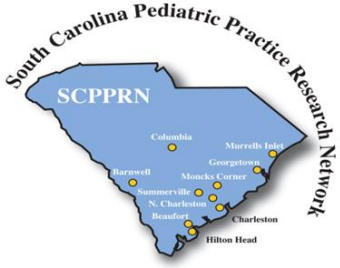
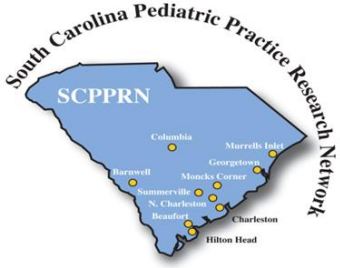


QI Improvements on HPV Vaccine Delivery at MUSC

QTIP Meeting January 28 2021

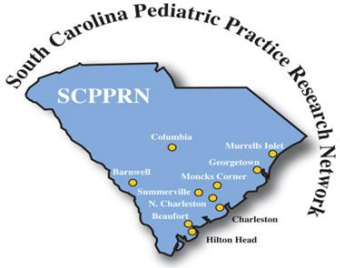
James R Roberts, MD, MPH
Professor of Pediatrics
Director, South Carolina pediatric Practice Research Network

Learning Objectives



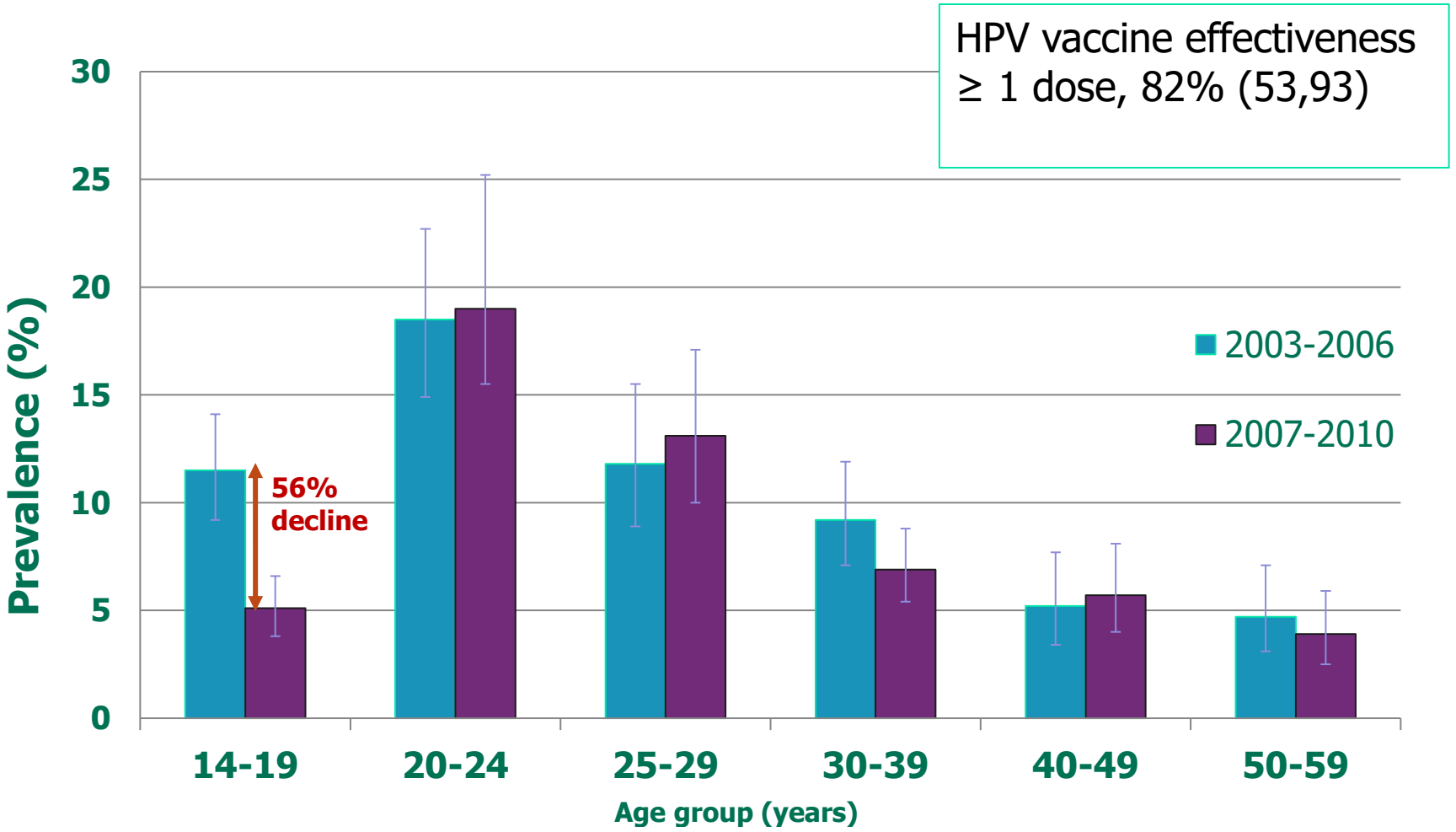
- Be able to discuss the role of the provider recommendation for HPV vaccines
- Describe the rationale for initiating the HPV vaccination at 9 years of age

