

2015

Influenza Vaccination in the Elderly

Ayse Nur Celebioglu
University of Vermont College of Medicine

Follow this and additional works at: <http://scholarworks.uvm.edu/fmclerk>



Part of the [Medical Education Commons](#), and the [Primary Care Commons](#)

Recommended Citation

Celebioglu, Ayse Nur, "Influenza Vaccination in the Elderly" (2015). *Family Medicine Clerkship Student Projects*. Book 112.
<http://scholarworks.uvm.edu/fmclerk/112>

This Book is brought to you for free and open access by the College of Medicine at ScholarWorks @ UVM. It has been accepted for inclusion in Family Medicine Clerkship Student Projects by an authorized administrator of ScholarWorks @ UVM. For more information, please contact donna.omalley@uvm.edu.

Influenza Vaccination in the Elderly

Ayse Celebioglu

Brandon, VT: Brandon Medical Center

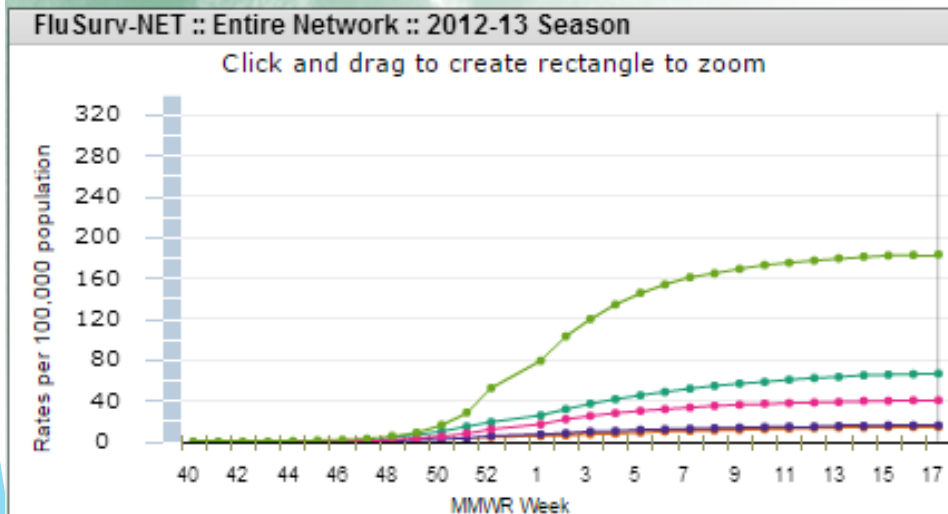
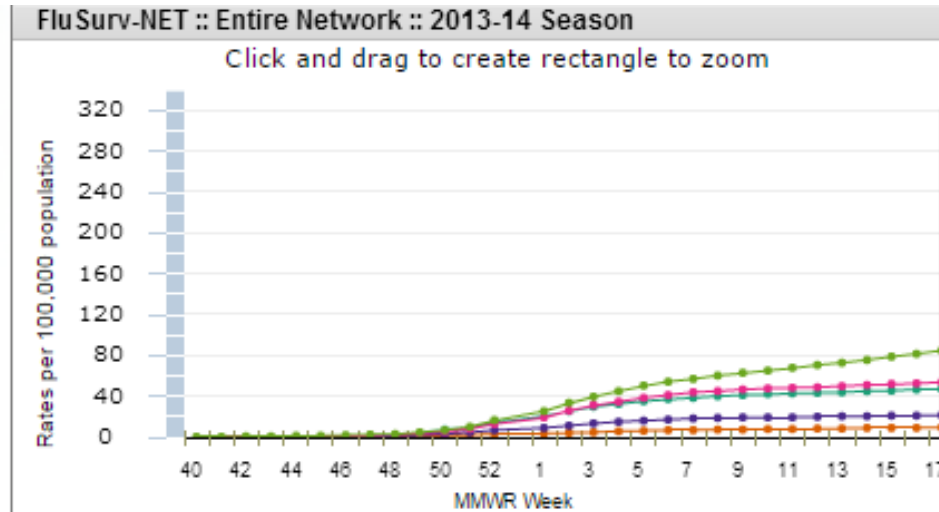
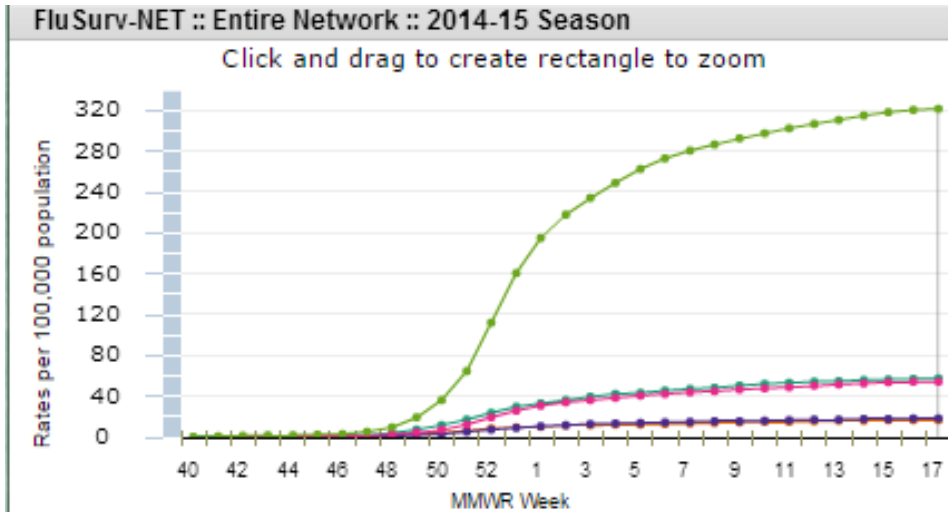
November 2015

