Influenza: Protect Yourself and Others

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Influenza: Protect Yourself and Others

By Sarah Fieber
Rotation #5, Oct-Nov 2014

Project Mentors:
Nana Marfo and Daniel Pearson from AHEC
Slide 2: Problem Identification

• In clinic, I would recommend to each patient that he or she should consider having a flu shot as flu season is quickly approaching. I heard a plethora of reasons for not being vaccinated, and few of these reasons were fact based.

• Through discussion with AHEC coordinators Daniel Pearson and Nana Marfo and with the advice of Dr. Mascia, I made the decision to work with young people and offer educational materials about the flu and vaccination options.

• Teenagers are inconsistent about flu vaccination, and I thought if I could present an argument in favor of flu vaccinations, this could make a difference for the coming generations.

• Daniel Pearson works with the Careers in Medicine group at Danbury High School, and he knew they would be an interested group of young people who would want to hear about the topic. In addition, I would be a resource for them to ask questions about medical school and medicine as a future career choice.
Slide 3: Public Health Costs

• 5-20% of the US population have the flu each year, and the virus is responsible for 200,000 hospitalizations annually in the US (CDC).
• Influenza associated deaths range from 3,000 to 49,000 deaths per year in US between 1976-77 and 2006-7. Approximately 90% of those deaths are >65 years old (CDC).
• 33.7 % +/- 1.6 of children age 13-17 were vaccinated in 2011-12. This age group is the lowest vaccination rate among children <18 (CDC).
• “Connecticut is just a few weeks into flu season, and already there have been more than twice as many cases of the illness as there were at this time last year” (Connecticut Post).
Dr. [Name Withheld], Chief of Pediatric Pulmonologist
- Has strong opinions regarding influenza vaccinations and the pediatric population in this community. He is the founder of Flu Wiki to monitor local flu activity.
- I first attended a discussion he led at Danbury Hospital titled, “Ebola, Enterovirus D68, and the Flu.” During this discussion, he emphasized that people seem most concerned regarding viruses they are unlikely to encounter.
- “Young people are not getting vaccinated. If a kid is sitting at his desk, and he looks to the left and right, only one of those three will be vaccinated. What the heck is wrong with the other two?”
- "We in Connecticut do better than other places, when it comes to getting flu shots, but not as well as we should," he said. "I wish I could say 'If you get a flu shot, you won't get Ebola.' But I can't do that." (quote from CT Post)

[Name Withheld], RN, BSN, Health and Nursing Services Coordinator at Danbury Public Schools
- Danbury High School has 5 flu vaccination clinics a year, averaging 150 people in attendance. Students and their families are invited to 4 of them.
- Health Services sees approximately 100 students a day, and there are two nurses on site. If an increasing trend is noted of students going home sick, a memo is sent home to family members.
- “I wish we could monitor who is getting the flu shot, but we are really limited by money.”
- “We recommend students get the flu shot, and we sent out letters to the parents. Still, people are not getting vaccinated.”
Slide 5a: Intervention

• 20 minute interactive presentation about the influenza with an emphasis on empowering young people with regards to what they can do to prevent themselves and others from becoming sick with the flu. A significant amount of time is spent encouraging students to be vaccinated for the flu every single year, and major public health concepts such as herd immunity were discussed with students. This presentation included information regarding the virus structure and other areas future medical professionals would be interested in as students were in the Career in Medicine Group.

• 5 minutes were dedicated to a survey for students to complete in order to gauge how effective the presentation was with regards to learning about the flu, providing information for students to be vaccinated, and enabling students to encourage others to be vaccinated.

• 20 minutes were allotted to question and answer, and students were encouraged to ask anything with regards to medicine and education.
Interventions

This is the survey students were given:

Age:
Flu Shot: Y N

Please rate the following questions in regards to the presentation today on a scale of 1-5:
1) Strongly Disagree, 2) Disagree, 3) Neutral, 4) Agree, 5) Strongly Agree.

I learned something about the influenza today that I did not know before:
1 2 3 4 5

I know how the cold and flu present:
1 2 3 4 5

I learned something about the medical field today that I did not know before:
1 2 3 4 5

I am more likely to have a flu shot this year and in coming years after the lecture today:
1 2 3 4 5

I am more likely to encourage others to have a flu shot this year and in coming years after the lecture today:
1 2 3 4 5

I am more equipped to protect myself and others from the flu after the lecture today:
1 2 3 4 5

Comments:
Students were given a survey to complete after the presentation (see previous slide). There were 21 students present, 20 of whom were female. All completed the survey.

- **# of Students who Received the Flu Shot**
  - Yes: 9
  - No: 12

- **"I Learned Something New About the Flu Today"**
  - Neutral: 4
  - Agree: 12
  - Strongly Agree: 5

* No students disagree or strongly disagree
Slide 6b: Results/Responses

"I Am More Likely to Receive the Flu Shot This Year and in Future Years"

- **Strongly Agree**: 14
- **Agree**: 4
- **Neutral**: 3

"I Am More Likely to Encourage Others to be Vaccinated"

- **Strongly Agree**: 9
- **Agree**: 2
- **Neutral**: 10

* No students disagree or strongly disagree

89% of students who did not receive a flu shot this year report they are more likely to receive one this year and in future years after the presentation.
Slide 7: Effectiveness and Limitations

• Students appeared engaged and interested in the presentation. They participated when questions were asked and frequently raised their hands during the presentation to ask questions.

• Based on the results, 81% of students report they learned something new about the flu and 86% of students report they are more likely to have a flu shot this year and future years after hearing the presentation. 90% of students report they are more likely to encourage others to have the flu shot.

• [Name Withheld], AHEC, said, “I could tell they were learning. They asked lots of questions, and there was stuff about vaccinations that they did not know before.”

• The power of the survey is low (n=21), and as this presentation was given to the Careers in Medicine group, the student population demonstrated selection bias. Students were more likely to be interested in the topic and more likely to find vaccinations and public health an important issue.

• While I know the number of students who received the flu shot this year based on personal report, a repeat survey would have to be performed to know the number of unvaccinated students who sought a flu shot following the presentation to evaluate effectiveness further.
Slide 8: Recommendations and Future Interventions

• Target a larger number of students and present earlier in the year, before the school-sponsored flu clinics have begun. This presentation should occur at as many schools as possible, and it would be helpful to provide students with a handout for them to bring home to their families to encourage vaccination and education.

• Inspire students to be health advocates in their communities and help other students/family members locate resources for vaccinations.

• Aid in the advertisement of school-sponsored flu clinics.

• Encourage flu clinics to be during lunch period instead of after school.

• As a recommendation for Danbury Public Schools, if the resources were available, monitor the student vaccination rates and assess for barriers to vaccinations. These likely include time restraint, finances, cultural differences, and many others. Address the barriers as much as possible. Students with underlying medical conditions such as asthma and diabetes should be priority for monitoring vaccination status.
Center for Disease Control. (2014). *Influenza.*
http://www.cdc.gov/flu/index.htm


[Name Withheld], Pediatric Pulmonologist. Personal Interview. 11/6/2014

[Name Withheld], RN, BSN, Health and Nursing Services Coordinator Danbury Public Schools. Personal Interview. 11/6/2014