

## National Immunization Partnership with the APA

### *Improving HPV Immunization Rates in Practice-Based Settings*

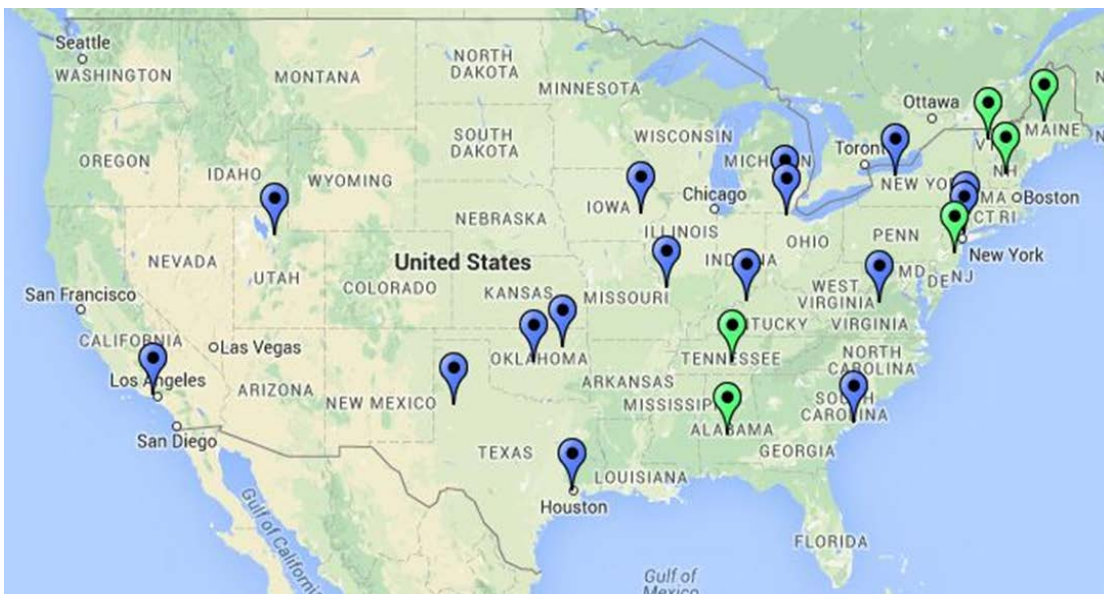
#### Final Project Report for **New Hampshire Pediatric Improvement Program**

### Project Description

The National Immunization Partnership with the Academic Pediatric Association developed the HPV Virtual Learning and Improvement Network to provide infrastructure support for practice-based quality improvement in participating practices. The collaboration brings together the expertise of the Academic Pediatric Association's Continuity Research Network (CORNET) and the National Improvement Partnership Network (NIPN) in adolescent immunization, practice change, and immunization education. The goal of this learning collaborative was to increase rates of HPV vaccine series initiation and completion through reduction of missed opportunities. During the 9-month intervention phase of this project, practices implemented one or more evidence-based strategies to reduce missed opportunities: provider prompts, standing orders, or reminder-recall. In addition, all practices implemented a strong provider recommendation for HPV vaccine.

### Participant Demographics

	CORNET	NIPN
States	11	6
Practices	14	38
Participants	121	190
Estimated number of patients 11-17 years of age seen annually	20,220	38,320



**Blue markers**= CORNET sites (represent individual sites)

**Green markers** = NIPN states (represent multiple sites within the state)

## Project Surveys

Tool	Time Survey Administered		
	Pre-Project	Intervention Period	Post-Project
Practice Readiness Assessment	X		
Office Systems Inventory	X		X
Staff Impact Survey		X	X

