

Use of the North Carolina Immunization Registry for Adolescent Assessment, Feedback, Incentives, and eXchange

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Purpose and Design

- **Primary Purpose:** Assess the effectiveness of adolescent AFIX
- **Secondary Purpose:** Comparison of In-Person AFIX and Webinar AFIX



- **Groups:**
 - In Person
 - 30 providers received in-person AFIX visit
 - Webinar
 - 31 providers received webinar AFIX visit
 - Control
 - 30 providers received no intervention
- **Measures:**
 - Change in coverage rates
 - Baseline versus 5 month follow-up
 - Cost Effectiveness
 - In-Person versus Webinar

Typical Adolescent AFIX Visit



- Each practice received:
 - 2 Coverage Reports per practice
 - State, National & County level rates
 - An analysis of missed opportunities
 - A list of patients who are missing immunizations
 - Training on how to use the reminder/recall function of the NCIR (if necessary)
 - Strategies on how to improve adolescent rates

Assessment

- Overall Rate – 2MMR, 1Meng, 1Tdap, 3Hep B
- Individual Rates for:
 - 2MMR
 - 1Tdap
 - 1 Meng
 - 3 Hep B
 - 1 and 2 Var
 - 1, 2, and 3 HPV_(girls only)



Sample Coverage Rate Report

Age Range	11 through 12 years as of 1/1/11
Birth Date Range	Born between 1/2/98 and 1/1/00

Total # of Patient Records Assessed	1157
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Vaccinations Coverage: Who is Up-to-Date?

	Selected Antigens	# of Patients Up-to-date	% of Patients Up-to-date
1	HepB3, Meng1, MMR2, Tdap1	572	49%
2	Tdap1	904	78%
3	MMR2	1045	90%
4	Meng1	618	53%
5	HepB3	1085	94%
6	Var1	1107	96%
7	Var2	853	74%

Total # of Female Patient Records Assessed	521
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	Selected Antigens	# of Patients Up-to-date	% of Patients Up-to-date
1	HPV1	133	26%
2	HPV2	85	16%
3	HPV3	31	6%

Sample Coverage Rate Report

Immunizations NOT Complete with HepB3, Meng1, MMR2, Tdap1

Immunization Status	# of Patients	% of Patients
<i>Missed opportunities to administer vaccine</i>	264	23%
No missed opportunities but NOT eligible for immunization as of assessment date	0	0%
No missed opportunities; eligible; <i>last visit < 12 months ago</i>	71	6%
No missed opportunities; eligible; <i>last visit ≥ 12 months ago</i>	250	22%
Total Patients Not Complete by Assessment Date	585	51%

Bring Patients Up-to-Date

Of patients NOT complete, # of patients who could be brought up-to-date with one additional visit	524 of 585
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Immunizations Needed	# of Patients	% of Patients
1	298	26%
2	196	17%
3	27	2%
4+	3	0%
Total patients up-to-date with one additional visit	524	45%




2011 NIS Teen Rates

Vaccine	National Average	NC Average
Meningococcal	70.5%	65.9%
Tdap	78.2%	77.8%
Td or Tdap	85.3%	83.6%
>= 1 HPV	53.0%	54.4%
3 doses HPV	34.8%	32.3%

