

**HEALTHY CHICAGO**  
CHICAGO DEPARTMENT OF PUBLIC HEALTH

**“Less Is More” Approach:  
Impact of a Provider-Education Intervention  
on HPV Vaccination Rates**

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November 3, 2015

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**Presenter Disclosure**

“No relationships to disclose”

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**HPV Infections**

- US statistics
  - Currently infected: ~79 million
  - New infections/year: ~14 million
  - HPV infection is most common in people in their teens and early 20s
- HPV is the most common STI
  - ...but most people never know that they have been infected -- unless a woman has an abnormal pap test with a positive HPV test

Jemal A et al. J Natl Cancer Inst 2013;105:175-201

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### HPV Transmission

- HPV exposure can occur with any type of intimate sexual contact
- Among a cohort of adolescent women without prior vaginal intercourse (followed longitudinally):
  - HPV was detected in 46% of females *prior* to 1st vaginal sex
  - 70% of these women reported non-coital behaviors that may in part explain genital transmission
- Vaginal intercourse is not necessary to become infected
- Condoms do not completely stop HPV transmission

Jemal A et al. J Natl Cancer Inst 2013;105:175-201

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### Transmission During Intercourse

- Nearly 50% of high school students have already engaged in sexual (vaginal-penile) intercourse
  - 1/3 of 9th graders and 2/3 of 12th graders have engaged in sexual intercourse
  - 24% of high school seniors have had sexual intercourse with 4 or more partners
- About 50% of people are infected with HPV within 12 months of sexual debut

Jemal A et al. J Natl Cancer Inst 2013;105:175-201  
 Wiener RL, Lee SK, Hugh JP, et al. Am J Epidemiol 2003. 157:218-226.

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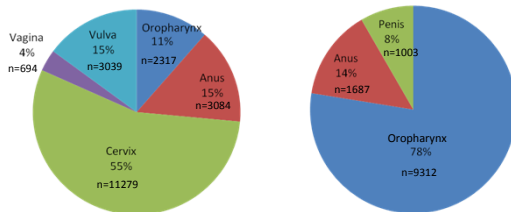
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### Average Number of New HPV-Associated Cancers by Sex, in the United States, 2005-2009

Women (N=20,413)

Men (N=12,002)



