



Mid-Atlantic Biological Safety Association

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Faculty Club
Columbia University Medical Center

Strategies for Flu Vaccine Enrollment in the Workplace



SHIELD YOURSELF FROM THE FLU

GET YOUR FLU SHOT HERE

NO APPOINTMENT NEEDED

FOOD MART on the

SPECIALS

RED H

POP OFF



**Respiratory
Protection
is
NOT
enough**

Study conducted to identify **individual and organizational barriers and facilitators** to influenza vaccination

Specific Aim 1: To determine the seasonal, pandemic (H1N1) and combination (pandemic H1N1 and seasonal strain) influenza vaccination 2010/11 uptake rates for two major subgroups.

Specific Aim 2: To identify **factors significantly associated with non-compliance (barriers)** with the combination (pandemic H1N1 and seasonal strain) influenza vaccine 2010/11 recommendations and to identify facilitators to compliance.

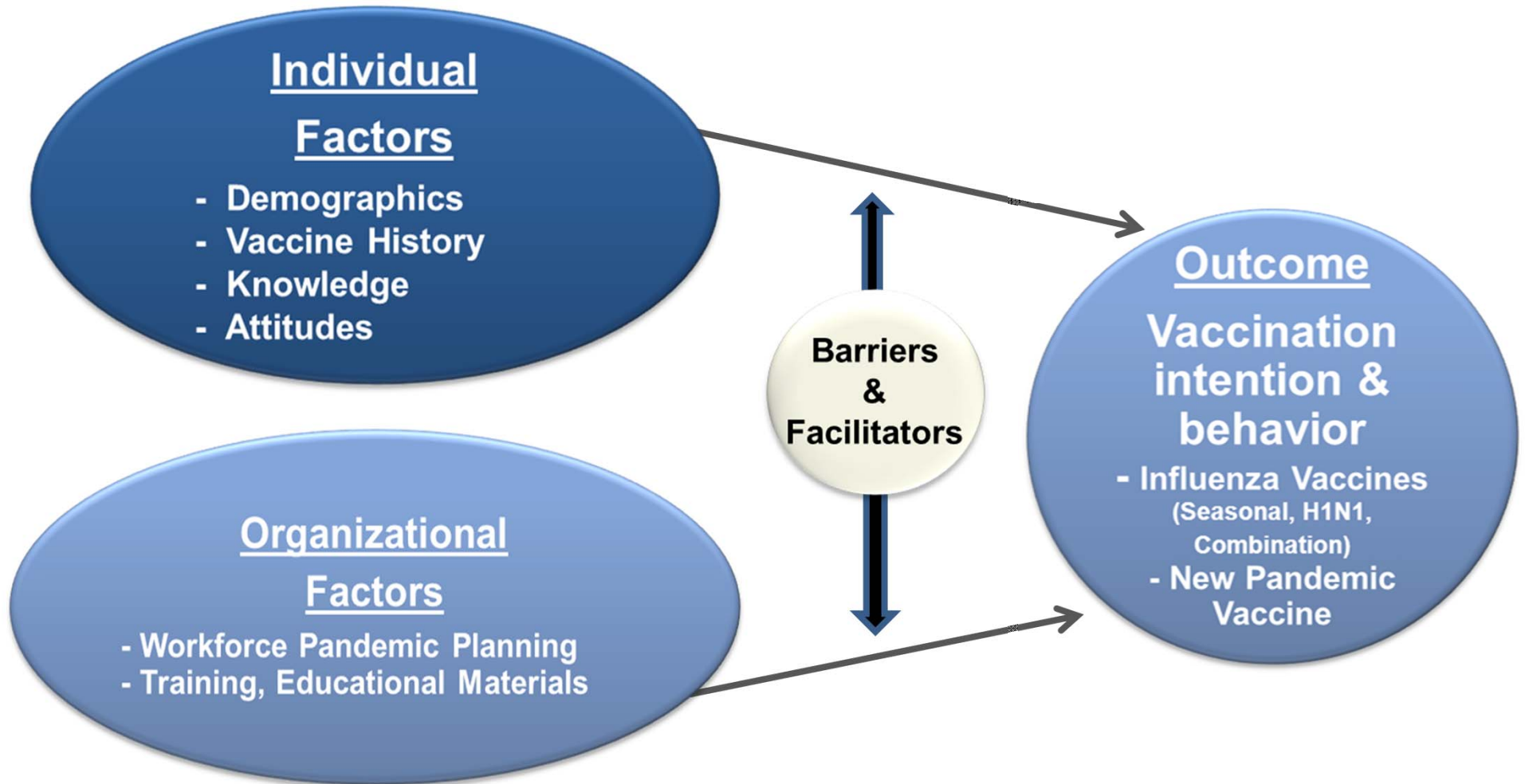
Specific Aim 3: To identify **factors associated with intentions to accept vaccination** with a hypothetical future novel pandemic influenza vaccine.

