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Theodore Cisu

University of Vermont College of Medicine

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Fighting the flu:

Devising a novel approach to address patient concerns with the seasonal influenza vaccine

Theodore Cisu | MS-III | November 2016

University of Vermont College of Medicine

UVMMC - South Burlington Family Medicine

Problem Identification

- The seasonal flu vaccine, or “flu shot” has an overall efficacy of 60% in health adults, according to a 2014 meta-analysis of inactivated flu vaccine studies¹. It is associated with significant reductions in laboratory-confirmed influenza illness, hospitalization for influenza and pneumonia, and death due to influenza or its complications².
- There are even greater reductions in morbidity and mortality in patients >65 years old and those at risk, particularly pregnant women and immunocompromised patients³.
- In 2015-2016, flu vaccination rates in adults across the United States ranged from 33% (Alaska) to 56% (Iowa), with 49% in Vermont⁴.
- In Vermont, vaccination rates increase with age (65% immunization rate in those >65), higher levels of education (52% in college graduates), and socioeconomic status (50% in households earning >\$75,000/year) according to 2014 data⁵.

Public Health Cost

- The annual health cost of annual influenza epidemics averages \$10.4 billion in direct medical costs.
- This accounts for 3.1 million hospitalized days and 31.4 million outpatient visits⁶.
- In Vermont, it is estimated that between 2008 and 2014, 4.8% of the population received medical attention for influenza-related illness, accounting for annual productivity costs of \$8,938,000⁷.

Community Perspective

- **Robert Luebbers, M.D.**, *Physician at South Burlington Family Medicine*
 - “I have noticed that there is a need for more information I can give to patients regarding concerns with the flu shot. I hear the same sorts of concerns ever year around this time [November] as I recommend patients getting vaccinated.”
 - “I am interested in learning more about why patients believe the flu shot is any different from other immunizations, such as the TDaP or pneumonia vaccine.”
- **Jan Carney, M.D.**, *Professor of Medicine at UVM College of Medicine; Former Commissioner of the Vermont Department of Health*
 - “There is ample evidence supporting the flu shot on the VT Department of Health and CDC websites, but I recognize that patients may not access these resources regularly.”
 - “Patients don’t spend most of their life in a doctor’s office. We need to find ways to reach patients outside of the office - putting up flu shot posters in pharmacies and supermarkets, or playing a video clip on flu shot safety in the waiting room. Anything that will make them stop and re-consider.”

Intervention Method: Pamphlet

- Content:
 - Ten of the most frequently-discussed questions and concerns as taken from anecdotal experience with patients during family medicine clerkship, as well as popular online blogs and forums when inputting the keywords “safety of flu shot” as an online search query.
 - Responses are paraphrased from online materials available for health care professionals, such as UpToDate, as well as publicly-available resources from the Centers for Disease Control (CDC).
 - All material herein is intentionally written at the 8th grade reading level.
 - As the VT Department of Health and most family medicine practices already have pamphlets on the flu itself, this material is specifically targeted to those who are curious or skeptical about the safety of the flu vaccine.

Frequently Asked Questions (FAQ) about the seasonal flu shot

“How effective is the flu shot?”

The flu shot varies in effectiveness each year. On average, it is 60% effective at reducing your chance of getting the flu and preventing major complications, such as pneumonia, hospitalization, and death. Even if you do end up getting the flu, it will be milder than had you not received the flu shot.

“Can’t I get the flu from the flu shot?”

It is impossible to get the flu from the flu shot. The vaccine is made with either an inactivated flu virus, or no virus at all.

“Don’t most flu shots contain mercury, a neurotoxin?”

There is no scientific evidence of harm from Mercury used as a preservative in vaccines, as levels are far too low and the chemical is quickly eliminated from the body. However, the flu vaccine is now available in both mercury-containing (with thimerosal) and mercury-free versions. Ask your doctor or pharmacist about these options.

“I have an egg allergy. Is that okay?”

As of 2016, it is okay to get the flu shot if you have an egg allergy, as long as you are vaccinated in a medical setting. The risk for allergic reaction is low. We recommend a medical setting so that a trained health care provider can recognize and manage an allergic reaction in the rare chance that it does occur.

“I’m pregnant.” Or “I’m sick with a cold right now” Should you still get it today?

No problem! If you’re pregnant, you are especially encouraged to get the shot to prevent illness in your future baby. If you are sick with a cold or other mild illness, you can safely get the flu shot today – just ask your doctor.

“Aren’t drug companies getting rich off of vaccines? Isn’t the push to give flu vaccine all about money, not health?”

No. In fact, flu vaccine revenue comprises just 0.3% of total revenue for the pharmaceutical industry.

“The flu vaccine may not be right for this year’s flu strain, right?”

Most of the time, flu vaccine is highly effective, and there are only rare years when the effectiveness is lower.



“I’m healthy. I’ve never gotten the flu. I don’t need the flu shot.”