Jemal A et al. J Natl Cancer Inst 2013;105:175-201

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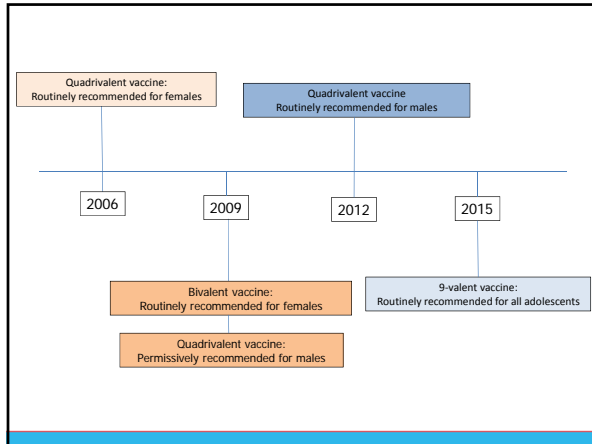
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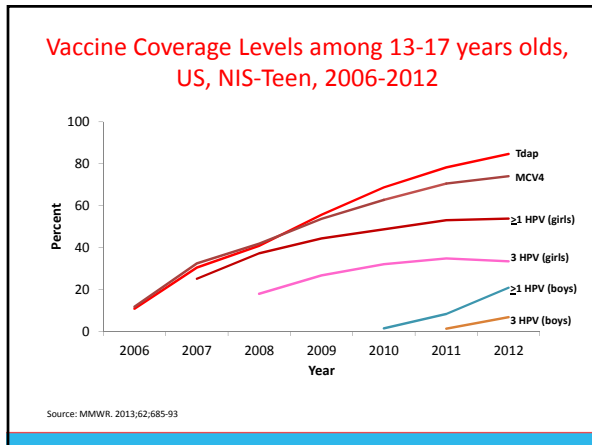
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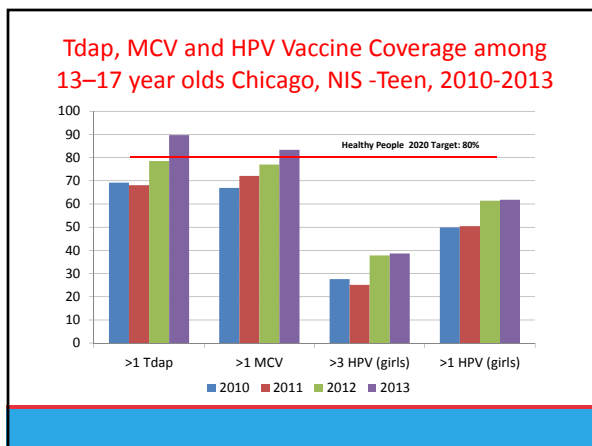
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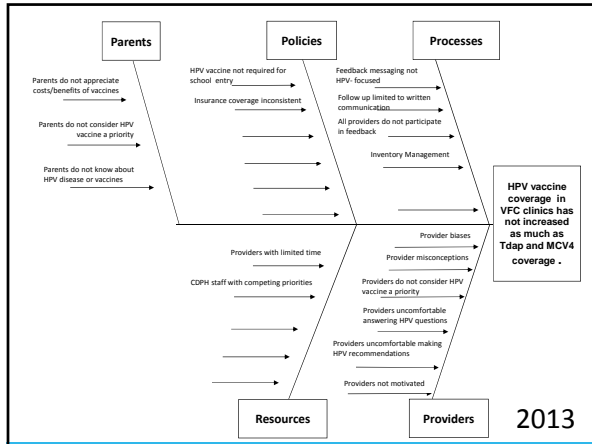
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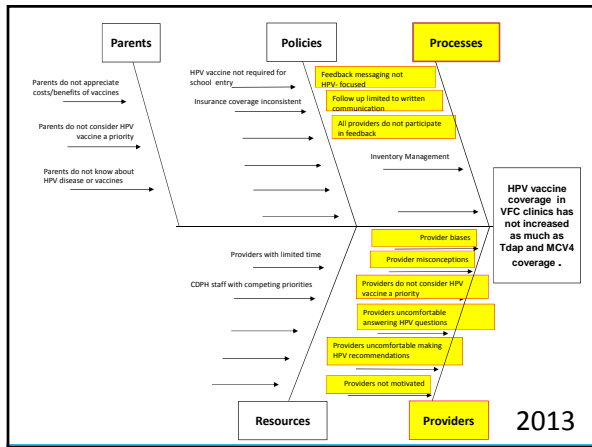
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**“Less is More” Intervention**

- Feedback sessions - 30 to 45 minutes
- Required at least (1) healthcare provider
- Feedback reports were customized
  - main focused was HPV
  - other vaccines included
- One pager – key messages for HPV dialogue
- Peer educator (clinician-to-clinician)
- 6 month follow-up

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## Feedback Report

**Adolescent Immunization Coverage Report**  
**13-18 year olds (N = 290)**

Clinic A- HC 3  
 Address:  
 Phone number

Percent of 13-18 year old females* with ≥ 1 HPV				Percent of 13-18 year old females* with ≥ 3 HPV			
This clinic	All Chicago HC 3 Clinics	City of Chicago	Goal	This clinic	All Chicago HC 3 Clinics	City of Chicago	Goal
<b>85%</b>	57%	63.6%	NA*	<b>59%</b>	54%	38.7%	80%

\*Coverage levels for females reported since the routine recommendation for males was not issued until 2011.  
 \*Healthy People 2020 Goal only available for ≥ 3 doses HPV among females 13-15 years of age

Scale:

Excellent: 90-100%

Very Good: 80-89%

Good: 70-79%

Fair: 60-69%

Needs Improvement: ≤ 59%

Clinic rating for females with ≥ 1 HPV

Very Good

Clinic rating for females with ≥ 3 HPV

Needs Improvement

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**Introduce all recommended adolescent vaccines as a single recommendation, similar to how you might recommend infant vaccines to a parent.**

“Today Miraya is due for three routine vaccines which include meningitis vaccine; Tdap which is tetanus, diphtheria and whooping cough; and HPV which is Human Papillomavirus vaccine. The nurse will be right in to administer those vaccines and I look forward to seeing you next year.”