Dr. George Fjeld

Problem Identification and Description of Need

- ▶ There are an estimated 300,000 hospitalizations and 23,000 deaths due to influenza in the United States each year, the majority of which are in older adults
- ▶ As such, the US Advisory Committee on Immunization Practices recommends yearly influenza vaccinations in all individuals older than 6 months for whom it is not contraindicated
- ▶ Elderly populations (individuals 65+ years old) are especially at risk of complications due to influenza infection due to progressive weakening of the immune system over time
- ▶ However, nationally only 65% of US seniors receive influenza vaccines
- ▶ Meta-analyses demonstrate a 28-58% reduction in laboratory confirmed influenza-associated hospitalizations in the elderly and a 61% reduction in individuals >50 years old

Public Health Cost Nationally: Laboratory-Confirmed Influenza Hospitalizations



Age Group

- Overall
- All Age Groups
- 0-4 yr
- 5-17 yr
- 18-49 yr
- 50-64 yr
- 65+ yr

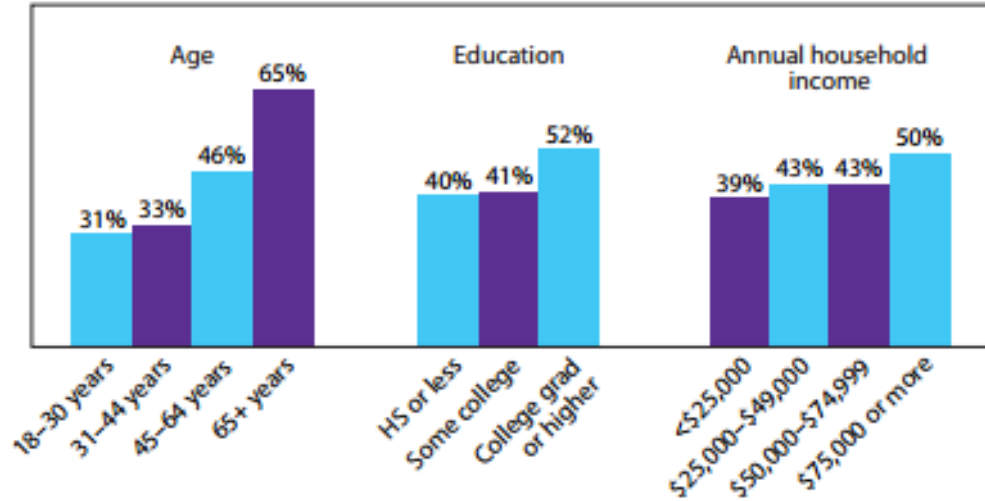


Every season, the elderly are consistently the most hospitalized age group with laboratory confirmed influenza