Sample County Rankings Summary

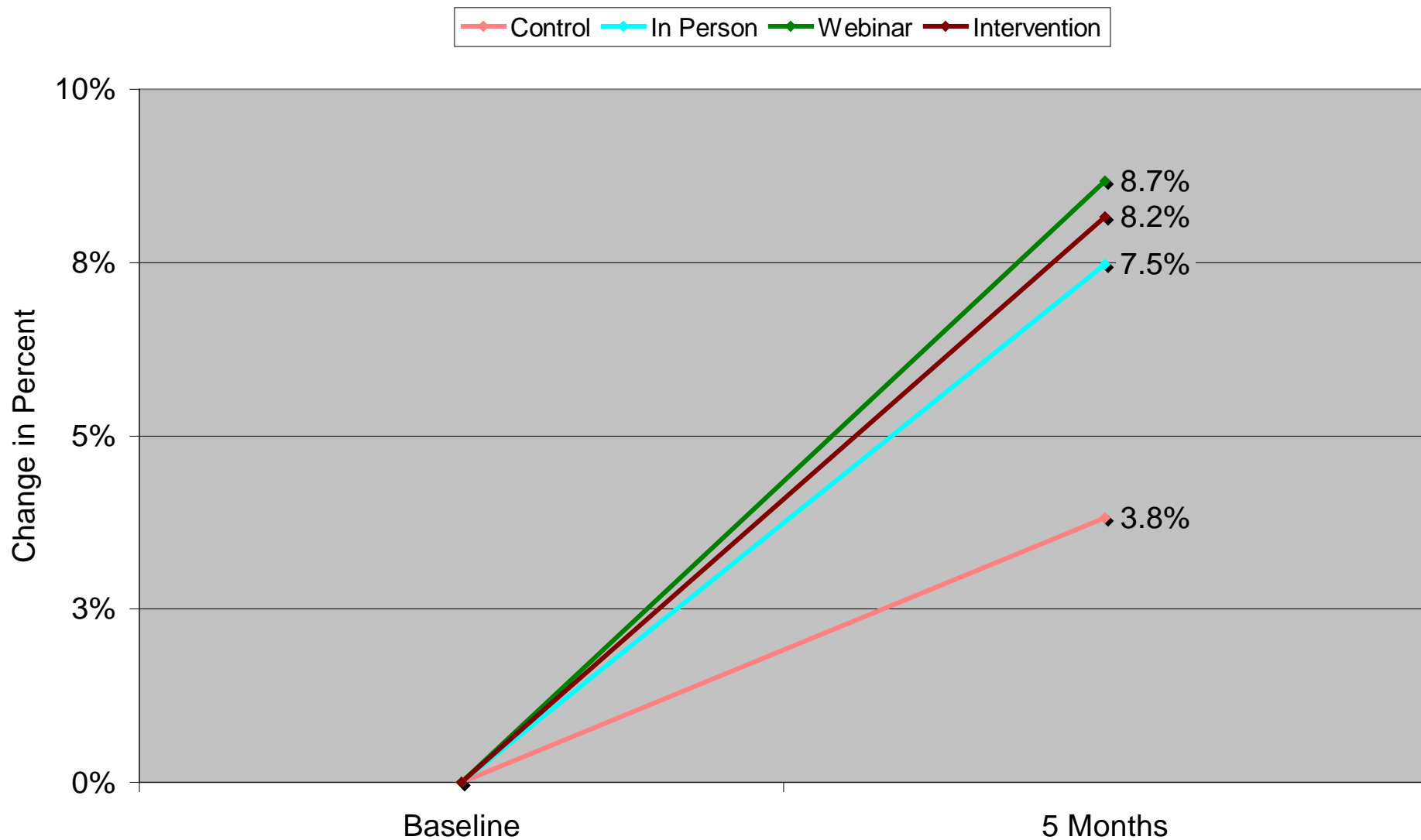
Number of 11-18 year olds	Tdap Rate	Meng Rate	MMR2 Rate	HepB3 Rate
107,885	55%	43%	55%	64%

 County Provider Rankings:

Tdap Rate	Meng Rate	MMR2 Rate	HepB3 Rate
93%	83%	90%	91%
85%	67%	86%	89%
82%	66%	84%	86%
80%	61%	79%	81%
79%	59%	78%	79%
75.6%	46%	74%	78%
75.5%	41%	65%	72%
74%	38%	63%	68%
71%	28%	62%	64%
71%	27%	51%	60%
45%	23%	21%	23%
37%	7%	13%	16%

