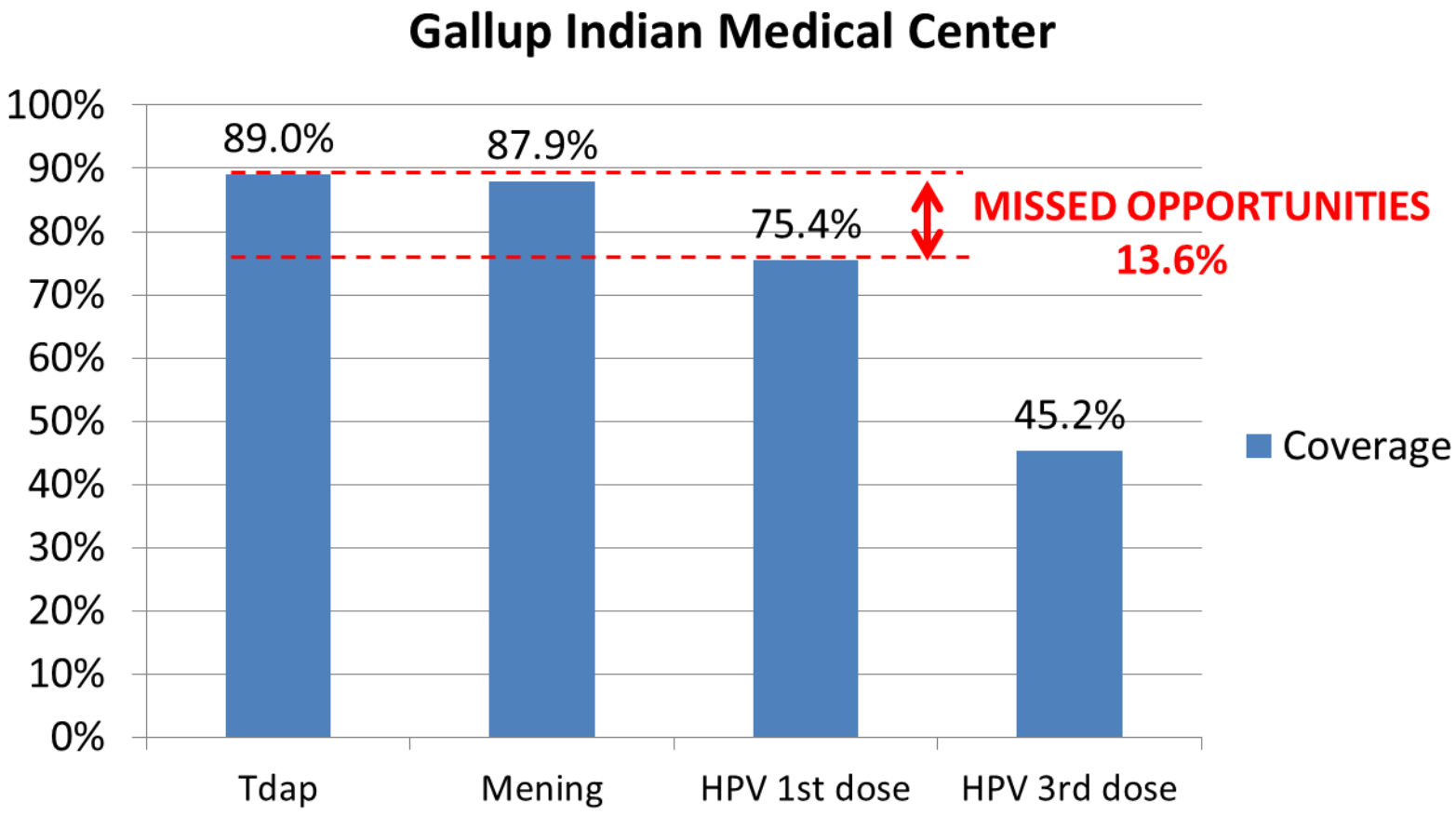
Missed Opportunities Analysis

- Missed opportunity = visit during which the adolescent was due for a HPV vaccine, but did not get vaccinated…
- Evaluated 140 patients due for next dose of HPV
  - 67% (94) of adolescents had **at least 1** missed opportunity
  - 14% (20) of adolescents had **3 or more** missed opportunities
  - Vast majority of missed opportunities occurred at Pediatric Clinic visits…
    - Did not include separate ED, UCC, or pharmacy visits