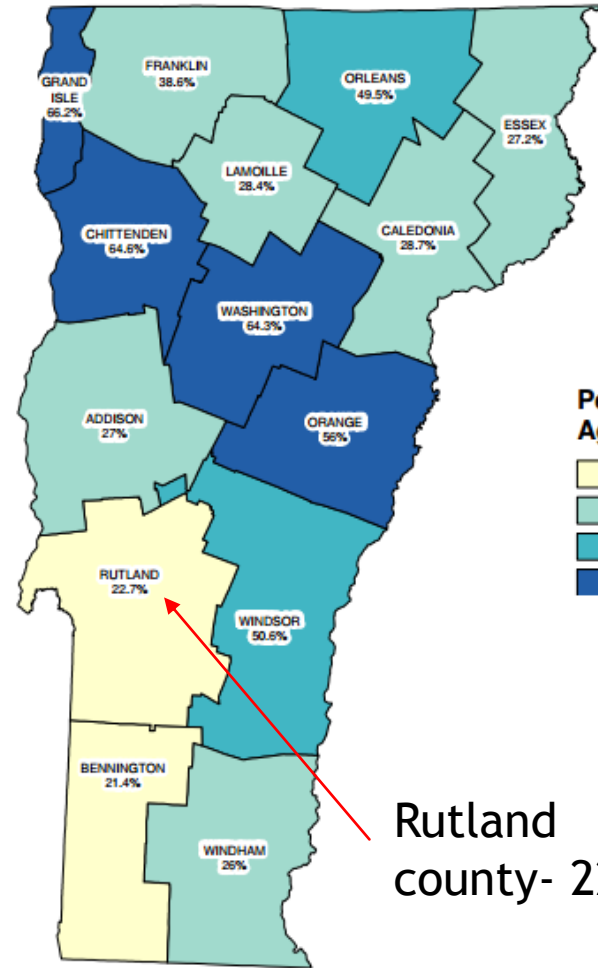
Public Health in Rutland County

Percent of adult Vermonters that received an influenza vaccine in 2013

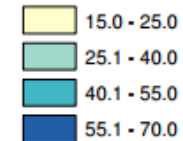
Behavioral Risk Factor Surveillance Survey (BRFSS)



Though seniors are best at obtaining an influenza vaccination as a whole in Vermont, only 22.7% of seniors in Rutland county receive it.



Percent of patients with at least 1 flu shot. Ages 60+ as of 2013.



Rutland county- 22.7%

Community Perspective on Issue and Support for Project

- ▶ Judy Manning, pharmacist at Rite Aid in Brandon, VT
 - ▶ Most common myths associated with influenza vaccination:
 - ▶ The flu shot will give them the flu
 - ▶ The flu shot will not prevent them from getting infected
 - ▶ They've never been infected before, so they don't need the vaccination to protect them now
 - ▶ Very few customers know about the different types of influenza vaccinations
 - ▶ Highest influx of vaccinations is in October
- ▶ Cathleen Paulin, Manager of Community Occupational Health and Registered Nurse
 - ▶ In the US, most flu peak seasons are around January-March
 - ▶ Most common myths associated with influenza vaccination:
 - ▶ I don't want to get the flu shot because last year's didn't work
 - ▶ I won't catch the flu since I'm homebound, so I don't need the vaccination
 - ▶ Even with the education we do from year to year, we have repeat patients who don't know they have a choice in different types of vaccines. I do think it's improving though since from year to year, the number of high dose and quadrivalent vaccines are changing.
 - ▶ Many people don't realize that in Rutland County, Blue Cross Blue Shield will supplement flu vaccinations for VNA-hosted public flu clinics. We encourage everyone to come out for their vaccines regardless of their insurance.

Intervention and Methodology

▶ Goals of Intervention

- ▶ To create a pamphlet on influenza vaccination that is easy to read and informative for all age groups
- ▶ To educate the public about different types of influenza vaccinations
- ▶ To emphasize key points identified by the interviewees

▶ Methodology

- ▶ Using myths compiled from patients, recommendations compiled from the interviewees, and information compiled from studies, created a pamphlet to distribute at Brandon Medical Center
- ▶ Focused on debunking myths and educating the public about different types of vaccinations so they can make an informed choice
- ▶ Included information from the NIH and CDC

Pamphlet- Back

Where To Get Vaccinated

- 1) Your Doctor/Healthcare Provider (for instance Brandon Medical Center)
- 2) Pharmacies/ supermarkets
Free with Medicare and Medicaid
- 3) Ask your employer, many will provide free flu shots
- 4) College health centers
- 5) Urgent care facilities
- 6) Flu Clinics, provided by members of the Vermont Visiting Nurses Association. Clinic fees vary, but all agencies accept Medicare. If you don't have insurance, ask about supplement options. 1-802-775-0568
- 7) Dial 2-1-1 for more information on flu clinics

Flu Vaccination Information

Made by Ayse Celebioglu
University of Vermont College of Medicine
MSIII Class of 2017