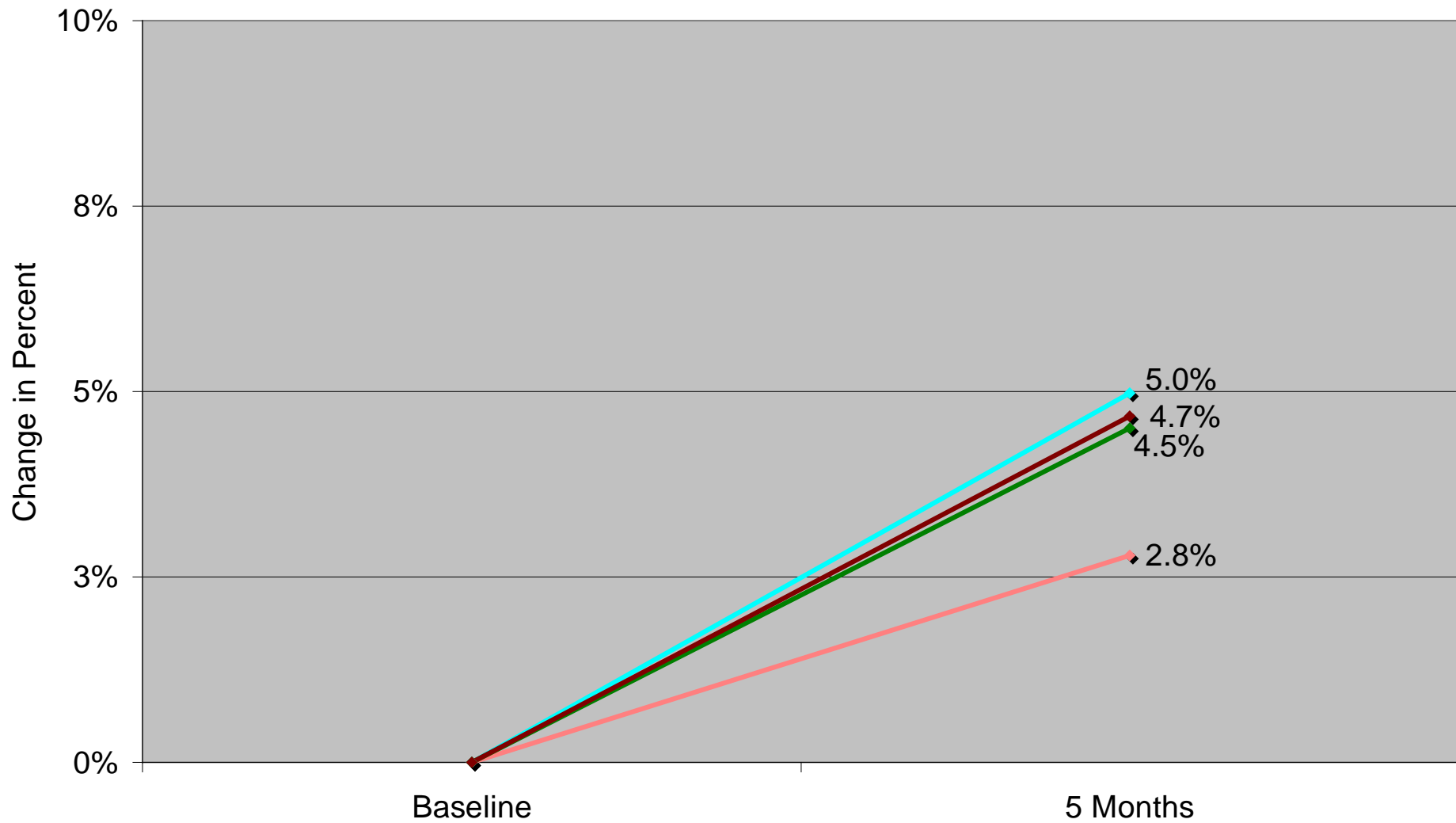
Results...

HepB3, Meng1, MMR2, Tdap1 Vaccination Rate Change: 11-18 y.o. Baseline to 5 Months