Disclosure



- We received an internal grant award from the Hollings Cancer Center to work on HPV vaccine delivery in South Carolina
- I do not have any financial relationships with any company that manufactures or distributer of vaccines
- Some slides were borrowed from the American Cancer Society and the CDC
  - "You are the Key to Cancer Prevention" series

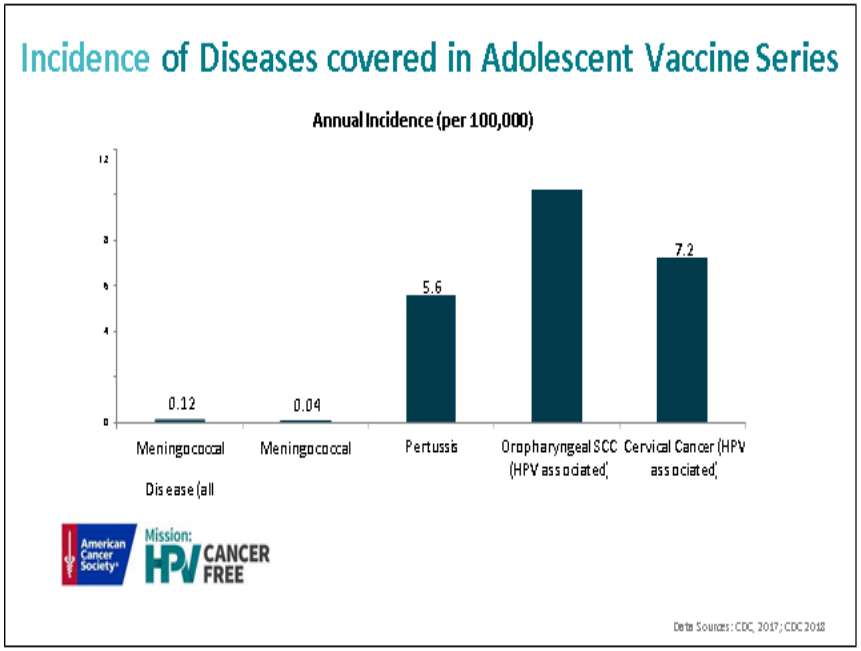
Prevalence of HPV 6, 11,16, 18* in Cervicovaginal Swabs, by Age Group, NHANES, 2003-2006 and 2007-2010, U.S.

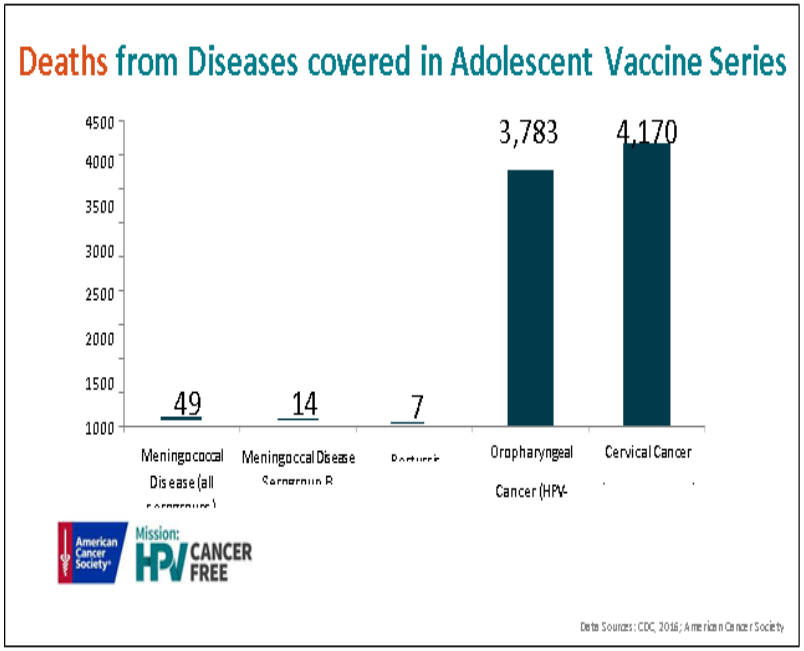


*weighted prevalence

Markowitz, et al. Reduction in HPV prevalence among young women following HPV vaccine introduction in the United States, NHANES, 2003-2010. J Infect Dis 2103

How Common is HPV disease compared to others?