## Patient Data

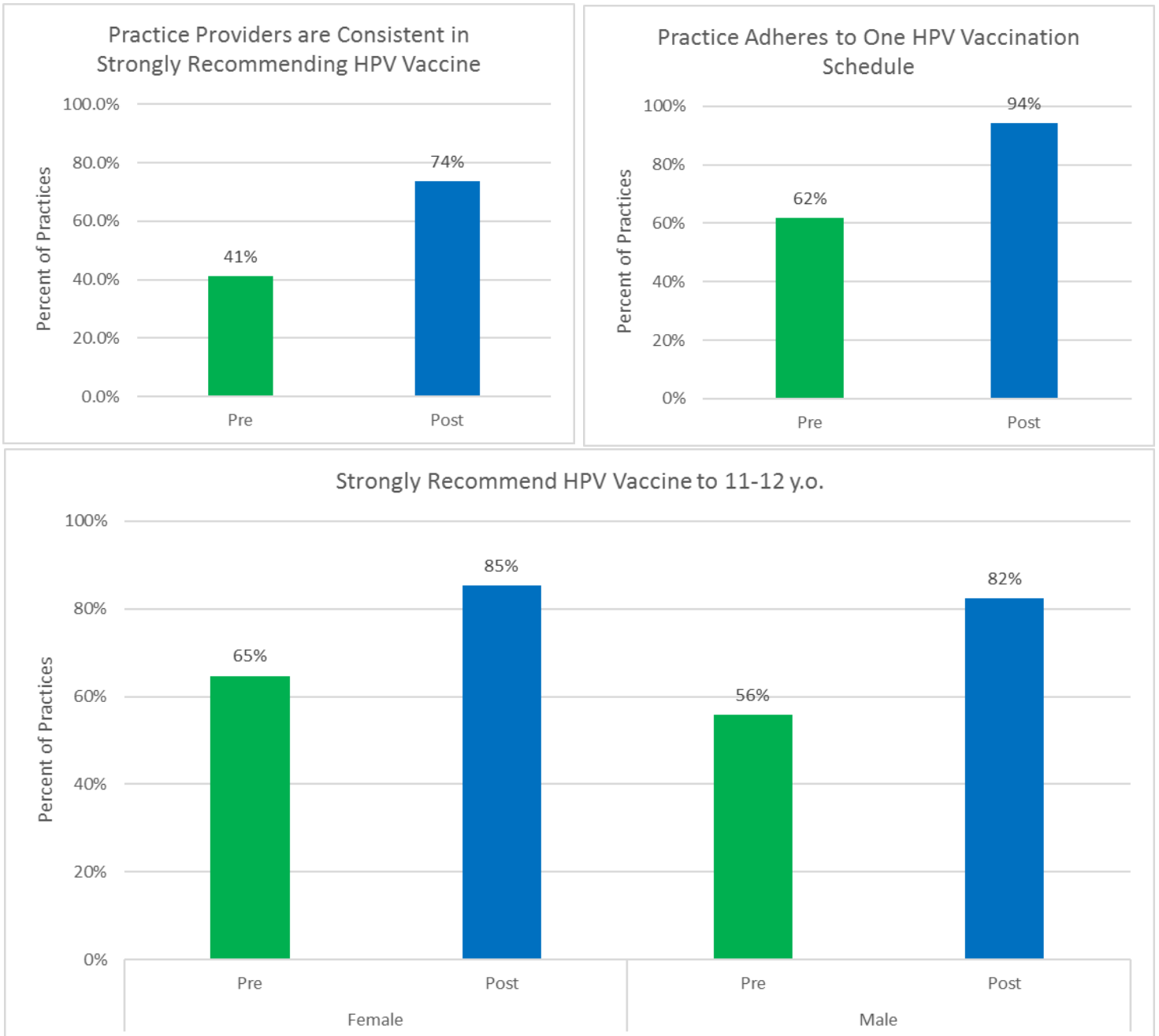
	Measure(s)	Frequency	Number of charts	Dates
Pre-project chart audit	HPV vaccine series initiation HPV vaccine series completion Missed opportunities	Once	50 (25 female, 25 male)	August 1, 2014- April 30, 2015
Intervention period	Missed opportunities	Monthly	10 per month	August 1, 2015- April 30, 2016
Post-project chart audit	HPV vaccine series initiation HPV vaccine series completion Missed opportunities	Once	50 (25 female, 25 male)	August 1, 2015- April 30, 2016

