A community survey about influenza vaccination in a central Bronx Institution

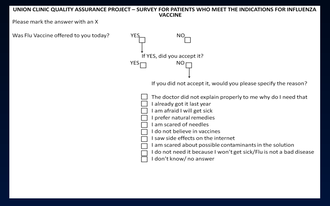
Giuseppe Annunziata MD, Victor Gomez MD, Marta Luna Rodriguez MD, Florenta Bederniceanu MD
Department of Internal Medicine - St Barnabas Hospital / Union Community Health Center, Bronx

BACKGROUND

Influenza is a serious disease which requires hospitalization for more than 200,000 people on average per season in United States, and is especially dangerous for the adults >65 years old and those with underlying respiratory and circulatory diseases. For the years 2006-2007 a study estimated an overall number of influenza associated deaths as high as 15,573.
Influenza vaccination is considered safe and about 60% effective in preventing the infection among the overall population, however the estimated national coverage in the season 2012-2013 was only 31.1% for adults 18-49 years, 45.1% for adults 50-64 years, and 66.2% for adults of 65 years and older. The estimated coverage among adults with at least one selected high risk condition was only 47.0 ± 1.4 %, with wide State-specific variations .
In order to explore the issue in our community and have an idea of how much we can do to improve our counseling skills and quality of care, we conducted a survey on the influenza vaccination rates in patients who came for a routine medicine clinic visit

METHODS

• 96 consecutive patients seen at the UCHC
• Verbal consent was obtained prior to give the questionnaire to the patient, and the patient was asked not to place his/her name or date of birth on it.
•Adequate privacy was ensured by filling the questionnaire in the gap of time between the Resident and Resident + Attending evaluation.
•All the gathered data was coded with no mention of any personal information, then stored in a secured computer with password protection and accessible only to the investigators.
•Medical notes were used to obtain details about past medical history, comorbidities. Patients with dementia or other psychiatric conditions which could affect their judgment were excluded from participation. Copy of the questionnaire is reproduced on the right.


UNION CLINIC QUALITY ASSURANCE PROJECT – SURVEY FOR PATIENTS WHO MEET THE INDICATIONS FOR INFLUENZA VACCINE

Please mark the answer with an X

Was Flu Vaccine offered to you today? YES NO

If YES, did you accept it? YES NO

If you did not accept it, would you please specify the reason?

- The doctor did not explain properly to me why do I need that
- I already got it last year
- I am afraid I will get sick
- I prefer natural remedies
- I am scared of needles
- I do not believe in vaccines
- I saw side effects on the internet
- I am scared about possible contaminants in the solution
- I do not need it because I won't get sick/Flu is not a bad disease
- I don't know/ no answer

RESULTS

	Total (N=96)		Patients who accepted the vaccine (N=48)		Patients who declined the vaccine (N=48)		p-value
	Number	%	Number	%	Number	%	
Age: ≤40	36	37.5	17	47.2	19	52.7	0.67
41-65	48	50.0	22	45.8	26	54.1	0.41
≥65	12	12.5	9	75.0	3	25.0	0.06
Sex: M	23	23.9	15	65.2	8	34.7	0.09
F	73	76.0	33	45.2	40	54.7	0.09
Ethnicity: Hispanic	82	85.4	46	56.0	36	43.9	0.003
Black	12	12.5	2	16.6	10	83.3	0.001
Asian	1	1.0	0	0.0	1	100.0	
Caucasian	1	1.0	0	0.0	1	100.0	
Presence of at least one high risk comorbidity	37	38.5	17	45.9	20	54.0	0.52
Absence of any high risk comorbidity	59	61.4	31	52.5	28	47.4	0.52

Tab. 1 : characteristics of the different groups of the population examined, further divided in 2 subgroups: the ones who accepted the vaccines and the ones who declined the vaccine. Note how males were more likely to accept the vaccination. Also note the different rates of acceptance among different ethnicities. 54% of the patients with at least one high risk comorbidity did not accept the vaccine.

Comorbidity	Number of Patients who accepted the vaccine	% of the total "yes" answers	Number of Patients who declined the vaccine	% of the total "no" answers	p-value
Obstructive Pulmonary Disease (i.e. Asthma, COPD)	5	10.4	10	20.8	0.15
OSA	1	2.0	0	0	0.31
ASCVD (e.g. evidence of cerebrovascular or cardiac disease)	5	10.4	1	2.0	0.09
Chronic Kidney Disease	2	4.0	1	2.0	0.55
Diabetes	7	14.5	9	18.7	0.58
Hematologic condition (e.g. anemia, leukopenia)	1	2.0	7	14.5	0.02
History of Cancer	1	2.0	1	2.0	1

Tab. 2 : Different groups of comorbidities in the population studied. Note how 10 out of 15 patients with obstructive pulmonary diseases declined the vaccine.

