Human Papillomavirus Vaccine Uptake in Adolescent Female Medicaid Enrollees — New Hampshire, 2007

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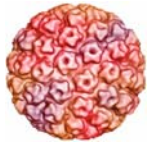
Background



Human Papillomavirus (HPV)

- >40 types of HPV infect mucous membranes
- Two subtypes:
  1. *Oncogenic* – can lead to cervical pre-cancers, cervical cancers, other anogenital cancers, and a subset of oropharyngeal cancers
  2. *Non-oncogenic* – can lead to genital warts and recurrent respiratory papillomatosis
- One of most common STDs in US, prevalence 27%

HPV Vaccine

- June 2006: FDA approved quadrivalent vaccine
- Commercially known as Gardasil® and only vaccine currently licensed for use in US
- Contains 4 types of HPV:
  - 16 and 18 – oncogenic and associated with 70% of cervical cancers
  - 6 and 11 – non-oncogenic and cause 90% of genital warts
- 3-dose series is given at 0, 2, and 6 months in time
- Advisory Committee on Immunization Practices guidelines:
  - 3-dose series routine administration to females aged 11–12 years
  - 3-dose 'catch-up' series to females aged 13–26 years

New Hampshire's (NH) Universal Vaccine Distribution Program

- NH supplies recommended vaccines at no charge to *all* resident children aged 0–18 years
- Vaccine purchase funded by NH, US government, and insurance companies
- January 2007: HPV vaccine 1st became available through the program
- Manufacturer advertising and vaccine's subsequent popularity lead to high demand, and availability of vaccine was outstripped for first few months of 2007

Objectives

- Assess HPV vaccine uptake among NH adolescent females through analysis of Medicaid data
- Evaluate for differences between ages and counties
- Determine vaccine series completion
- Establish baseline for comparison to future years

Methods

- NH 2007 Medicaid dataset analyzed (NH does not have a vaccine registry)
- Current Procedural Terminology code for HPV vaccine administration used to identify HPV vaccine recipients
- Calculated percentages and 95% CI for vaccine uptake at state, age, and county level and completion of vaccine series at state level using Poisson distribution
- Used chi square test to assess statistical differences in age- and county-specific vaccine uptake

Calculation of uptake

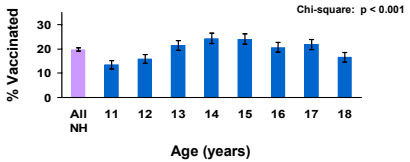
- Denominator: average Medicaid population enrollment during 2007, females, aged 11–18 years
- Numerator: received ≥ 1 HPV vaccine during 2007

Calculation of completion of vaccine series

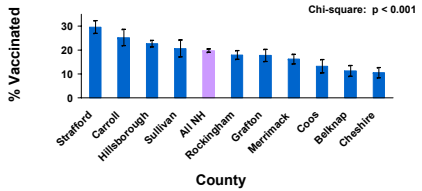
- Denominator: received ≥ 1 HPV vaccine during January 1–June 30, 2007
- Numerator: received ≥ 3 HPV vaccines during 2007

Results

HPV Vaccine Uptake by Age Among New Hampshire Female Medicaid Enrollees, 2007
(N = 12,169)



HPV Vaccine Uptake by County Among New Hampshire Female Medicaid Enrollees, 2007
(N = 12,169)

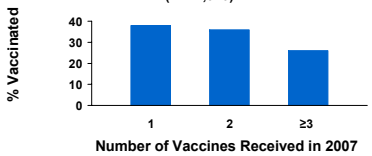


HPV Vaccine Series Completion Among New Hampshire Female Medicaid Enrollees, 2007

	Percent (N = 1071)	95% CI
Vaccine Completion*	26.0%	(23.3–28.6)

*among those who had received ≥1 HPV vaccine during January 1– June 30, 2007

HPV Vaccine Series Completion Among New Hampshire Female Medicaid Enrollees Vaccinated in First Half of 2007
(N = 1,070)



Discussion

Limitations

- Administrative data sets do not provide all medically relevant information
- Dataset might not capture all vaccination events for each individual due to Medicaid enrollees falling into and out of eligibility during a calendar year
- Inability to evaluate access to providers as a factor affecting county-specific vaccine uptake
- Potential underestimation of vaccine series completion by late completers, because 2008 data was not yet available

Conclusions

- HPV vaccine uptake 20% among NH adolescent Medicaid enrollees
- Vaccine uptake unevenly distributed between ages and counties
- Vaccine series completed by only 26% of those who received an HPV vaccine in the first 6 months of 2007

Recommendations

- Continue surveillance of vaccine uptake
- Conduct studies to determine reasons for differences in uptake by county and evaluate risk factors for low uptake
- Conduct follow-up assessment of vaccine series completion to account for late completers
- Work with providers, patients, or parents to increase uptake of well-care visits and the HPV vaccine

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