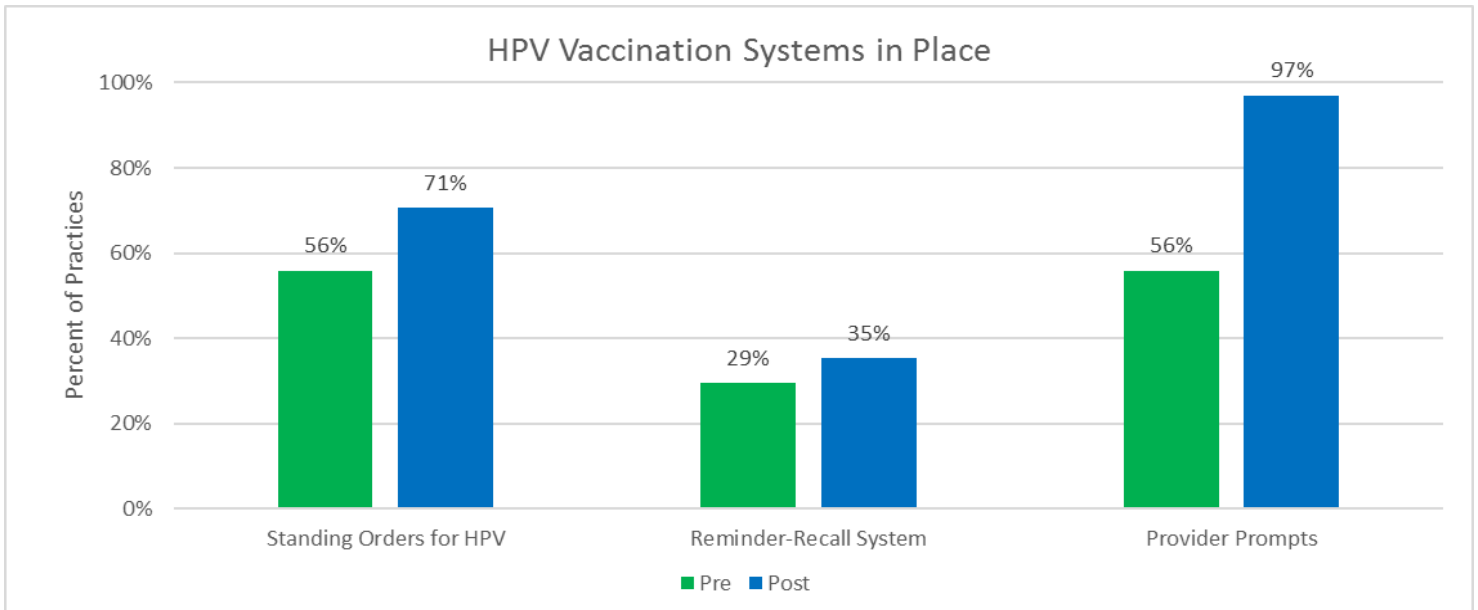
## Results

The results shown in the following pages of the report are from data submitted by the 38 practices that participated in the NIPN cohort of the learning collaborative. NH PIP recruited 2 practices in New Hampshire that completed this project (a third practice started the project but did not complete). Results from project surveys (Office Systems Inventory and Staff Impact Survey) are aggregated results from the 38 NIPN practices (individual practice data are not represented). Aggregated data from the New Hampshire practices for missed opportunities and HPV vaccination rates are shown alongside aggregate NIPN data for comparative purposes.