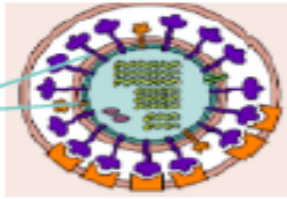


Pamphlet- Front

The Basics of Influenza

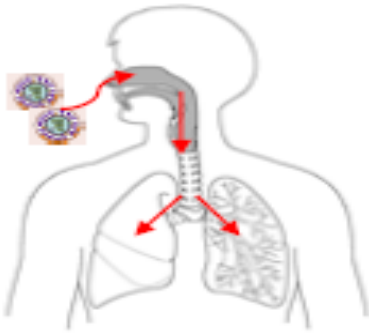
Virus Types- Influenza A, B, and C

Viral Surface proteins
our immune system
responds to



How Is It Spread:

Inhalation of small aerosol droplets
Infects upper and lower respiratory tract



Risk Factors:

- ALL age groups are susceptible
- Children
- Elderly
- Those with weakened immune systems
- Pregnant women
- People with cardiac or respiratory problems

Symptoms of Influenza:

- Fever (temperature > 100.5 F)
- Headache
- Muscle aches
- Tiredness
- Extreme exhaustion
- Stuffy nose/sneezing
- Sore Throat
- Cough

Types of Flu Vaccinations

Trivalent Flu Vaccines- protect against 2 influenza A viruses and 1 influenza B virus

A + A + B



Standard dose shot- 6 months and older



High dose shot- proven best vaccination for seniors 65 years and older



Recombinant egg-free shot- 18 years and older

Quadrivalent Flu Vaccines- protect against 2 influenza A viruses and 2 influenza B viruses

A + A + B + B



Shot- 6 months and older
Intradermal- smaller needle, 18-64 year olds



Nasal spray- approved for 2-49 year olds, except pregnant women

Which Vaccine is Right for You?

- The shot forms of the vaccines are manufactured using dead viruses grown in eggs, so be sure to inform your physician or pharmacist if you have an egg allergy

-Since the nasal spray is a live vaccine, it should **NOT** be given to people who are:

- Pregnant women
- People with weakened immune systems
- Children 2-4 years old with asthma/wheezing

Debunking Myths

Common Myths

- "The flu shot is going to make me sick."
- "I've been fine all these years without getting a flu shot so I don't need one now."
- "The pharmaceutical companies are only guessing when they make the flu shot, and people still get the flu even after receiving the vaccination."

The Facts

- Studies have shown that influenza vaccine does not produce any increase in side effects or disability. Symptoms you may feel after the flu shot are likely due to coincidental illness coupled with increased awareness of your body post-vaccination.
- There are an estimated 300,000 hospitalizations and 23,000 deaths due to influenza in the United States each year, the majority of which are in older adults. Flu vaccination is associated with a 71% decrease in hospitalizations among adults of all ages, and a 77% decrease in the elderly.
- Even during flu seasons with mismatch between the vaccine and circulating influenza strains, flu vaccination has proven to have a 61% effectiveness of preventing laboratory confirmed influenza-associated hospitalization.

Why You Should Get Vaccinated

- You not only protect yourself from infection, but you also protect the people around you.
- You reduce the duration of illness in case you do get infected.

Results/Response- Data/results may be qualitative or quantitative

- ▶ Copies of the pamphlet were printed out and given to 5 individuals- 3 patients and 2 staff at Brandon Medical Center (1 DO, 1 PA)
- ▶ The patients were asked if they knew how influenza was transmitted, what kind of vaccines are available, and how their understanding of influenza vaccines changed after reading the pamphlet.
- ▶ 3/3 patients had a prior understanding of influenza transmission
- ▶ 0/3 patients knew about the different types of vaccines, even after having received their vaccinations
- ▶ 3/3 patients found the pamphlets helpful in understanding more about vaccine
 - ▶ “I have a better understanding of how the virus is transmitted and the different types of vaccines.”
 - ▶ “The brochure was very helpful. I didn’t know any of the rates of people hospitalized by the flu, so I’m glad that I got it. It’s good knowing what kind of vaccine I got for my age group.”

