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Vermont Concerns and Trends in the SBFP Sub-populations

Paul C. Baresel IV
University of Vermont

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Vaccination Trends and Concerns in the SBFP Sub-population

MSIII PAUL BARESEL

FAMILY MEDICINE

JULY-AUG 2016

SOUTH BURLINGTON FAMILY PRACTICE

2: Problem Identification

- In 2014 and 2015 the Vermont Department of Health reported that ‘the vast majority of Vermonters are immunized’ yet ‘a small numbers of adults and children’ remain.
 - The 2013 Vermont Immunization Program Annual Report indicated that Vermont was below national and state goals in toddler immunization (63% Vermont, 68% nat. average, 80% 2020 Healthy People Goal), was average in teen vaccination, and was above state average in zoster vaccination and male HPV vaccination. Data regarding PPSV23 immunization was not included.
- A 2015 survey of naturopathic providers in Vermont indicated that a substantial portion of their patient population feels they have specific concerns and fears around vaccinations that have not been adequately heard or addressed by other providers which lead them to choose not to vaccinate or to pursue alternative vaccination schedules.
 - This suggests there are likely sub-populations of interest which are not adequately represented by aggregate vaccination data, who may be good targets for target discussion and distribution of specific vaccination information material.
- According to the WHO the incidence of measles, mumps, and pertussis in the United States grew from 43, 800, and 10,454 in 2007 to 667, 1,223, and 32,971 in 2014 respectively.
- In 2015 Vermont eliminated the philosophical exemption, purchased \$13 million in pediatric vaccines for use in primary care offices, expanded the HPV Vaccine Initiative group to provide HPV vaccinations, and drove the “It’s OK to Ask” campaign to encourage vaccination discourse. Unprecedented levels of state support and public awareness make it an opportune time to identify and eliminate barriers to vaccination at the community level through primary care provider offices.



3: Public Health Cost

Table 1

- HealthyPeople.gov and the CDC rank vaccines as among the most cost-effective preventative health service.
- The Office of Disease Prevention and Healthy Promotion estimates that vaccination of each yearly birth cohort to CDC recommendations reduces health care costs by \$9.9 billion and saves \$33.4 billion in indirect costs.
- The CDC estimates the per cost of each of the most common vaccine preventable illness hospitalizations to be as shown in table 1.
 - In 2013 there were 9/100,000 cases of pertussis in the United States, the highest since the 1950's.

Disease	Average Cost Per Hospitalization
Diphtheria	\$16.9K
Tetanus	\$102.5K
Pertussis	\$10.7K
Measles	\$4.0K
Mumps	\$11.1K
Rubella	\$4.8K
Varicella	\$4.1K
Pneumococcal	\$3.1K



4: Community Perspective

Dr. Clara Keegan

Dr. Aaron Reiter

What are the most important influences on patient decisions to vaccinate

Towards not vaccinating:

- Cost
- Personal experience with adverse effects
- Trust/distrust of “Big Pharma”

Toward vaccinating:

- Provider recommendation
- Trust/Distrust of government recommendations
- Cultural Background

Provider recommendation
 Personal experience with adverse effects
 Trust/Distrust of “Big Pharma”
 Cultural background

Are you able to fully address these concerns during OV’s?

Generally. Most difficult: “I don’t know about additives in different vaccines.”

Some, although some are accurate (Rotavirus).

What percent of your patients would you say are fully/partially vaccinated?

51-75% (fully)
 76+% (at least partially)

76+% (both)



5: Intervention and Methodology

1. Goal

1. To analyze compliance with CDC vaccination guidelines in order to identify vaccinations of concern to patients served by the South Burlington FM practice and help address specific issues related to those vaccinations.

2. Methodology

1. Over 4 weeks vaccination compliance with CDC guidelines for MMR, Tetanus, Diptheria, Pertussis, Influenza, pneumonia (PPSV23/13)*, HPV, and Zoster* was assessed at each annual physical. No identifying data was recorded. *when indicated

3. Intervention

1. Develop prepared reference material to which can be included as an after-visit summary smart-phrase and/or waiting area pamphlet which helps address the most common patient concerns.



6a: Results/Response

1. 43 annual wellness visits/physicals between July 18 and Aug 9 were assessed. 2 were excluded from analysis based on pending immunization history.
 - 30/41 (73.1%) were fully vaccinated to CDC recommendations.
 - 11 (26.8%) did not meet CDC recommendations.
 - ✦ 4 visits were adults >40 years of age, who did not meet Tetanus and Pertussis vaccination recommendations.
 - ✦ 2 visits were cases that did not meet PPSV23 vaccination recommendations.
 - ✦ 5 visits were cases that did not meet Zoster vaccination recommendations.



6b: Results/Response: Zoster Vaccination

- Retrospective meta-review of all patients seen at SBFP in the previous 30 days was performed in using bulk queries in Epic EMR to review Zoster vaccination statistics. No individual identifying data was stored or used for analysis.
 - 438/1006 (43.5%) patients >60yo did not meet zoster vaccination standards.
 - 105/289 (36.3%) patients between 60-64yo and eligible for free Zoster coverage did not meet recommendations.
 - 73/228 patients between 61-64yo had had a previous annual visit and did not meet recommendations, indicating they did not vaccinate at age 60.
- Compared to the state average of ~47% Shingles vaccination, these data suggest that compliance amongst the SBFP clinic is quite good. However, a substantial portion of patients who would benefit from the vaccine remain unvaccinated despite no cost.



7: Effectiveness and Limitations

1. Effectiveness

1. Assessing the effectiveness of this project can be done by repeating re-querying the data for vaccination rates at 1 year intervals while keeping the sample set and comparing it against both the data here, and against a new incoming one.

2. Limitations

1. Improving vaccination rates by addressing patient fears and concerns is critical to the continued improvement of community health at the population level. While it is fortunate that there is a very high degree of vaccination compliance at SBFM, it suggests that demographics choosing not to vaccinate or to vaccinate incompletely may not be well represented at SBFM. Engaging this population may require an approach outside the scope of the family medicine primary care office setting.
2. This study was also limited by the scope of aggregate data access available through Epic. Only patients in the last 30 days were able to be used in the dataset, and the scripting with which to analyze and sort information in the dataset was limited to basic queries and filters.



8: Future Follow-up

1. Adults between the 60-64 years of age at SBFP are not limited from vaccination by a cost barrier. In addition, provider interviews at SBFP and in a 2015 study regarding Naturopathic providers both suggest that the most important factor on patient decisions to vaccinate are provider opinions and influence. Direct interviews with this population are not possible at the moment due to IRB approval requirements, but would be helpful towards identifying additional barriers to vaccination in the future.



9: References

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