## Office Systems Inventory

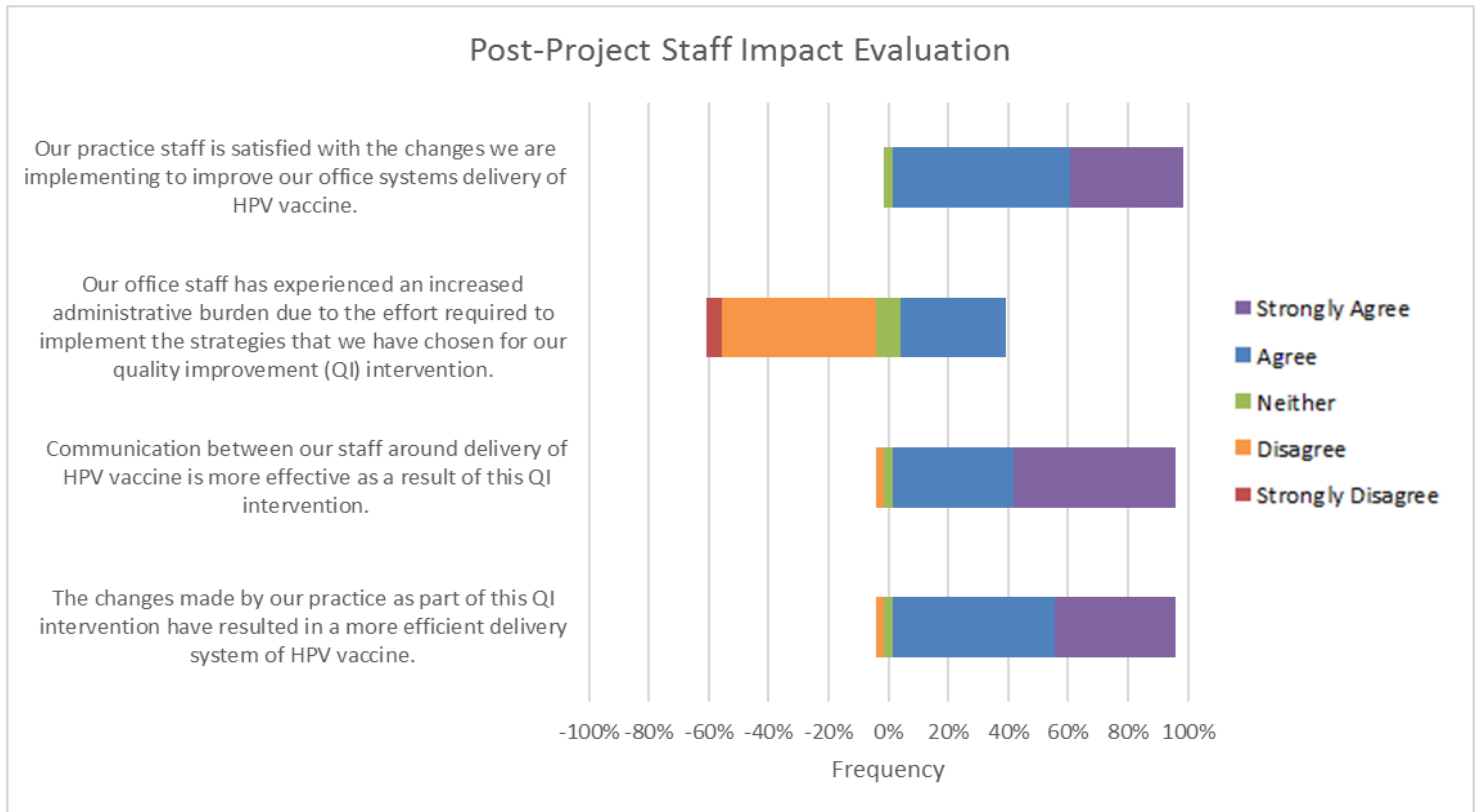
The Office Systems Inventory assessed what tools and strategies practices had in place to support HPV vaccination efforts prior to the project and again at the end. The percent of practices that consistently provided a strong recommendation for HPV vaccine increased, as did the percent of practices that adhered to one HPV vaccination schedule. Implementation of Provider Prompts, Standing Orders, and Reminder-Recall increased as a result of this project. In addition, the 38 participating practices implemented 136 new office strategies to support HPV immunization.





## Staff Impact Survey

The Staff Impact Survey was one of the project's balancing measures to assess whether changes being implemented as part of this project initiative were felt to be beneficial and did not result in increased administrative burden to clinic staff.



## Missed Opportunities

**Measure:** Proportion of adolescents 11 through 17 years of age seen for any visit (health supervision, chronic care, acute care, or other) during the intervention period who are eligible for a dose of HPV vaccine and do not receive it at that visit.