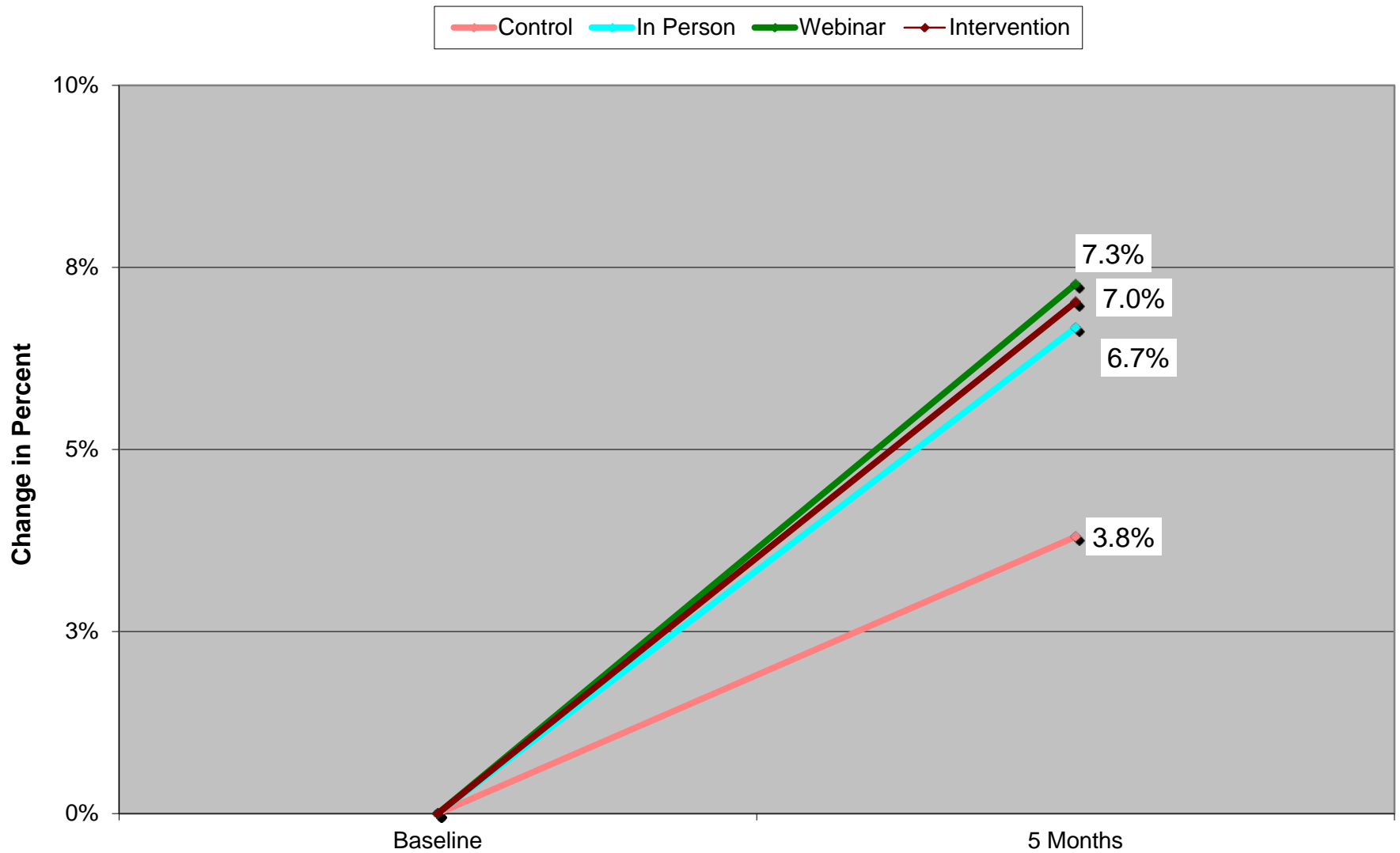


Tdap1 Vaccination Rate Change: 11-18 y.o. Baseline to 5 Months

Control In Person Webinar Intervention

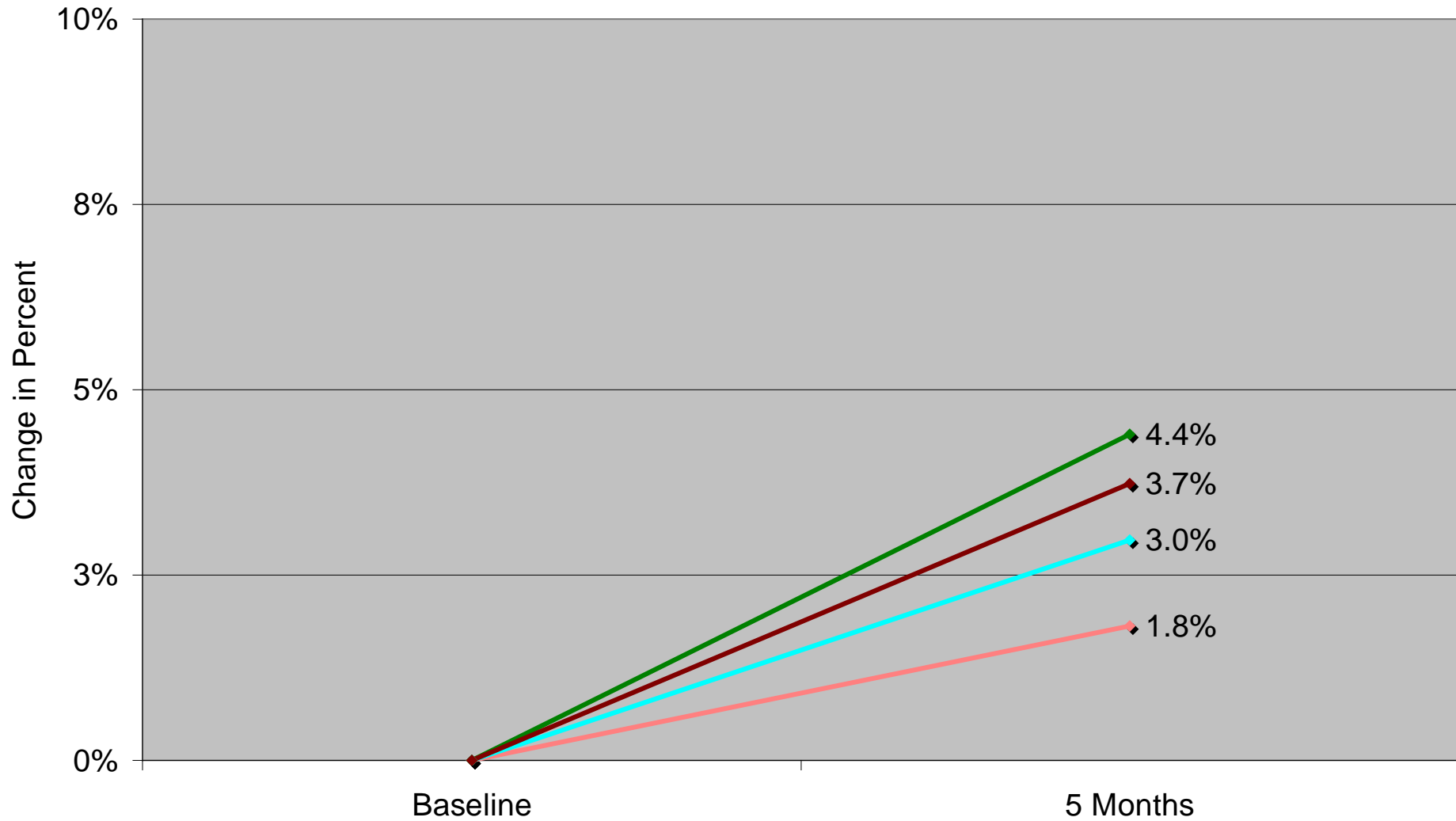