Evaluation of effectiveness and limitations

- ▶ Qualitative evaluation of effectiveness
 - ▶ “I like it a lot. It’s easy to understand, has good images, and hits on all the important points. I’m ready to start handing it out.” - Elizabeth Sheldon-Morris, PA
 - ▶ “It looks good. It’s comprehensive and educational.”- Kim Kurak, DO
- ▶ Limitations
 - ▶ Limited sample size of patients and providers in gathering information on making the pamphlet
 - ▶ Due to availability of community interviewees, some of the interviews took place after the pamphlet had already been made.
 - ▶ Limited sample size of patients and providers for feedback
 - ▶ Responses were interpreted by the author

Recommendations for future interventions/projects

- ▶ Community education
 - ▶ Distribute pamphlets at senior centers and nursing homes in the area
 - ▶ Teach not only about influenza vaccination, but focus on dispelling myths, educating about different types of vaccines, and addressing concerns of cheapest way to get the vaccine (ex: free at Rite Aid with Medicaid, subsidized for the uninsured at public flu clinics through the VNA)
 - ▶ Find a way to emphasize the availability of the different flu clinics the VNA puts on as they promote education and awareness but may not be familiar to people on an individual basis as they tend to target larger groups

References

- ▶ Galarce, E.M., Minsky, S., and Viswanath, K. “Socioeconomic Status, Demographics, Beliefs, and A(H1N1) Vaccine Uptake in the United States.” *Vaccine*. 2011, Vol. 29(32), pp. 5284-5289.
- ▶ Margolis, K.L., Nichol, K.L., Poland, G.A., and Pluhar, R.E. “Frequency of Adverse Reactions to Influenza Vaccine in the Elderly: A Randomized Placebo Controlled Trial.” *Journal of the American Medical Association*. 1990, Vol. 264(9), pp. 1139-1141.
- ▶ Talbot, H.K., Griffin, M.R., Chen, Q., Zhu, Y., Williams, J.V., and Edwards, K.M. “Effectiveness of Seasonal Vaccine in Preventing Confirmed Influenza-Associated Hospitalizations in Community Dwelling Older Adults.” *Journal of Infectious Diseases*. 2011, Vol. 203(4), pp. 500-508.
- ▶ Talbot, H.K., Zhu, Y., Chen, Q., Williams, J.V., Thompson, M.G., and Griffin, M.R. “Effectiveness of Influenza Vaccine for Preventing Laboratory-Confirmed Influenza Hospitalizations in Adults, 2011-2012 Influenza Season.” *Clinical Infectious Diseases*. 2013, Vol. 56(12), 1774-1777.
- ▶ Darvishian, M., Bijlsma, M.J., Hak, E., and van den Heuvel, E.R. “Effectiveness of Seasonal Influenza Vaccine in Community-Dwelling Elderly People: A Meta-Analysis of Test-Negative Design Case-Control Studies.” *The Lancet Infectious Disease*. 2014, Vol. 14(12), pp. 1228-1239.
- ▶ Jackson, M.L. “Influenza Vaccine Effectiveness in Elderly People.” *The Lancet Infectious Diseases*. 2014, Vol. 14(12), pp. 1169-1170.
- ▶ Chit, A., Roiz, J., Briquet, B., and Greenberg, D.P. “Expected Cost Effectiveness of High-Dose Trivalent Influenza Vaccine in US Seniors.” *Vaccine*. 2015, Vol. 33(5), pp. 734-741.

References, continued

- ▶ "Influenza (Flu) Vaccine (Inactivated or Recombinant): What You Need To Know." *Vaccine Information Statement*. Center for Disease Control and Prevention, 07 Aug. 2015. Web. 28 Oct. 2015. <<http://www.cdc.gov/vaccines/hcp/vis/vis-statements/flu.pdf>>.
- ▶ *FluView: Laboratory-Confirmed Influenza Hospitalizations*. Center for Disease Control and Prevention, 31 Oct. 2015. Web. 31 Oct. 2015. <<http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html>>.
- ▶ "Vermont Immunization Program 2014 Annual Report." Vermont Department of Health, n.d. Web. 28 Oct. 2015. <http://healthvermont.gov/hc/imm/documents/annual_report_2014.pdf>.
- ▶ "Older Adults- Data Brief." *Vermont Immunization Registry*. Vermont Department of Health, Aug. 2015. Web. 28 Oct. 2015. <http://healthvermont.gov/hc/imm/data_briefs/documents/Older_Adults_Data_Brief.pdf>.
- ▶ "Key Facts About Seasonal Flu Vaccine." *National Institute of Allergy and Infectious Diseases*. US Department of Health and Human Services- National Institutes of Health, 24 Sept. 2004. Web. 04 Nov. 2015. <<http://www.niaid.nih.gov/topics/Flu/understandingFlu/Pages/seasonalVaccine.aspx>>.
- ▶ "Vaccination: Who Should Do It, Who Should Not and Who Should Take Precaution." *Influenza (Flu)*. Center for Disease Control and Prevention, n.d. Web. 04 Nov. 2015. <<http://www.cdc.gov/flu/protect/whoshouldvax.htm#nasal-spray>>.