**Goal:** Decrease by 20% over baseline rate

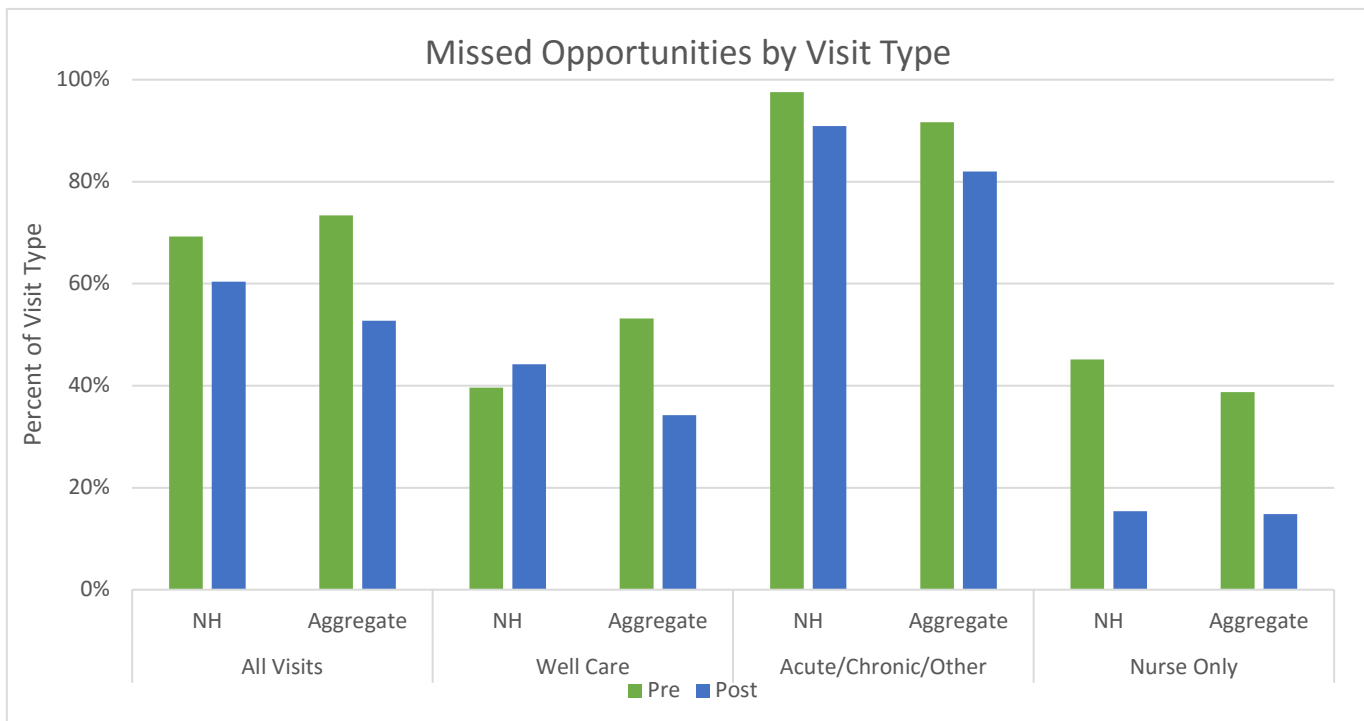
**Data source:** Pre- and post-project chart audit of 50 randomly selected patients; 25 female and 25 male.

**Result:** NIPN practices significantly reduced missed opportunities by 28% across all visit types.  
New Hampshire practices had a 13% decrease in missed opportunities across all visit types.