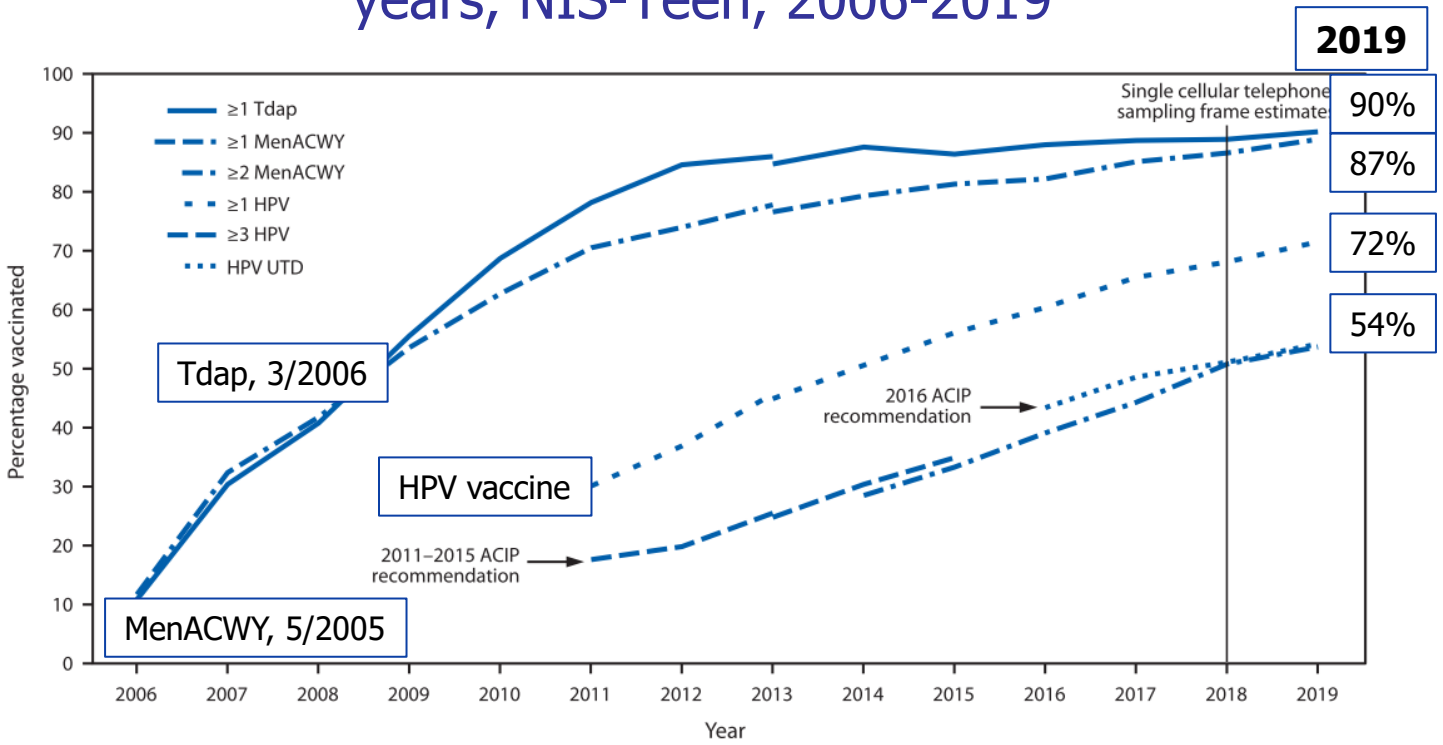




South Carolina Pediatric Practice Research Network
SCPPRN

Improving the Health of Oklahoma's Children
OCHRN
OKLAHOMA
Child Health Research Network

Estimated vaccination coverage, 13-17 years, NIS-Teen, 2006-2019



HPV female, 3/2007

2019 - 57%

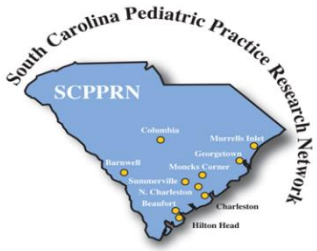
HPV male, 5/2010

2019 - 52%

Elam-Evans LD, Yankey D, Singleton JA, et al. National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13-17 Years - United States, 2019. *Mmwr.* 2020;69(33):1109-1116.

2018 & 2019 HPV Vaccine Coverage

NIS Teen Data--13-17 year olds



United States

	2018	2019
• HPV #1	68.1%	71.5%
• HPV UTD	51.1%	54.2%

South Carolina

	2018	2019
• HPV #1	63.7%	71.8%
• HPV UTD	41.2%	53.0%

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 these 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.

Strong Recommendation

"That's why I'm recommending that your daughter/son receive the first dose of HPV vaccine today."

http://www.cdc.gov/vaccines/who/teens/for-hcp-tipsheet-hpv.pdf

August 28, 2015

Participatory versus Presumptive (Expectant)

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

Opel DJ, et al. The Architecture of Provider-Parent Vaccine Discussion at Health Supervision Visits. *Pediatrics* 2013;132:1037

Why Presumptive (Expectant) Recommendation Might Be Better

- Most patients perceive decisions about vaccination to be complicated
- As humans, when we make decisions we perceive to be complicated, we tend to have a status quo bias (also called a default bias), meaning we go with what is expected or "normal"
- Using a presumptive approach, patients are made to feel that vaccination is what most people do, and it is the socially acceptable "norm"

O'Leary, S. Strategies for Talking to Vaccine-Hesitant Parents. *NFID Clinical Vaccinology Course* Mar 2017

Communication Coding and Examples

Increasing order of strength

Passive recommendation

"And, finally, well, the Human Papillomavirus, are you familiar with that one?"

Invitational recommendation

"Okay. If, from what you've heard or read, is that something that you're interested in protecting her with?"

"But since he's 13 he's eligible for the HPV vaccination. … You know, would you be interested in doing that as well?"

Expectant Provision

"...you need to go ahead and continue with the Gardasil vaccine. …….we'll go ahead and get the second one now"

"Well, that's one of the vaccines that we've got to do here today… So good time to get started now. It's a series of three. He'll have one today, come back in two months just to see the nurse for the second one, come back four months after that to see the nurse for the third and final one, and be all done."