Meng1 Vaccination Rates: 11-18 y.o. Baseline and 5 Months



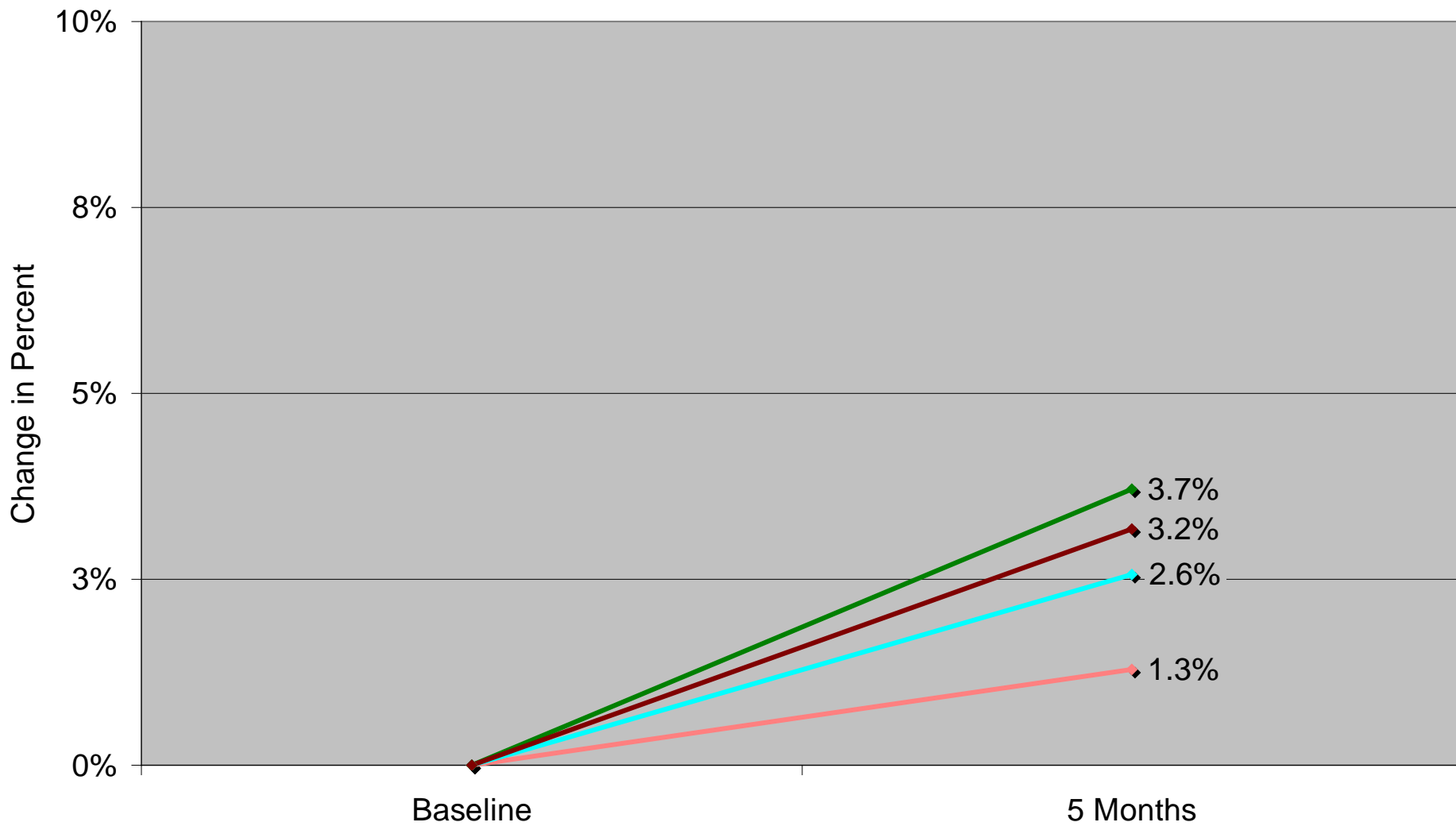
MMR2 Vaccination Rate Change: 11-18 y.o. Baseline to 5 Months