Adolescent Vaccines Coverage
13-17 year olds
Post-Intervention, March 2015



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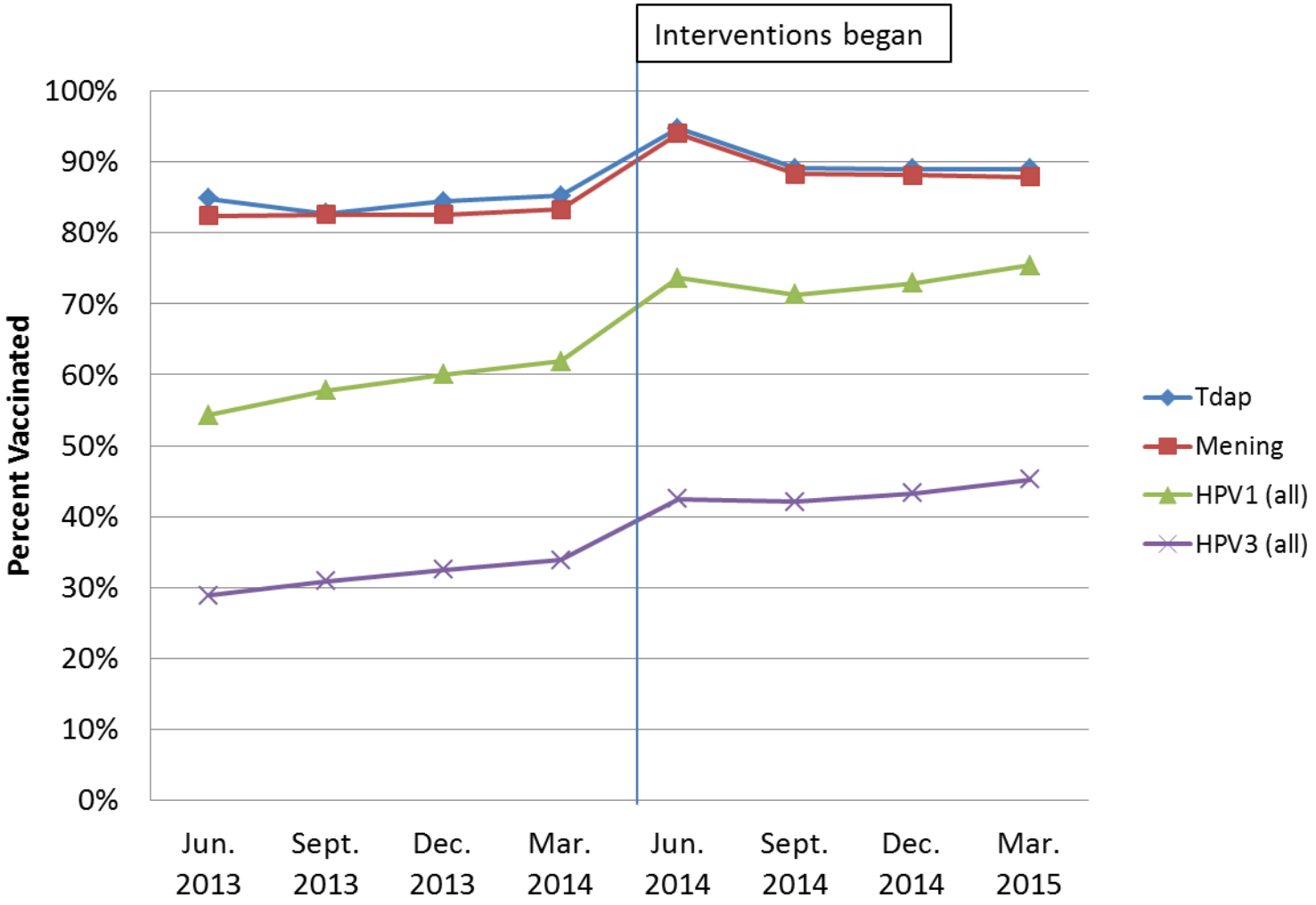

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Next Steps?