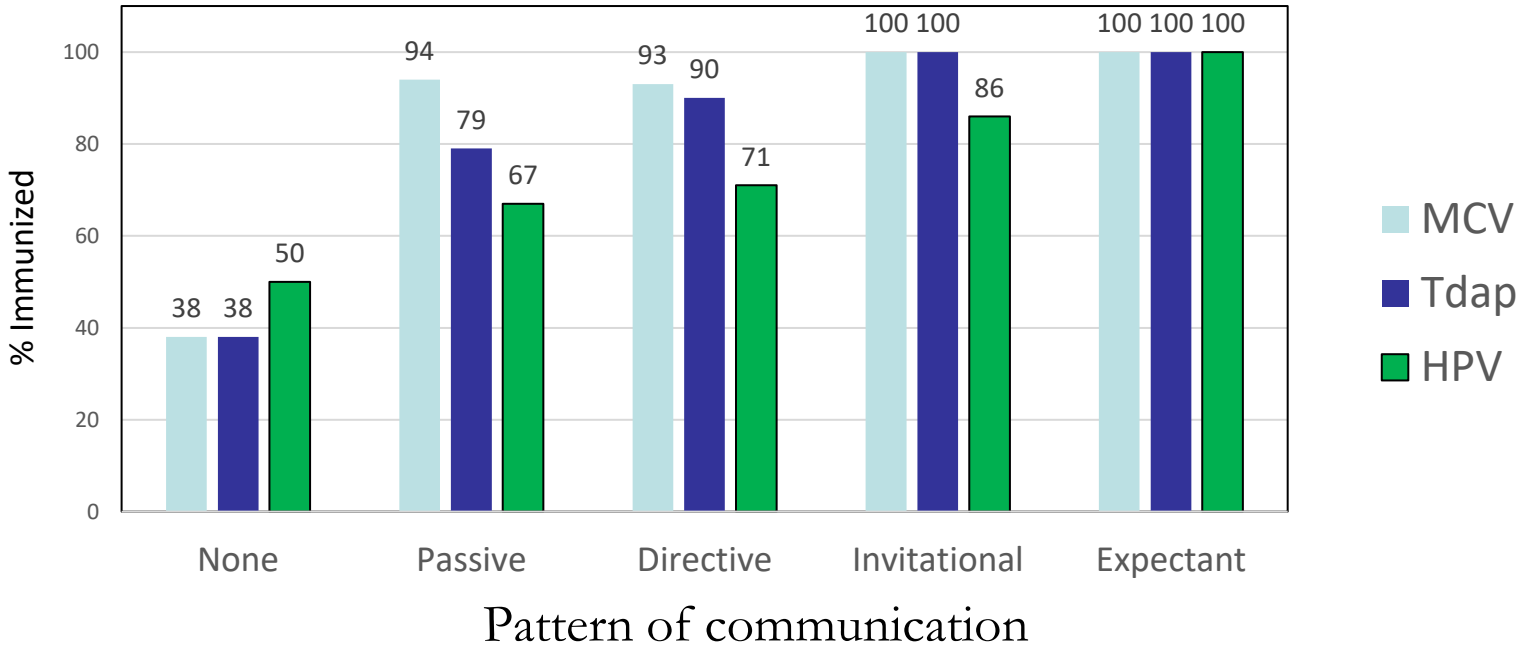
Directive recommendation

"So, I recommend this for all of my kiddos once they're eleven. HPV vaccine is the only vaccine that we have that actually prevents against cancer."

"Now, what I think I can speak more confidently to now is it's safe…So we heartily – I heartily encourage young ladies to get this vaccine, and I would do that."

Darden PM, Roberts JR, et al. Unpublished data

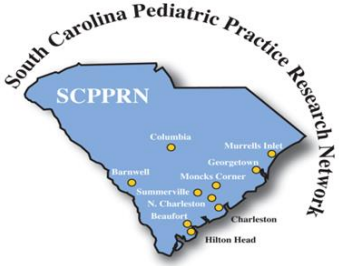
Receipt of Adolescent Vaccines by Pattern of Communication



Darden PM, Roberts JR, et al. Unpublished data

SC HPV Collaborative

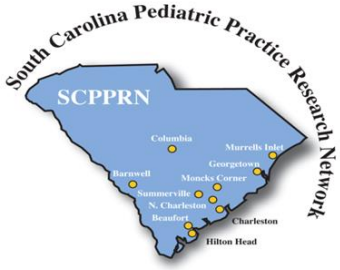
MUSC Hollings Cancer Center provided funding and practice support



- Four Health Systems in SC
  - MUSC, McLeod, Spartanburg Regional, and Prisma Health
- Data and Evaluation
  - Full Baseline data of % Initiated and % Complete for each practice
  - Intermittent chart audits to follow progress
  - Eventual full data at Completion
- Each System focuses on their own needs
- Emphasis on using the provider recommendation
- We also discussed the FDA approval down to 9 years of age and offering the vaccine early

2018 & 2019 HPV Vaccine Coverage

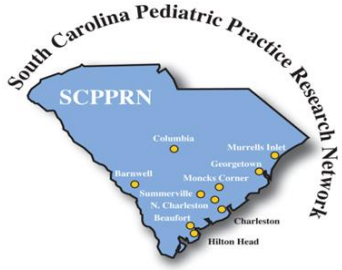
NIS Teen Data--13-17 year olds



	United States 2018	United States 2019
HPV #1	68.1%	71.5%
HPV UTD	51.1%	54.2%

	South Carolina 2018	South Carolina 2019
HPV #1	63.7%	71.8%
HPV UTD	41.2%	53.0%

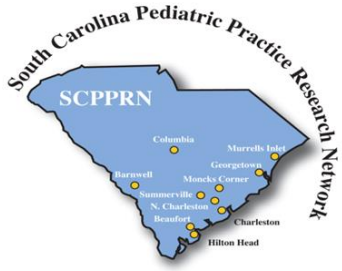
Participating MUSC Practices
Baseline Data