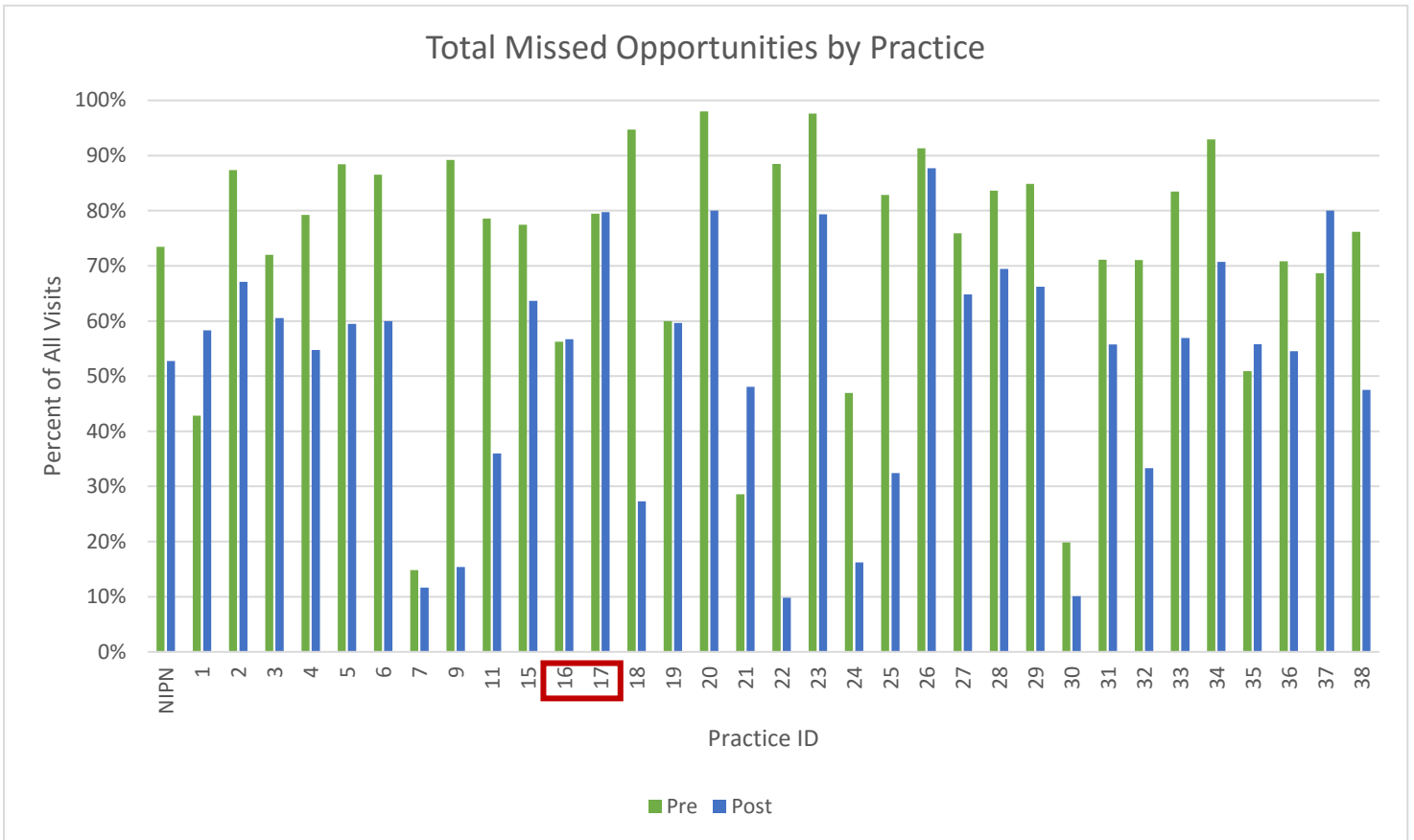
### New Hampshire Practice Data

### Aggregate Data

Visit Type	Number of Visits Audited		Percent of MO by Visit Type		Percent Change	Number of Visits Audited		Percent of MO by Visit Type		Percent Change
	Pre-Project	Post-Project	Pre-Project	Post-Project		Pre-Project	Post-Project	Pre-Project	Post-Project	
Well Care	53	52	40%	44%	12%	839	885	53%	34%	-36%
Acute	61	50	100%	96%	-4%	1204	835	93%	84%	-10%
Chronic	21	16	90%	75%	-17%	203	143	89%	73%	-18%
Other	0	0	#N/A	#N/A	#N/A	48	22	67%	68%	2%
Nurse Only	31	26	45%	15%	-66%	276	338	39%	15%	-62%
<b>All Visit Types</b>	<b>166</b>	<b>144</b>	<b>69%</b>	<b>60%</b>	<b>-13%</b>	<b>2570</b>	<b>2223</b>	<b>73%</b>	<b>53%</b>	<b>-28%</b>



### Total Missed Opportunities (all visit types): All practices



\* New Hampshire practice IDs are circled in red

## HPV Series Initiation

**Measure:** The proportion of adolescents 11 and 12 years of age seen for any visit during the defined measurement periods who received the first dose of the series.

