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Improving Vaccination Rates in Bangor, ME

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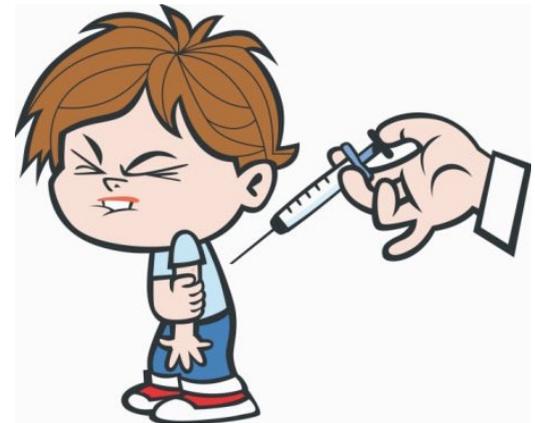
Improving Vaccination Rates in Bangor, ME

Noah Quinlan and Whitney Thomas

EMMC Family Medicine Center and Residency Program

April 2014

Project Mentor: Dr. Robin Pritham

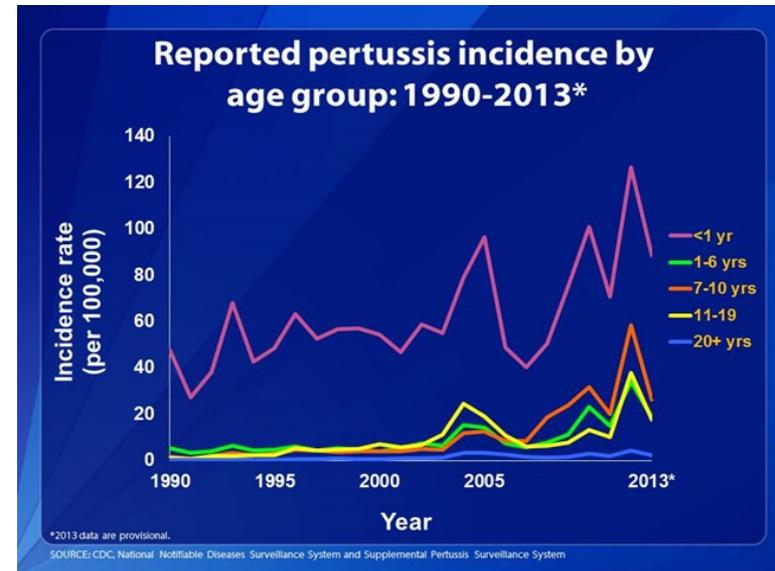


Problem Identification

	National Immunization Rates	Eastern Maine Medical Center - Center for Family Medicine Immunization Rates
Pneumococcal (>65yo)	59.9%	57.4%
Tdap (>19yo)	14.2%	38.7%
Zoster (>60yo)	20.1%	14.8%
HPV (11-26yo)	Female: 34.5% Male: 2.3%	Female: 17.4% Male: 4.3%

Problem Identification

- Providers believe vaccination rates at EMMC Center for Family Medicine can be higher
- A resurgence in some preventable diseases is likely due to decreased immunization rates
- While other preventable diseases have not seen a resurgence, the potential for outbreak exists if immunization rates remain low
- Factors contributing to low immunization rates are misinformation, lack of awareness, cost, inconvenience, and infrequent office visits by adolescents



Public Health Cost

- For every \$1 spent on **Tdap** vaccinations, more than \$24 is saved in direct medical costs.
- For each year that the **HPV** rate among females stays at the current coverage rate of 33%, 4,400 women will be diagnosed with cervical cancer and 1,400 cervical cancer-related deaths will occur in the future.
- At least 1 million people in the US get **shingles** yearly; in clinical trials, the vaccine reduced risk by 50%.
- Even with antibiotic treatment, 10-15% of people with **meningococcal** disease in the US die.
- In children, **pneumococcal** disease is fatal in 1 out of every 10 cases.