		9 and 10 year olds		11 and 12 Year olds		13 – 17 year olds	
Practice		Initiated N (%)	Complete N (%)	Initiated N (%)	Complete N (%)	Initiated N (%)	Complete N (%)
1	M					714 (92%)	714 (69%)
	F					729 (92%)	729 (72%)
2	M					814 (95%)	814 (85%)
	F					713 (93%)	713 (83%)
3	M					161 (91%)	161 (63%)
	F					99 (92%)	99 (84%)
4	M					244 (68%)	244 (45%)
	F					308 (74%)	308 (57%)

2019 South Carolina 72% Initiated, 53% Completed

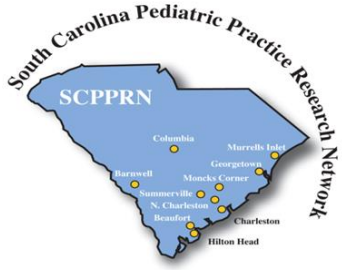
Participating MUSC Practices
Baseline Data



		9 and 10 year olds		11 and 12 Year olds		13 – 17 year olds	
Practice		Initiated N (%)	Complete N (%)	Initiated N (%)	Complete N (%)	Initiated N (%)	Complete N (%)
1	M			360 (81%)	360 (37%)		
	F			364 (81%)	364 (43%)		
2	M			455 (86%)	455 (63%)		
	F			466 (88%)	466 (68%)		
3	M			71 (92%)	71 (56%)		
	F			45 (89%)	45 (56%)		
4	M			90 (49%)	90 (14%)		
	F			69 (48%)	69 (6%)		

2019 South Carolina 72% Initiated, 53% Completed

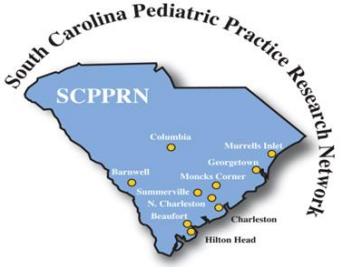
Participating MUSC Practices
Baseline Data



		9 and 10 year olds		11 and 12 Year olds		13 – 17 year olds	
Practice		Initiated N (%)	Complete N (%)	Initiated N (%)	Complete N (%)	Initiated N (%)	Complete N (%)
1	M	336 (35%)	336 (7%)				
	F	285 (39%)	285 (8%)				
2	M	445 (53%)	445 (15%)				
	F	406 (53%)	406 (15%)				
3	M	50 (46%)	50 (16%)				
	F	59 (46%)	59 (3%)				
4	M	76 (0%)	76 (0%)				
	F	66 (0%)	66 (0%)				

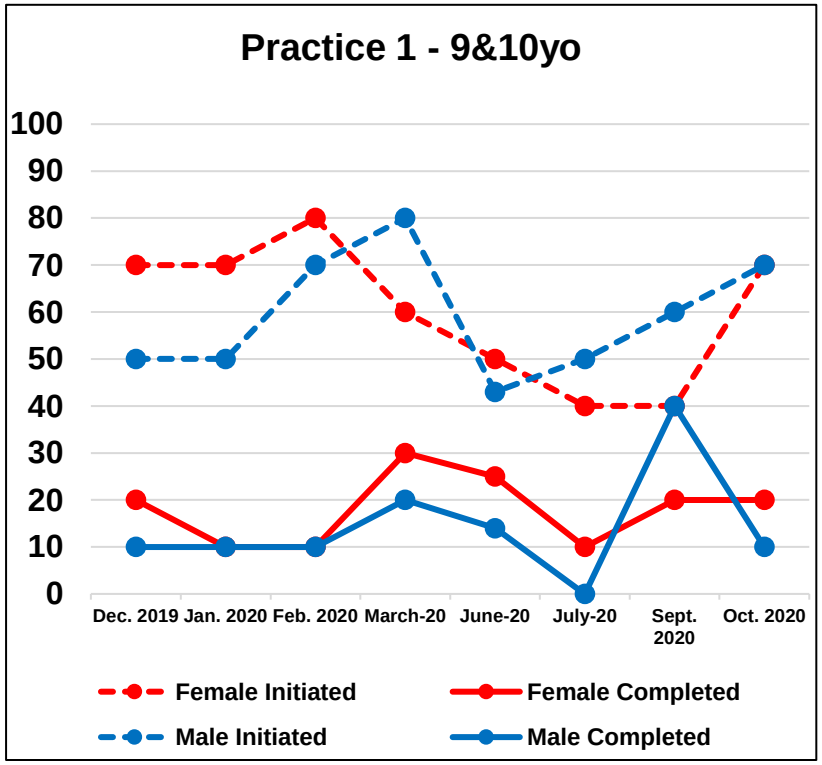
2019 South Carolina 72% Initiated, 53% Completed