Control In Person Webinar Intervention



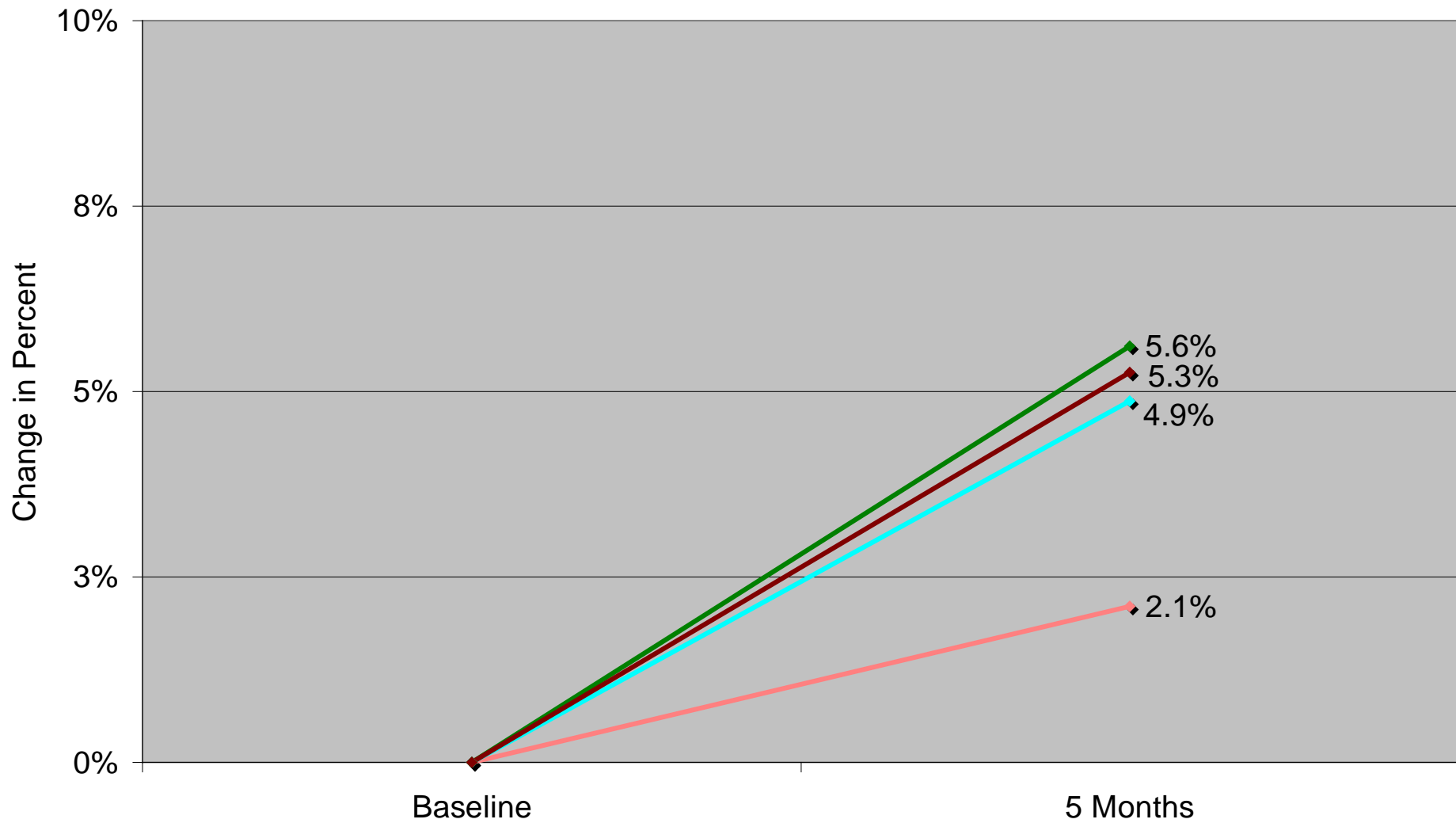
HepB3 Vaccination Rate Change: 11-18 y.o. Baseline to 5 Months