Community Perspective

- *Name withheld*, **FN** – Public Health Director, Bangor Public Health & Community Services
 - She believes that the low vaccination rates in Penobscot county are in part due to the prohibitive costs and inconvenience of receiving vaccines. Her mission is to increase coverage through education and providing free vaccine clinics for members of the local community. She works closely with local schools to increase vaccination rates among children and young adults.
- *Name withheld*– Brewer High School nurse
 - She is deeply concerned with the low vaccination rates among her students at Brewer High School. She believes the biggest barrier is parents not bringing their children in for immunizations, and feels we need to make it easier for parents to do so. She feels that making personal phone calls to parents regarding their child's immunization status would increase coverage rates.

Community Perspective

- *Name withheld*, **CMA** – Penobscot Pediatrics
 - She is very active at Penobscot Pediatrics in trying to increase immunization rates. She believes that adolescent immunizations are missed due to infrequent visits and patients'/parents' lack of awareness. She encourages staff to review each patient's immunization status at every visit so no opportunities are missed. While unlikely, she thinks legislature requiring adolescents to get certain vaccinations before entering high school may be beneficial.
- *Name withheld*– Insurance Clerk, Center for Family Medicine
 - She helped us understand financial barriers to vaccination for patients at CFM. She feels that rates of Zoster immunization are so low at the clinic because it costs patients \$272 and is not covered by Medicare.

Intervention and Methodology

What:

- We plan to...
 - educate patients about the importance of immunizations.
 - debunk common vaccine myths.
- Our goal is to increase immunization rates among CFM patients of all ages.

How:

- Create a slideshow containing information about vaccinations to be shown on a continuous loop in the CFM waiting area.
- By presenting patients with this information prior to their appointment, we hope to evoke conversation about immunizations between patients and providers.

Results/Response

- We created a slideshow to educate patients about the following vaccines:
 - Meningococcal
 - Herpes zoster
 - Pneumococcal
 - Tetanus, diphtheria, pertussis
 - Human papillomavirus
- Once the waiting room renovations at CFM are completed, the slides will be shown on a constant loop for patient education and awareness while they wait to see their provider.
- When discussing our project with CFM providers and nursing staff, they agree that providing information to patients in this format is superior to vaccine pamphlet distribution, a method they found unsuccessful in the past.

Results/Response

• Samples from slideshow

FACT OR MYTH?

My child can only get one or two vaccines at a time.

MYTH!

There is **no proven danger** in getting many vaccines at once. Any time you delay vaccines your child is vulnerable to serious diseases.

DID YOU KNOW THERE IS A VACCINE AGAINST CANCER?

The HPV vaccine is approved for all children and prevents cervical, penile and oral cancer caused by Human Papillomavirus (HPV).

WHY DOES MY DAUGHTER NEED AN HPV VACCINE?

- Nearly 100% of cervical cancers are caused by HPV infection
- Cervical cancer is the 3rd most common cancer in females worldwide
- An estimated 80% of females will have been exposed to HPV by the age of 50

FACT OR MYTH?

Vaccines can cause autism.

MYTH!

Original studies suggesting that vaccines cause autism have been repeatedly **proven incorrect**. More recent, well-conducted studies have shown that there is **NO** link between vaccines and autism.

Evaluation of Effectiveness and Limitations

- One year from now, effectiveness of our project will be evaluated via
 - Surveying providers and medical assistants to see how resistance to vaccinations has changed and if patient-driven vaccine inquiries has increased
 - Surveying patients to evaluate their reaction to the slideshow and assess its influence on their vaccine compliance
 - Perform a chart review to quantitatively assess vaccination rates for CFM patients

Evaluation of Effectiveness and Limitations

- Limitations of this project include:
 - Since the slideshow will play in the waiting room, we will only capture patients who have appointments
 - Lack of patient literacy and inability to comprehend health care-related information
 - Financial barriers
 - Physician recommendation has a strong influence on patient's decisions therefore continuous physician support in this initiative is crucial
 - Patients often come into the clinic with preformed decisions about vaccinations

Recommendations for Future Projects

- Create a handout to be distributed at school for kids to take home
 - Target students that are behind on their immunizations
- Medical student-run vaccine clinics at schools
 - Create pre-authorization forms to allow children to receive vaccinations at school
- Target children for vaccines at sports physical exam appointments
- Change ME legislation to require certain vaccinations before entering high school
- Make phone calls to parents

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