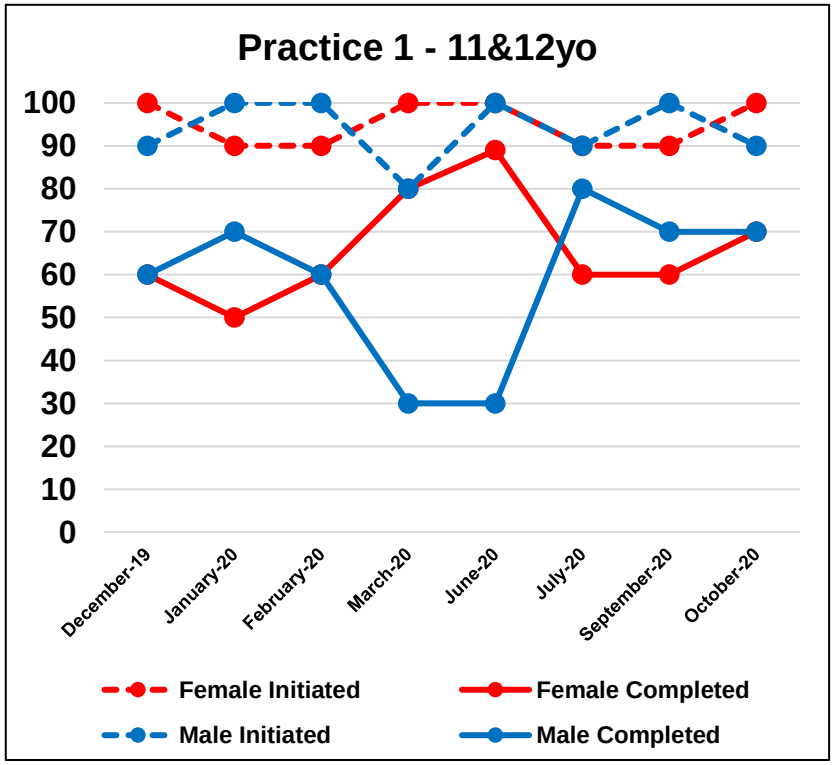
HPV Vaccine QI Project



- MUSC Practices (alphabetical order)
  - Family Medicine, Monck's Corner, Northwoods, and Pediatric Primary Care (resident continuity)
- List of Interventions
  - Physician Presentation
    - Emphasizing 9-10 year olds and vaccinating at All opportunities
  - Nurse Presentation
  - Academic ½ day Presentation to Residents
    - For intervention to incoming Interns
  - HPV Article Shared
  - Physician leader update
- Chart Audits

Chart Audits following interventions





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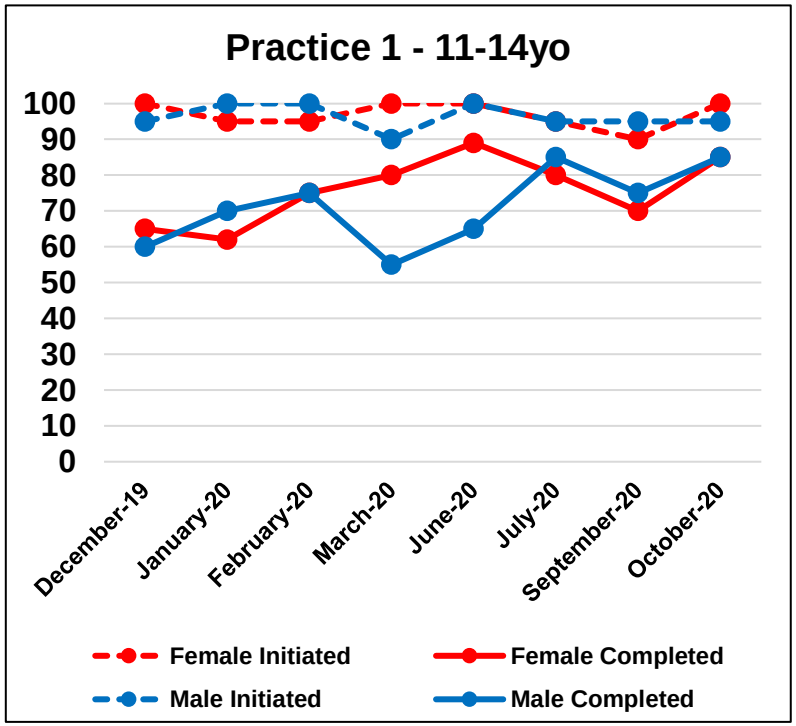