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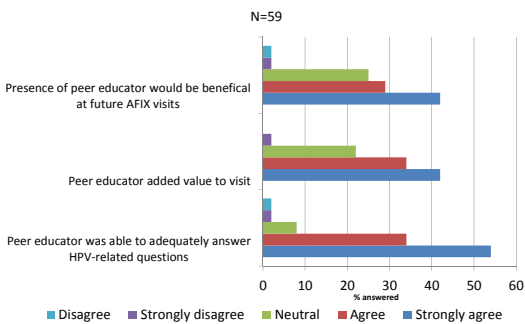
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## Evaluation of Peer Educators




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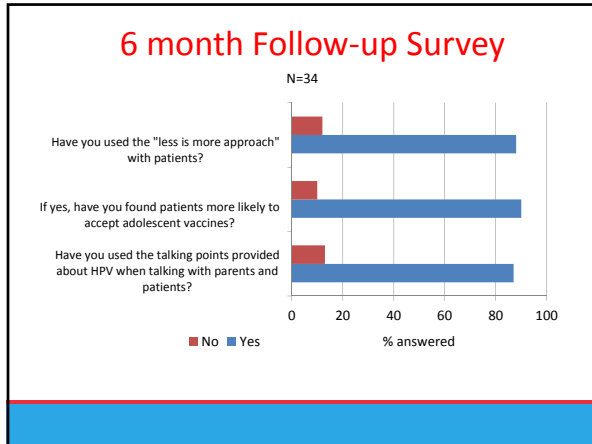
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### Analysis

- **Objective:** Assess impact of "Less is More" intervention on HPV vaccination rates among Chicago clinics using Illinois Comprehensive Automated Immunization Registry Exchange (I-CARE) data
- **Methods:** Pre-intervention (3/1/2014) and post-intervention (1/1/2015) clinic-level HPV vaccine coverage rates obtained from I-CARE for teens aged 13-17 yrs were compared
- Clinics analyzed:
  - 42 Chicago clinics received the "Less is More" intervention
  - As a comparison group, 71 Illinois clinics located outside of the city of Chicago (>30 miles away) were chosen
    - Clinics were chosen from cities with population >50,000
    - Clinics had >200 patients aged 13-17 years

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### Results

#### HPV Vaccine Coverage Levels

	≥1 HPV doses			≥3 HPV doses		
	Pre-intervention	Post-intervention	P-value	Pre-intervention	Post-intervention	P-value
Chicago Clinics	50%	57%	<0.01	15%	21%	<0.01
Illinois Control Clinics	44%	52%	<0.01	14%	18%	<0.01

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## Results

### HPV vaccine coverage levels among females

	≥1 HPV doses			≥3 HPV doses		
	Pre-intervention	Post-intervention	P-value	Pre-intervention	Post-intervention	P-value
Chicago Clinics	53%	59%	<0.01	19%	25%	<0.01
Illinois Control Clinics	48%	55%	<0.01	19%	22%	<0.01

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## Limitations

- Other CDPH efforts to increase HPV vaccine awareness (state-wide webinars, billboard, bus, CTA advertising) may have reached providers and parents outside of Chicago
- Difficult to identify a comparison group for Chicago clinics (no other large urban area with similar demographics in Illinois)
- I-CARE data may not be complete
  - Not all Illinois clinics enter vaccination data in I-CARE

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## Stakeholders




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**Print and Outdoor Ads**






**Social Media**

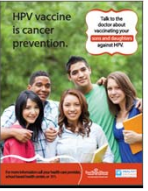
#UCanStopHPV

**Radio and TV**

**School Outreach**



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### Provider Education

- In-person and webinar training (22)
  - VFC providers underutilizing HPV vaccine
  - Professional organization members
  - Participants: >2,000
- Curriculum
  - Initiation of vaccine series
  - Adherence to schedule
- Stakeholder identified opportunities

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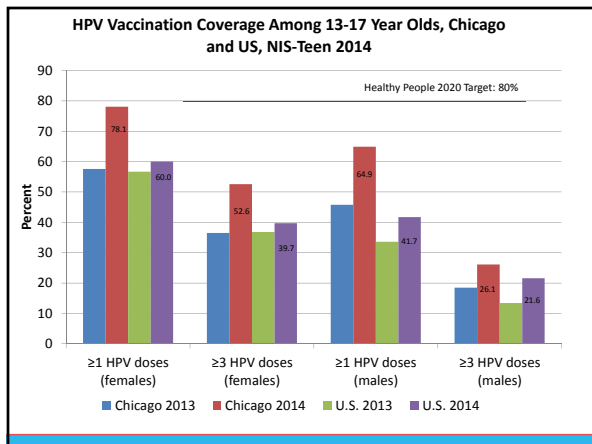
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## Conclusions

- “Less is more” approach when recommending the HPV vaccine to parents may improve vaccination coverage levels
- Multi-prong educational campaign may improve and have an impact on vaccination levels

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## Acknowledgements

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