Just because you’ve never had the flu in the past doesn’t mean you won’t get it this year. Each year, between 3,000 and 49,000 people die from influenza.

“I’m too busy.” Or “I can’t afford the flu shot right now.”

There is a very good chance that your employer, health insurance, and/or county health department offers free flu shots. In the unlikely scenario that they don’t, the flu shot is \$15 at membership wholesale clubs and \$30-40 at your local pharmacy. The whole process should take just a few minutes, and all of these options are cheaper than missing a few days of work or going to the hospital.

“Should I get the flu shot?”

If you’re still not convinced, remember this: don’t do it yourself, but do it for Grandma. Or little Tommy. While you may not be worried about getting the flu, you can spread it to an older relative or a young child, both of whom are more likely to have serious complications from the flu.

Intervention Method: Pamphlet (cont...)

- Front Cover:
 - Title: “Is the flu shot safe?”
- Back Cover:
 - Contact information for 2-1-1 and patient’s physician.
- Center page:
 - Specific content detailing where the content is sourced (physicians, CDC), as well as links to reliable online resources specifically for the inquisitive patient.



Why should I believe you?

All of our information comes from the Centers for Disease Control (CDC), as well as doctors and medical students at the University of Vermont Medical Center, experts in infectious disease and public health.

Where can I find more information?

Try to stick with reliable websites such as the Vermont Department of Health, CDC, and websites that end in “.gov” (for example, www.cdc.gov or www.healthvermont.gov).

For more flu myths and facts, go to www.cdc.gov/flu/keyfacts.htm or www.cdc.gov/flu/about/qa/misconceptions.htm

Any other questions?

Call 2-1-1

Vermont 2-1-1 is a free and confidential service, serving Vermonters since 2005. Just call 2-1-1 and mention the flu shot. You'll be guided to resources in your community for more information about the flu shot, including nearby flu shot clinics.



Come talk to us!

As physicians, we would love to continue this conversation with you in our office. We are happy to hear your questions and concerns regarding the flu shot. Call the office to make an appointment, or just send us a message on MyHealth online!



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Are flu
shots safe?

The most frequently asked
questions and concerns about the
flu shot!

Response

- Providers were given copies of the pamphlet to review and it was positively received, with a specific response that it fills an unmet need in the clinic, especially around October-January when flu shots are administered.
- The pamphlet can be given either at the front desk upon check-in, or by the nurse rooming the patient upon detecting no prior flu immunization that year. Providers themselves can briefly go over the content with patients who remain skeptical during their visit or, at the very least, can give patients a copy to bring home with them.
- Electronic copies of the handout were provided to healthcare providers and staff for future use and distribution.
- The generic nature of the pamphlet – i.e. not specific to the South Burlington Family Practice – allows for distribution to other family medicine clinics within the UVM network and possibly to other outpatient clinics in Vermont.

Effectiveness and Limitations of Pamphlet

- **Evaluating effectiveness:**

- A 5- or 10-question survey can be given to every patient at the South Burlington Family Practice who is given a pamphlet to determine if it appropriately addresses their specific concerns about the flu shot.
- Further evaluation with a satisfaction rating would be helpful in analyzing if “they are more likely” or “less likely” to get a flu shot during that visit or a future visit based on getting the pamphlet.
- Will submit pamphlet to NCQA for formal medical verification of content, allowing further distribution and updated content on a semi-regular basis.

- **Limitations:**

- This pamphlet was made under the assumption that other materials exist that adequately discuss the role of the influenza vaccine as part of a patient’s comprehensive care, as well as a discussion regarding who is most likely to benefit (and for whom it is contraindicated) from getting the shot.
- Does not address the various sub-types of flu shots that exist – trivalent vs. quadrivalent and injection vs intranasal.
- There was space enough for merely 10 questions. As such, there is a good chance that the patient has questions not explicitly discussed in the pamphlet. There are website links that the patient can navigate for further investigation, however.

Recommendations for future projects

- Evaluating the effectiveness of the pamphlet in a random sampling of 50 patients, with specific questions addressing patient satisfaction of the material, likeliness to vaccinate after reading, and
- A qualitative study characterizing the sources of health information that patients find online regarding the “safety of flu vaccines”
- A qualitative survey given to a large sample of patients investigating in what ways they perceive the influenza vaccine is different from other ‘required’ immunizations, such as Tdap and pneumococcal vaccines.
- Formal integration of pamphlet content into electronic health record to permit physicians to tack it on to visit summary information that patients take home.
- Creation of a social media campaign and several print posters to place in local pharmacies, supermarkets, and wholesale clubs. Each campaign or poster would include one “Did you know?” fact de-bunking a popular misconception about the flu shot, as taken from the pamphlet content.

References

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- 7- “The Economic Costs of Influenza.” Smartasset. <https://smartasset.com/insights/the-economic-costs-of-influenza>

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