**Goal:** Increase by 10% over baseline rate

**Data source:** Pre- and post-project chart audit of 50 randomly selected patients; 25 female and 25 male.

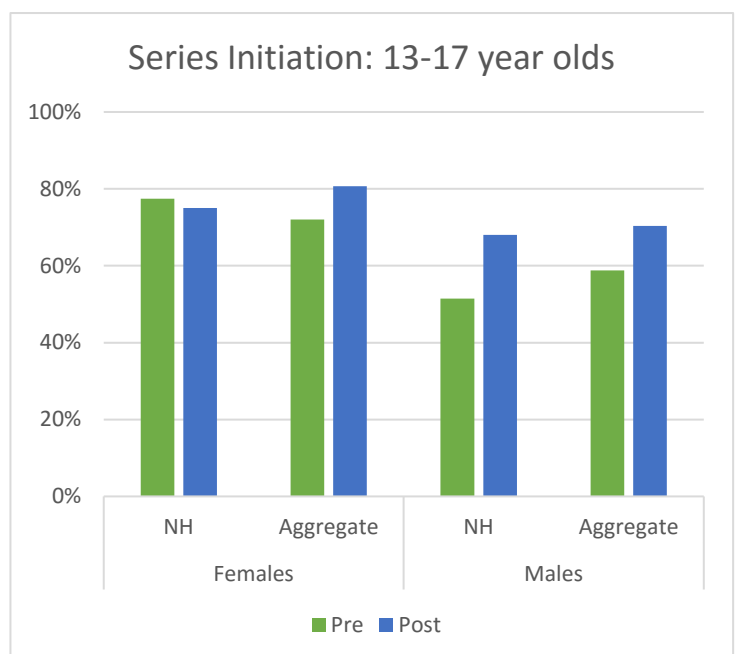
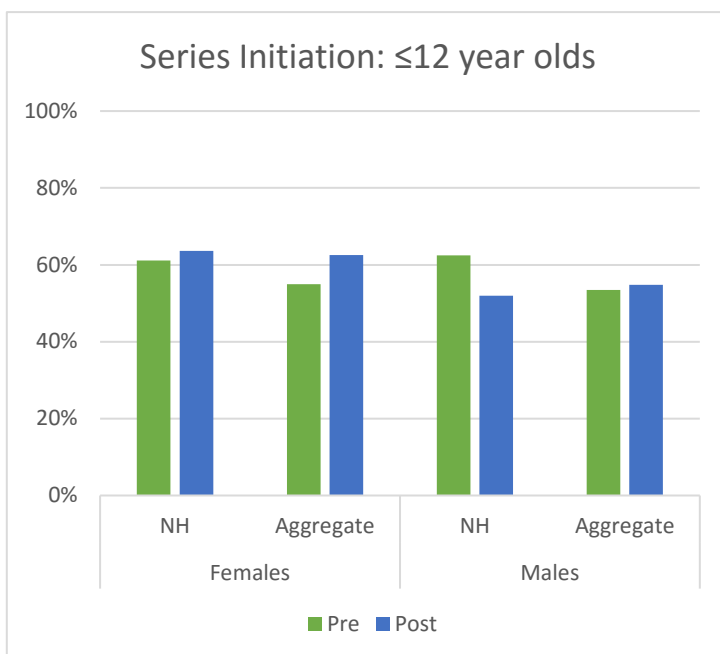
**Result:** NIPN practices had a 13% increase in the rate of HPV series initiation.  
New Hampshire practices had a 3% increase in the rate of HPV series initiation.

### New Hampshire Practice Data

Age	Females			Males			All		
	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change
≤ 12 years old	61%	64%	4%	63%	52%	-17%	62%	57%	-7%
13-17 years old	77%	75%	-3%	51%	68%	32%	64%	72%	13%
<b>All ages</b>	<b>71%</b>	<b>70%</b>	<b>-2%</b>	<b>55%</b>	<b>60%</b>	<b>9%</b>	<b>63%</b>	<b>65%</b>	<b>3%</b>

### Aggregate Data

Age	Females			Males			All		
	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change
≤ 12 years old	55%	63%	14%	53%	55%	3%	54%	59%	8%
13-17 years old	72%	81%	12%	59%	70%	20%	65%	75%	15%
<b>All ages</b>	<b>66%</b>	<b>74%</b>	<b>12%</b>	<b>57%</b>	<b>65%</b>	<b>14%</b>	<b>62%</b>	<b>70%</b>	<b>13%</b>





## HPV Series Completion

**Measure:** Proportion of adolescents 13 through 17 years of age seen for any visit between during the defined measurement periods who have completed the 3-dose HPV vaccine series.