- Sustain interventions adopted thus far…
- We're not vaccinating the 9-year-olds!
- We said we'd do it, but without other shots to give, we're forgetting…
- We need to start as early as possible…
- Adopt the "It's Easy as 1-2-3" Motto to remind us about one Tdap, two MCV-4s, and three HPVs for older children and adolescents!

Thanks!

- Cheyenne Jim,

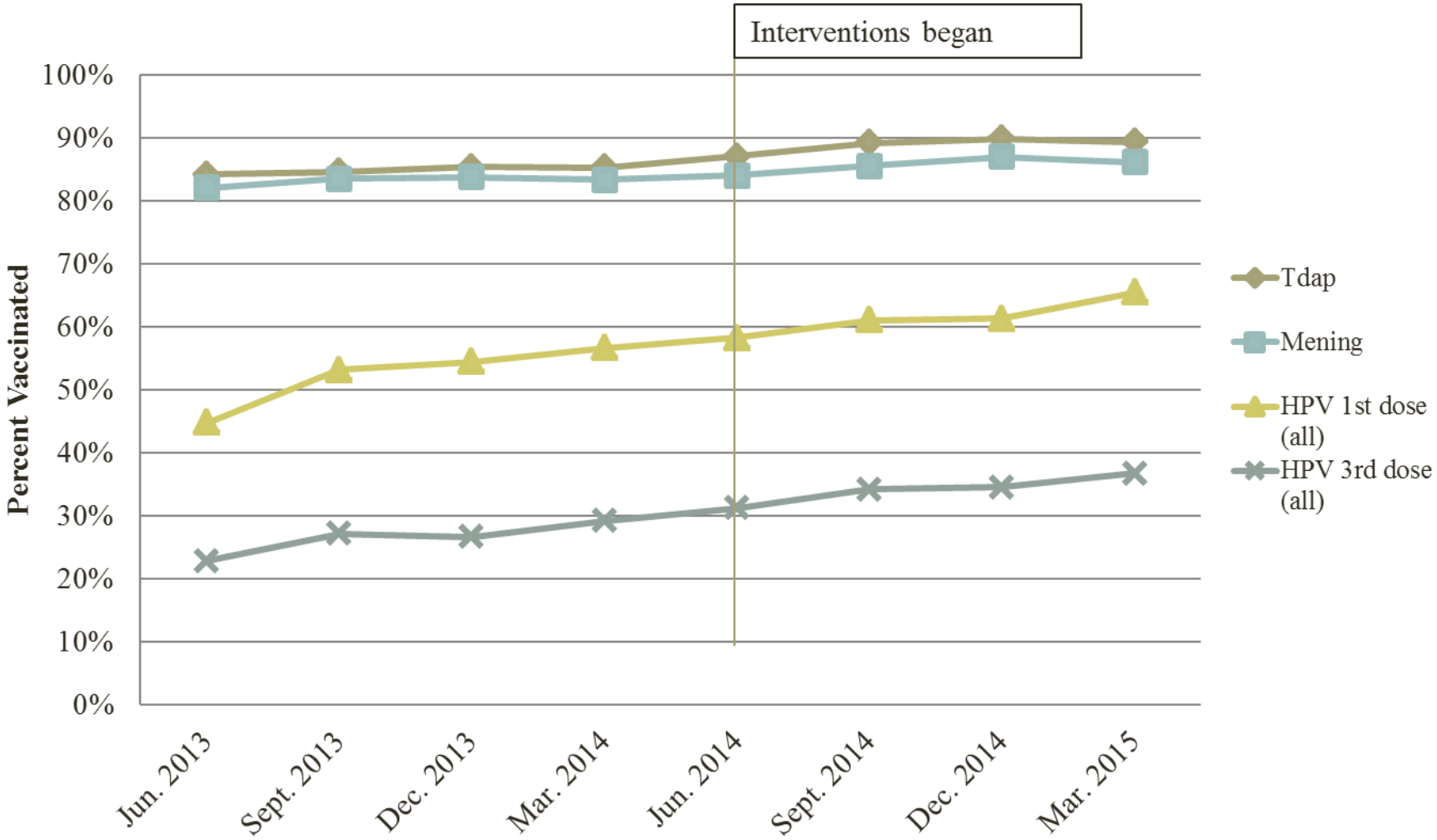
  IHS Immunization Program Analyst
- Amy Groom,