Control In Person Webinar Intervention



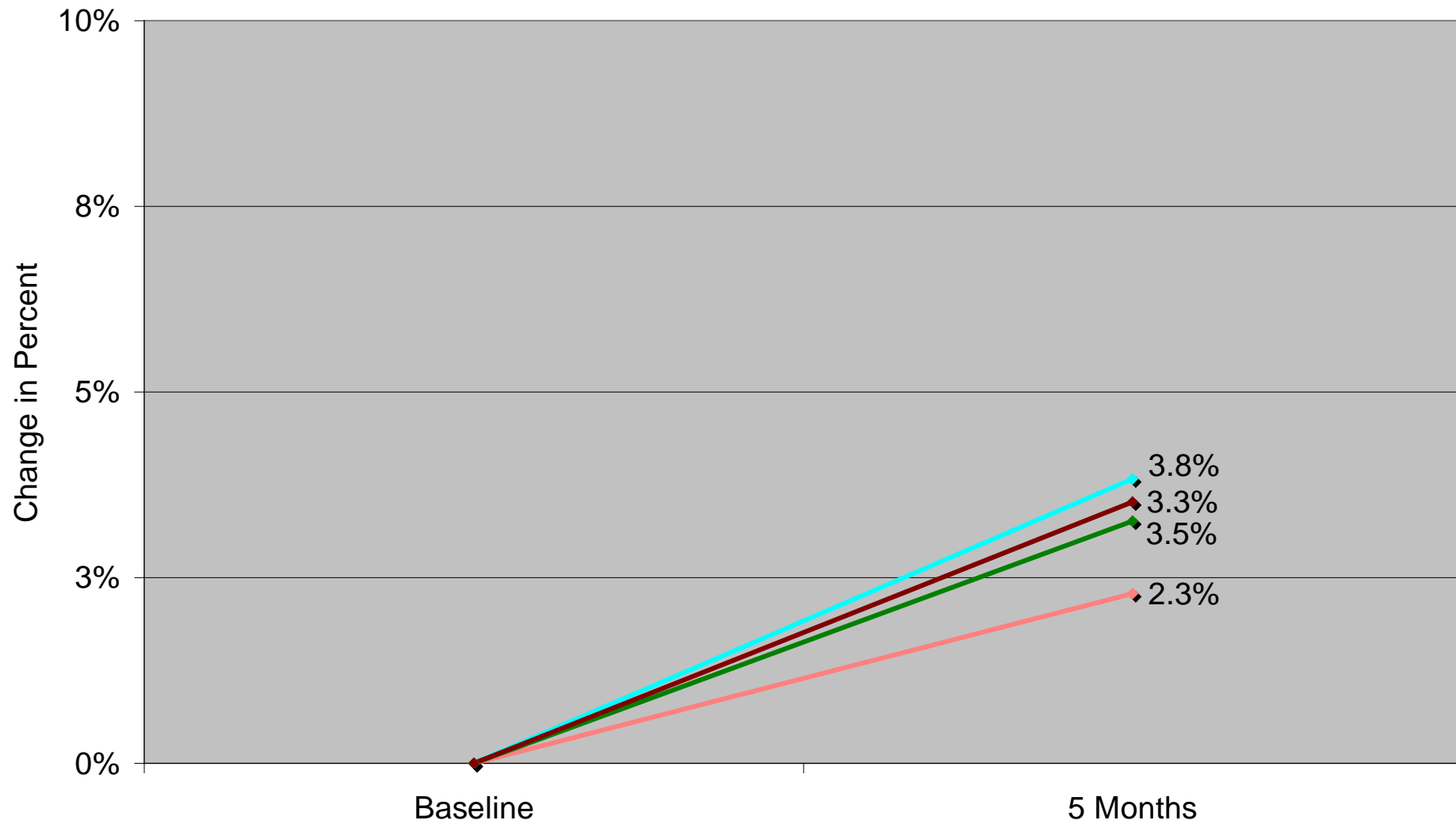
Var2 Vaccination Rate Change: 11-18 y.o. Baseline to 5 Months