**Goal:** Increase by 10% over baseline rate

**Goal:** Increase by 10% over baseline rate

**Data source:** Pre- and post-project chart audit of 50 randomly selected patients; 25 female and 25 male.

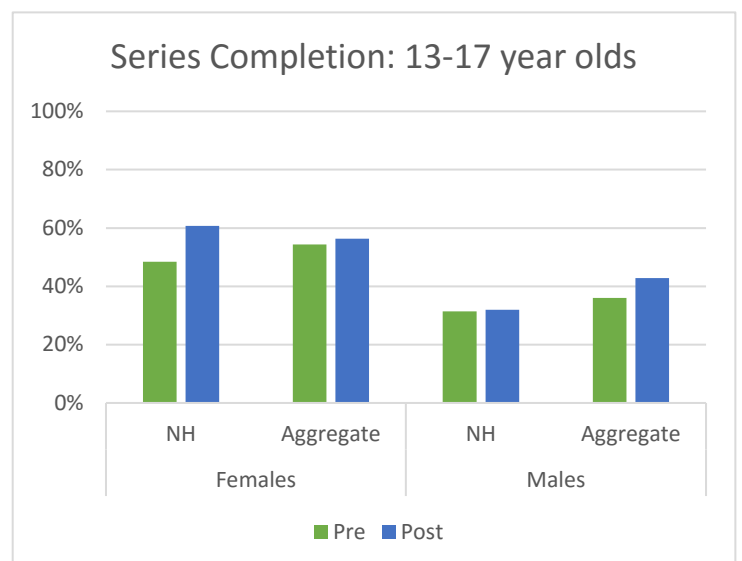
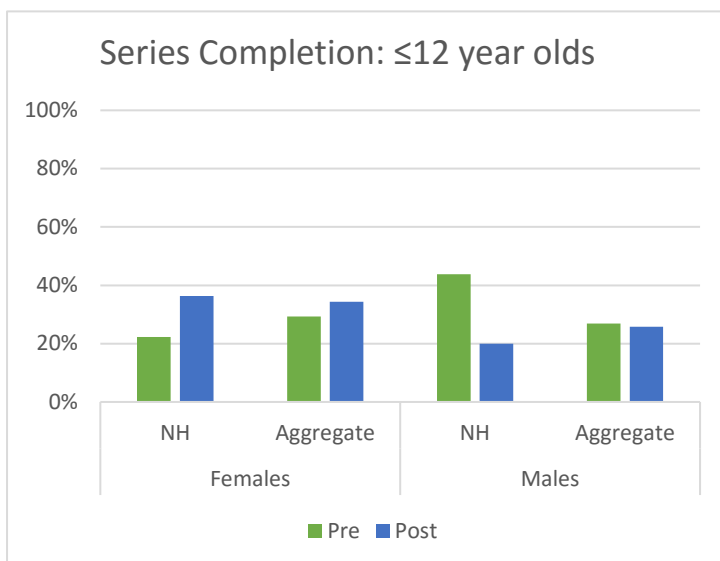
**Result:** NIPN practices had an 8% increase in the rate of HPV series initiation.  
New Hampshire practices had an 3% increase in the rate of HPV series initiation.

### New Hampshire Practice Data

	Females			Males			All		
	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change
≤ 12 years old	22%	36%	64%	44%	20%	-54%	32%	28%	-15%
13-17 years old	48%	61%	25%	31%	32%	2%	39%	47%	20%
<b>Total</b>	<b>39%</b>	<b>50%</b>	<b>29%</b>	<b>35%</b>	<b>26%</b>	<b>-26%</b>	<b>37%</b>	<b>38%</b>	<b>3%</b>

### Aggregate Data

	Females			Males			All		
	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change	Pre-Project	Post-Project	Percent Change
≤ 12 years old	29%	34%	17%	27%	26%	-4%	28%	30%	7%
13-17 years old	54%	56%	4%	36%	43%	19%	45%	49%	9%
<b>Total</b>	<b>46%</b>	<b>48%</b>	<b>6%</b>	<b>33%</b>	<b>37%</b>	<b>12%</b>	<b>39%</b>	<b>43%</b>	<b>8%</b>



## Monthly Chart Audits

**Data Source:** Convenience sample of 10 patients per month (5 female, 5 male) for each practice.