  IHS Immunization Program Manager
- Nurses and Docs at GIMC
- Pharmacists at GIMC
- Adolescents and Parents!

Winnebago Tribe of Nebraska HPV Project

Shannon Wright, RN, BSN
Public Health Nursing

Adolescent Vaccines Coverage Trends
Winnebago, 13-17 Year-olds



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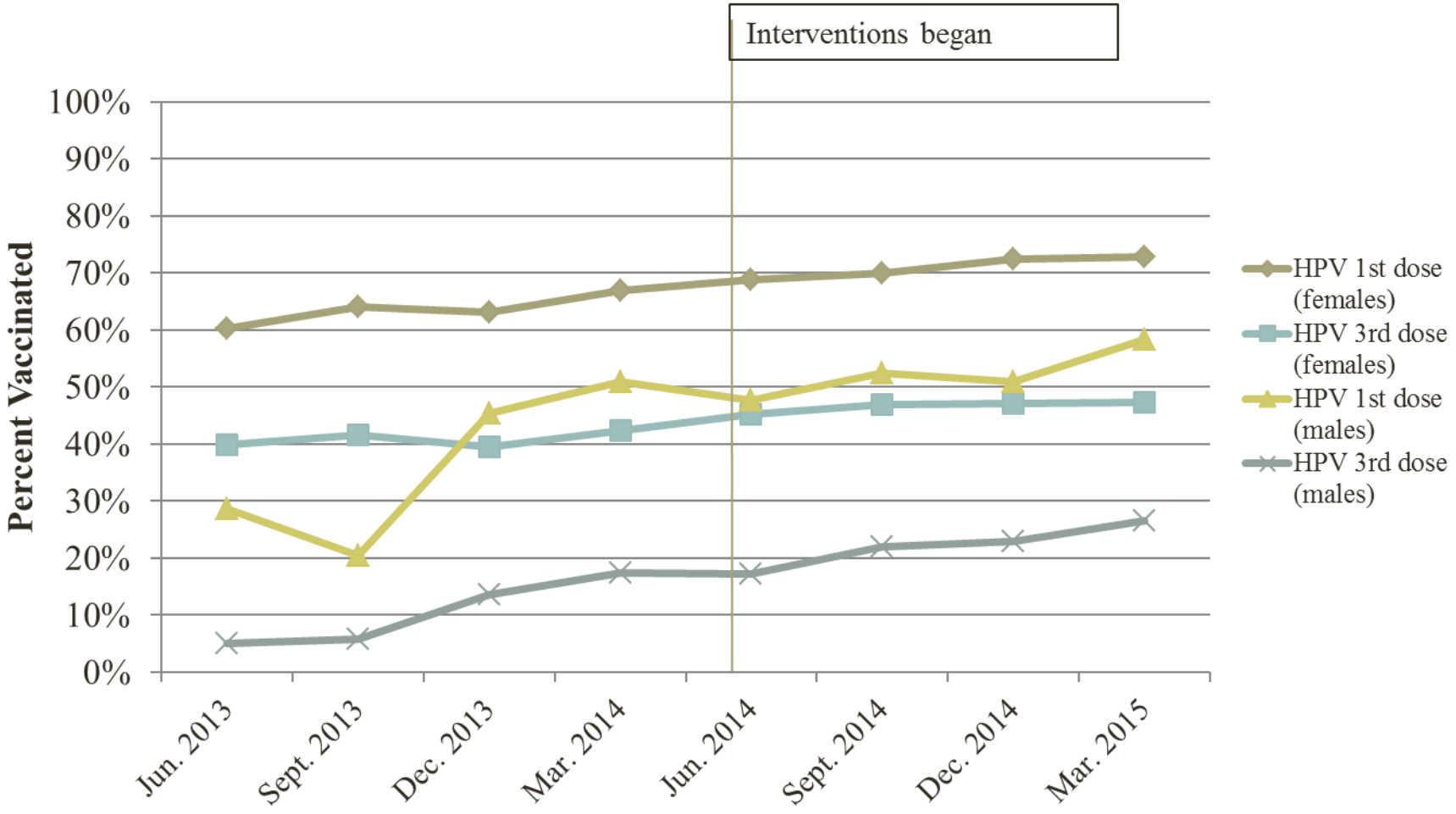