Control In Person Webinar Intervention



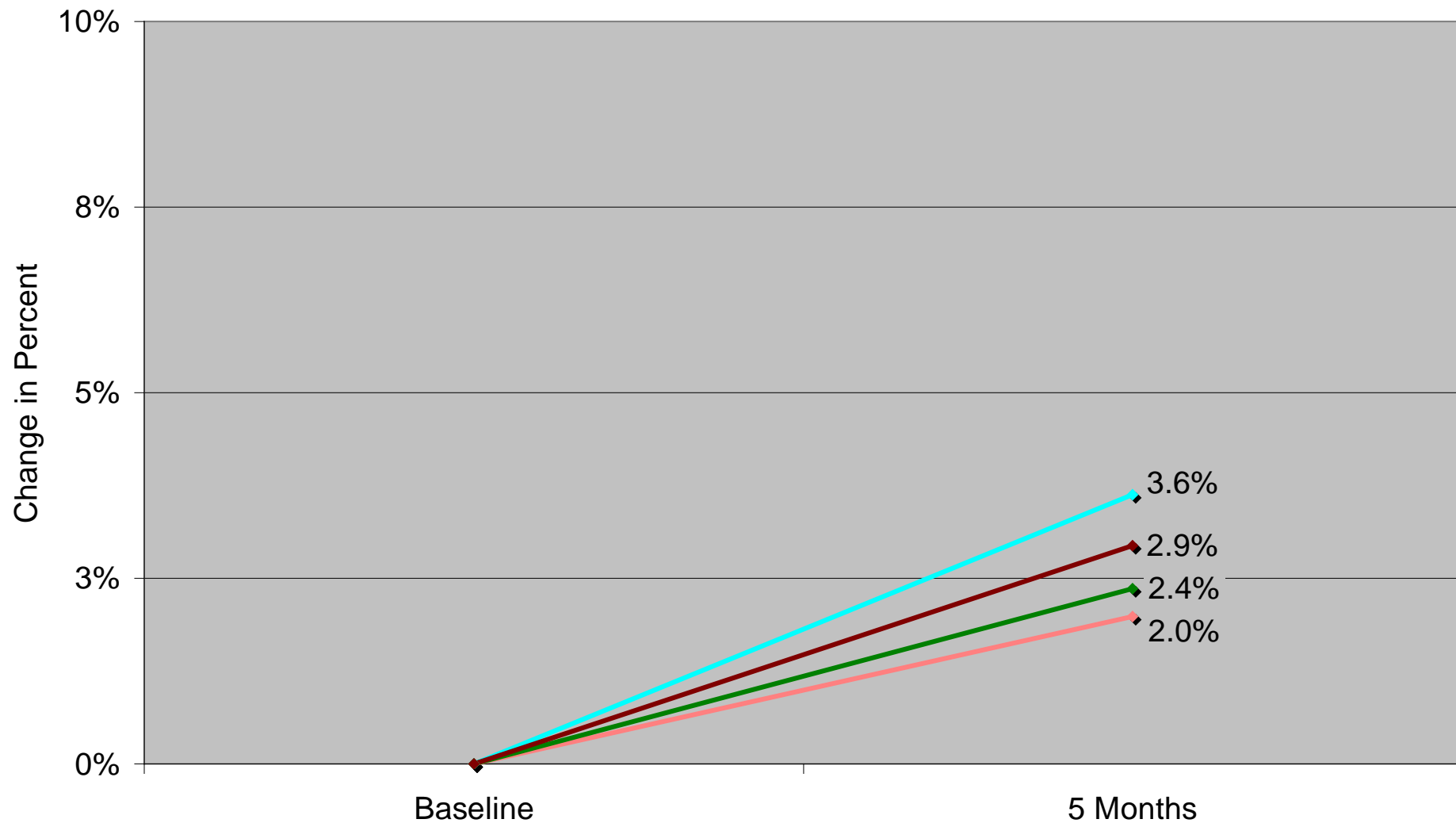
HPV1 Vaccination Rate Change: 11-18 y.o. Baseline to 5 Months

Control In Person Webinar Intervention



HPV3 Vaccination Rate Change: 11-18 y.o. Baseline to 5 Months

Control In Person Webinar Intervention



NIS Teen Rates

Vaccine	2011 National Average	2011 NC Average	2012 National Average	2012 NC Average
Meningococcal	70.5%	65.9%	74.0%	68.2%
Tdap	78.2%	77.8%	84.6%	87.9%
Td or Tdap	85.3%	83.6%	88.5%	91.4%
>= 1 HPV	53.0%	54.4%	53.8%	53.3%
3 doses HPV	34.8%	32.3%	33.4%	35.5%

Cost Effectiveness

Average Cost per Visit	In Person	Webinar
Staffing		
Visit preparation (2 hours)	\$41.02	\$41.02
Visit (1 hour in-person, 1.5 hours webinar)	\$20.51	\$30.77
Travel to visit (2 hours)	\$41.02	n/a
Travel		
Mileage (125 miles/visit @ \$0.30/mile)	\$37.50	n/a
Lodging and meals*	\$12.40	n/a
Mailings	n/a	\$15.58
Webinar license (\$390/year)	n/a	\$12.58
Total	\$152.45	\$99.95

*Over the course of the 30-visit intervention, the in-person condition required 3 overnight trips for a total cost of \$372.

Provider Feedback...

Ratings: Importance of AFIX Visit Components

Component	In Person	Webinar
Missing Immunization Report	4.77	4.64
Adolescent Assessment Report	4.63	4.58
County Rankings Summary	4.47	4.52
NCIR Reminder/Recall Training	4.40	4.52
State/National Adolescent Rate Summary	4.17	4.27



1 = very unimportant

3 = neutral

5 = very important

Confidence in Running NCIR Reminder/Recall Query

Confidence Level	In Person		Webinar	
	Before	After	Before	After
Very confident	17%	60%	10%	35%
Somewhat confident	33%	33%	13%	62%
Neither	7%	3%	29%	0%
Somewhat unconfident	13%	0%	13%	0%
Very unconfident	30%	3%	35%	3%

Five Month Follow-Up: Reported Increases in Effort

Activity	In-Person	Webinar
Enter historical immunizations	67%	100%
Target adolescents who could be up-to-date with one more visit	63%	58%
Inactivate adolescents in NCIR who are not seen by practice	57%	55%
Utilize a reminder/recall system	57%	45%

Summary

- Both in-person and webinar AFIX visits helped improve immunization rates
- Overall feedback very positive from both in-person and webinar groups
- Webinar visits were 50% more cost effective than in-person visits
- Both in-person and webinar intervention sustainable and easy to replicate

Any Questions?