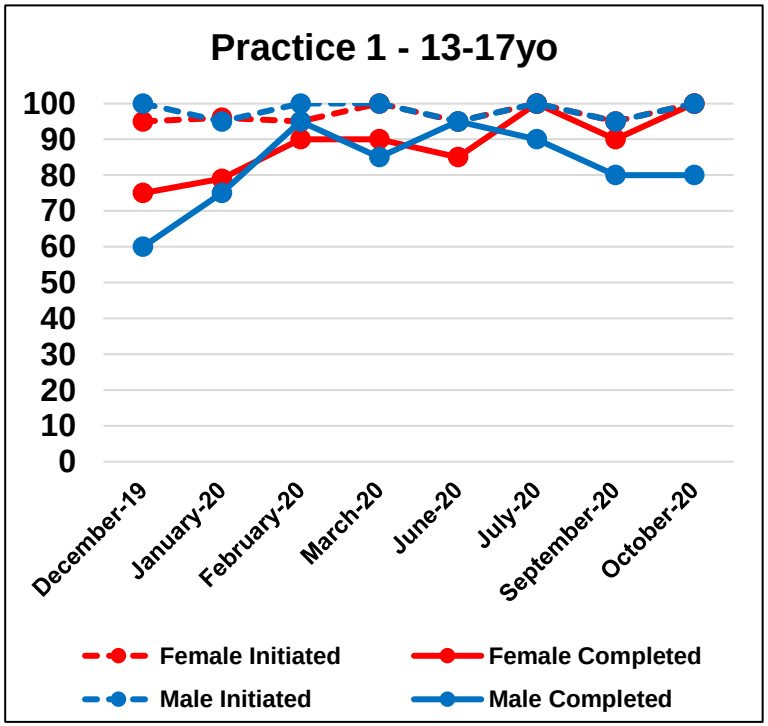

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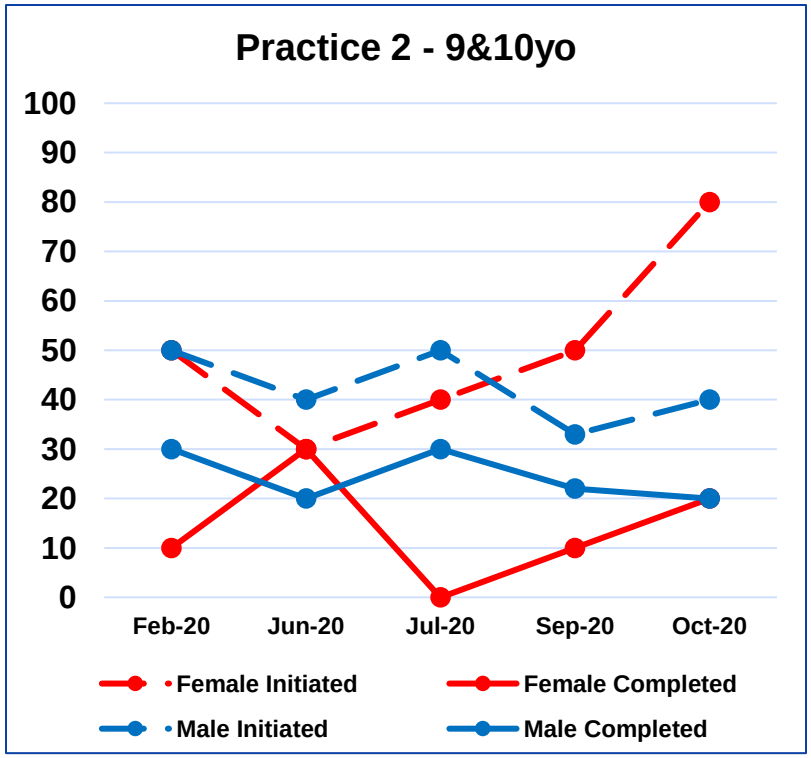