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Barriers to HPV Vaccination

- Missing data
  - perhaps from patients living in Sioux City
- Older adolescents do not come in to the clinic often, limiting the number of opportunities to administer the HPV vaccine
- Staff inconsistency:
  - All providers do not offer HPV vaccine consistently or with a strong recommendation
  - All nurses do not remind providers what vaccinations the patient is due for
- Many patients become lost to follow-up and do not receive their 2nd or 3rd doses

Barriers to HPV Vaccination

- Standing orders are not in place for the HPV vaccine
- Many people in the community do not know about the evening clinics and weekend clinics
  - Schedule Always changing
- Some parents/patients not educated about the benefits of HPV vaccine
- Large refusal rate
  - Once refusals happen, nurses/providers don't offer the vaccine again
  - Some parents consent to the 1st dose and refuse 2nd or third dose
- PHN's administered the 2nd shot as follow-up to 1st shot given in clinic
- Vaccine kept in Pharmacy fridge

Interventions

- Increase efforts to obtain parental consent
- Patient reminder phone calls*:*
  - Call parents during mornings when schools are closed
  - offer HPV vaccine at PHN office
- CHR supervisor calls parents and obtains verbal consent
  - CHR's go to patient homes with consent and VIS
- Administer HPV vaccine at health fairs, at schools, Summer youth program
- Standing orders
- VIS and consent forms in student handbook
- PHN administer 1st shot

Interventions continued…

- We are pretty much thinking of HPV all the time
  - Whenever an opportunity to either obtain signatures from parents (for the first dose) or when kids are available to us we administer the vaccine
- Every month we print out a list of shots due, obtain consents and coordinate with school
  - CHR accompanies to bring kids from class to school nurse office
- The school has scheduled a series of Mondays to be closed to students so on those days (2 days so far) we call parents and offer the HPV shot in our PHN offices
  - We had about 10 kids come in on each day
- Purchase of a vaccine refrigerator for PHN office
- HPV Flyer on PHN Facebook
- Position created for an Immunization Nurse

Challenges to Implementing Interventions

- Phone numbers are not always current
- Consent for each shot or for the series?
- Challenge to locate adolescents during the summer
  - especially the older kids
- School activity schedule (includes testing, game days, etc), PHN and CHR schedules have to coincide
- Clinic scheduling
- Clinic staff

Collaboration

Involved partners include

- PHN Nursing and Administrative staff
- CHR Staff
- Pharmacy Techs
- Outpatient Nursing Director
- Winnebago Public School Nurse
- Parents

Next Steps

- Immunization nurse (new position) will coordinate scheduling of immunizations
- Increased communication with clinic staff esp., O/P nursing supervisor
- Monthly Immunization Committee meetings
- Increased community education –Host the video *Someone You Love: The HPV Epidemic*