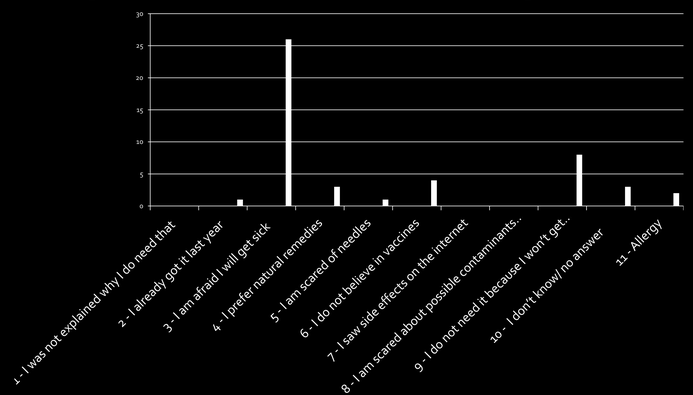


Fig. 1 : Different answers given by Patients who declined vaccination : by far, the most common concern was about "getting sick" as a consequence of the vaccine

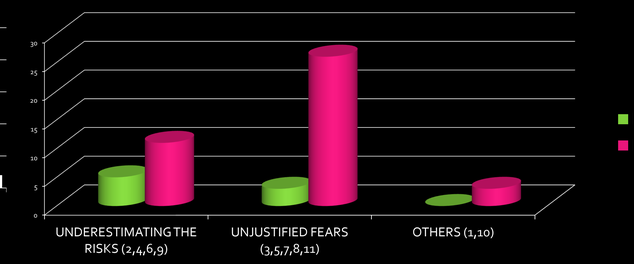


Fig. 2 : Answers divided in groups and based on gender. Females (red) were more likely to give explanations grouped as "unjustified fears" (answers 2,4,6 or 9), while males (green) were more likely to underestimate the risks related to influenza (answers 3,5,7,8 or 11)

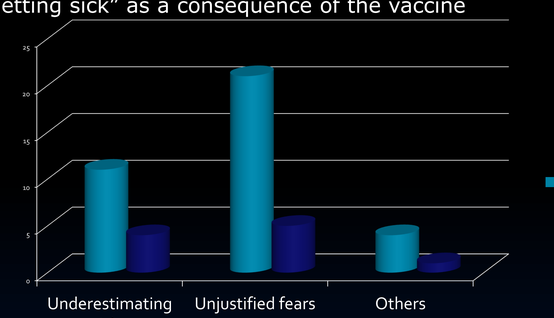


Fig. 3 : Answers divided in groups and based on the ethnicity. Hispanics were more likely to give explanations grouped as "unjustified fears" (answers 2,4,6 or 9). African Americans were also more likely to have unjustified fears, with more blunted differences

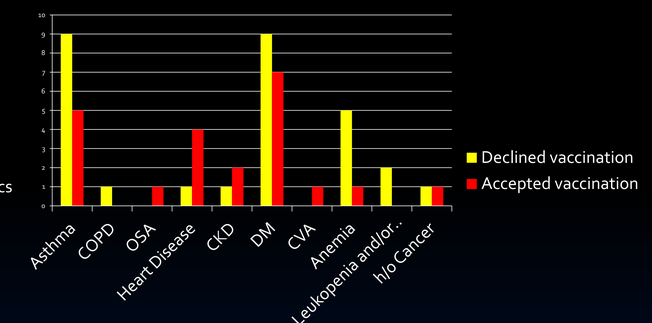
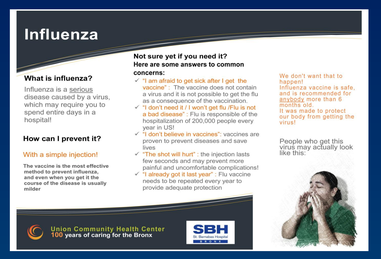


Fig. 4 : Rates of acceptance of vaccination in different high-risk comorbidities. Note how patients with obstructive pulmonary diseases were more likely to decline vaccination. The explanations given by those patients were mostly the concern of "getting sick"

DISCUSSION

• Our overall rate of acceptance (50.0%) is not much different from the data we have about NY State (influenza vaccination coverage for the season 2012 – 2013 was 46.6%) and Countrywide (41.5%) , rates that should raise concern in all the clinicians.
• Males were more likely to accept the vaccination than females, in contrast with the data from CDC. Specific cultural aspects or beliefs may be implied, such as irrational fears (Fig. 2).
• Persons with at least one high-risk comorbidity were less likely to accept the vaccination. A possible hypothesis to explain that may be the common misconception found in our community for which influenza vaccine can actually "make you sick", in the setting of a general perception of increased vulnerability to diseases based on the underlying problem.
• In order to facilitate the communication with the patients and to better explain the evidence against the most common reasons of refusal of the vaccine, we decided to make a simple handout which contains general information in English and Spanish about influenza and why is important to get vaccinated (see Fig. on the right)
• Further and larger studies may be needed in the future to improve vaccination rates in our community


Influenza

What is influenza?

Influenza is a serious disease caused by a virus, which may require you to spend entire days in a hospital!

How can I prevent it?

With a simple injection!

The vaccine is the most effective method to prevent influenza, and even when you get it the course of the disease is usually milder

Not sure yet if you need it? Here are some answers to common concerns:

- "I am afraid to get sick after I get the vaccine". The vaccine does not contain a virus and it is not possible to get the flu as a consequence of the vaccination
- "I don't need it / I won't get flu /Flu is not a bad disease". Flu is responsible of the hospitalization of 200,000 people every year in US!
- "I don't believe in vaccines": vaccines are proven to prevent diseases and save lives
- "The shot will hurt" : the injection lasts few seconds and may prevent more painful and uncomfortable complications!
- "I already got it last year" : Flu vaccine needs to be repeated every year to provide adequate protection

We don't want that to happen! Influenza vaccine is safe, and is recommended for anybody more than 6 months old.
It was made to protect our body from getting the virus!

People who get this virus may actually look like this:

Union Community Health Center
100 years of caring for the Bronx

SBH Health System Bronx

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