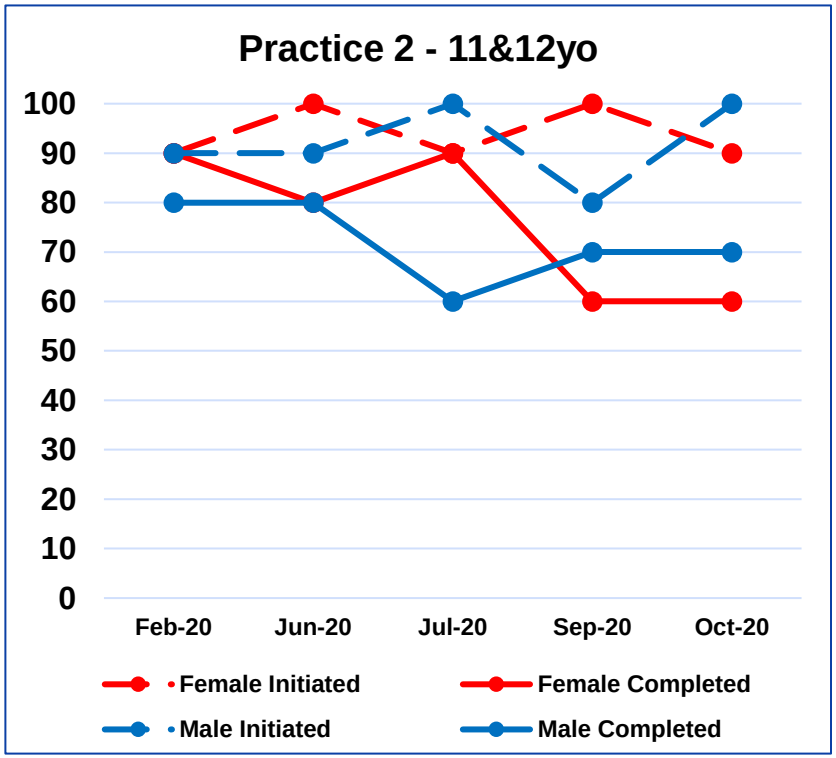

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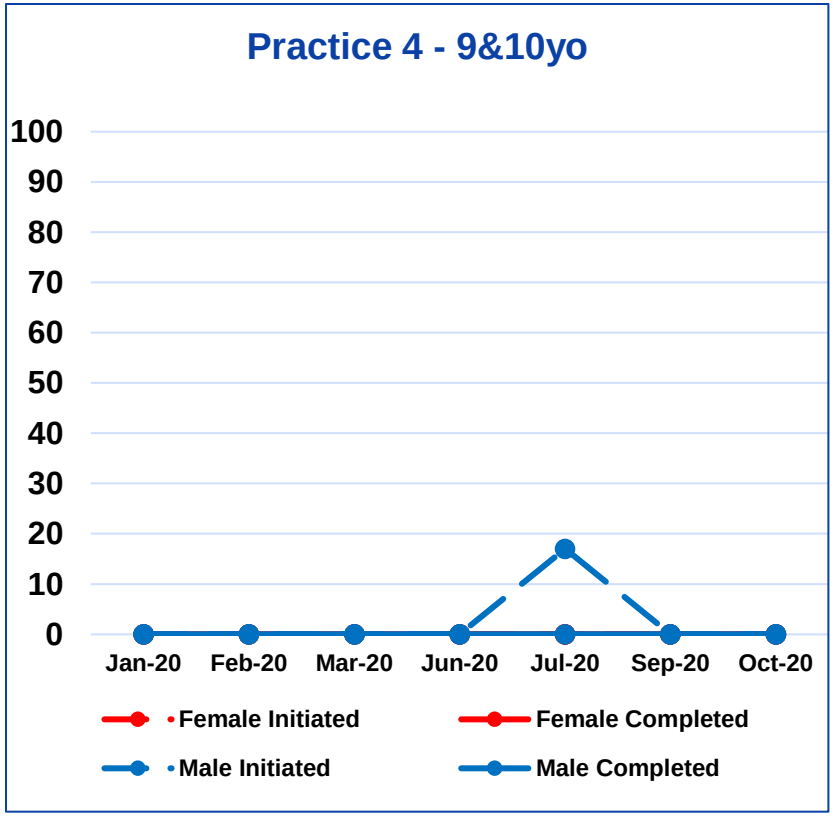
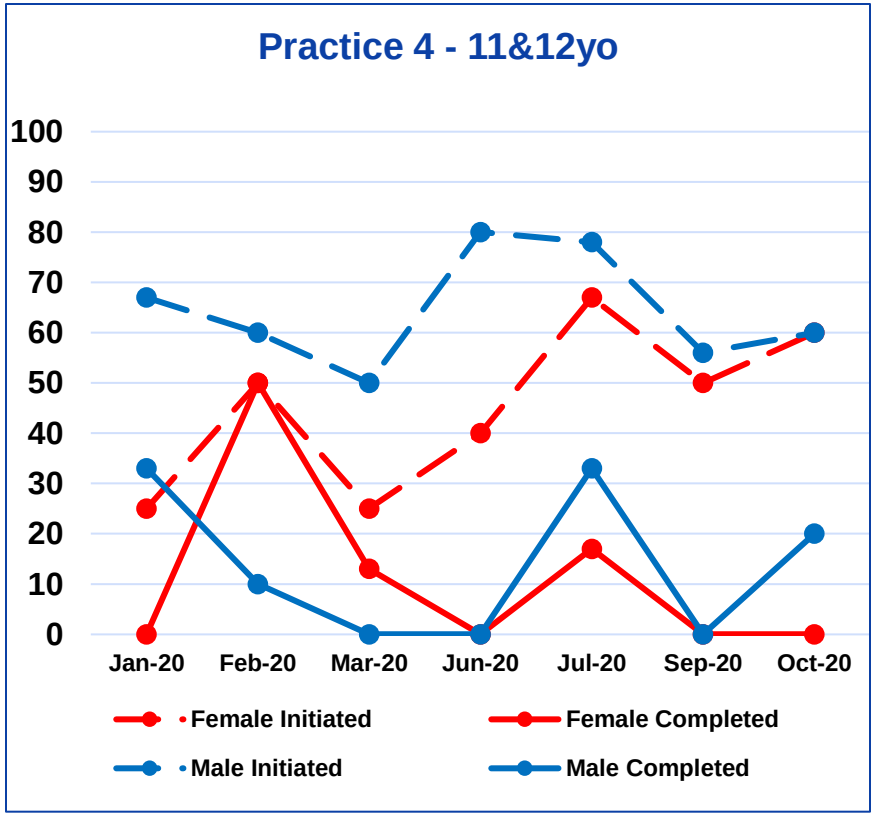
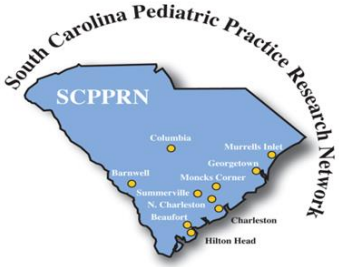




Successes and Challenges

- Several practices have a notable increase in initiating or completion in various age groups
  - Practice 1 has an increase in Completion at age 11-12 in both groups
  - Practice 4 has an increase in Initiating in girls at age 11-12 despite fewer visits
- COVID continues to have its effects
  - Decreased in-person visits
  - For some age groups, no patients seen in that 4 week audit period
  - Virtual visits in all practices with no chance to immunize
- Future Emphasis will be on improving the use of Current Standing Orders

Acknowledgement



- Paul Darden, MD University of Oklahoma
  - Long time Collaborator and Co-Author
  - Sender of many slides!
- Kristina Gustafson, MD
  - Director, Pediatric Primary Care Clinic and Co-Investigator
- Henry Lemon MD, Luke Edmondson MD and Sean Haley MD
  - Physician leaders for MUSC participating practices
- Beth O'Brien RN, BSN and Erin Dawley BA
  - Superior staff for SCPPRN
  - No SCPPRN project would be possible without them
- Bill Basco, MD
  - Outstanding and Highly Supportive Division Chief