K.A. Crowley *et al*, AJIC 41 (2013) 824-30

Specific Aim 4: To implement participatory action research (PAR) methodology to **identify potential interventions to address barriers and support facilitating factors.**

K.A. Crowley *et al*, DMPHP 7 (2013) 424-30

Conceptual Study Model



K.A. Crowley *et al* *AJIC* 41 (2013) 824-30
Adapted from DeJoy *et al* *Professional Safety*; Jul 2004; 49, 7

**Influenza vaccination prevalence rates:
clinical vs. non-clinical** (Public Safety, Facilities, Administrative)
Personnel

Influenza Vaccine Type	Total (N=428)	Clinical (n=170)	Non-Clinical (n =258)	RR	(95%CI) P<.001	Total N=428
Seasonal 2009/10	59%	82%*	42%	3.3	(2.3-4.6)	59%
H1N1 2009/10	45%	71%*	27%	3.0	(2.3-3.9)	45%
Combination 2010/11	46%	73%*	28%	3.2	(2.4-4.3)	46%
*statistically significant; RR= Relative Risk; CI = Confidence Interval						

Results: Significant Factors Associated with Seasonal Flu Vaccine 2009/10

Clinical & Research

(n=170)

- Seriousness, RR=1.3, P<.01

Non-Clinical

(n= 258)

- More Knowledge, RR=1.9, P<.01
- **Concern**, RR=1.5, P<.01
- Past Seasonal Flu Illness, RR=1.6, P<.01
- Some College to Professional Degree,
RR=1.4. P<.05

Organizational

- Prior Pandemic Flu Training, RR=1.7, P<.001
- Knows CU has Pandemic Flu Plan, RR=1.4, P<.05

Results: Significant Factors Associated with Pandemic H1N1 Vaccine 2009/10

Clinical & Research

(n=170)

- Took Seasonal Flu Vaccine, RR=6.3, P<.001

Non-Clinical

(n= 258)

- **Concern**, RR=2.6, P<.001
- More Knowledge, RR=2.1, P<.05
- H1N1 Flu Illness, RR=2.5, P<.05
- Past Seasonal Flu Illness, RR=2.3, P<.001
- Some College to Professional Degree, RR=1.8, P<.05
- Age above the mean, RR=1.7, P<.05

Organizational

- Prior Pandemic Flu Training, RR=2.0, P<.01
- Knows CU has Pandemic Flu Plan, RR=1.8, P<.05

Results: Significant Factors Associated with Combination Influenza Vaccine 2010/11

Clinical & Research

(n=170)

- Took Seasonal Flu Vaccine, RR=2.2, P<.001
- Took H1N1 vaccine, RR=1.5, P<.01

Non-Clinical

(n= 258)

- More Knowledge, RR=5.3, P<.001
- **Concern**, RR=2.0, P<.01
- Took H1N1 vaccine, RR=7.7, P<.001
- H1N1 Flu Illness, RR=2.5, P<.05
- Past Seasonal Flu Illness, RR=2.4, P<.001
- Some College to Professional Degree, RR=1.9, P<.01
- Age above the mean, RR=1.7, P<.05

Organizational

- Prior Pandemic Flu Training, RR=1.2, P<.05
- Prior Pandemic Flu Training, RR=1.7, P<.01
- Knows CU has Pandemic Flu Plan, RR=2.0, P<.01

Results: Significant Factors Associated with intentions to take a hypothetical **Future Pandemic Vaccine** (intentions to take)

Clinical & Research

(n=170)

- Took Seasonal Flu Vaccine, RR=3.7, P<.001
- Took H1N1 Vaccine, RR=3.6, P<.001
- Took Combi Vaccine 2010/11, RR=3.7, P<.001
- Seriousness, RR=1.8, P<.05

Non-Clinical

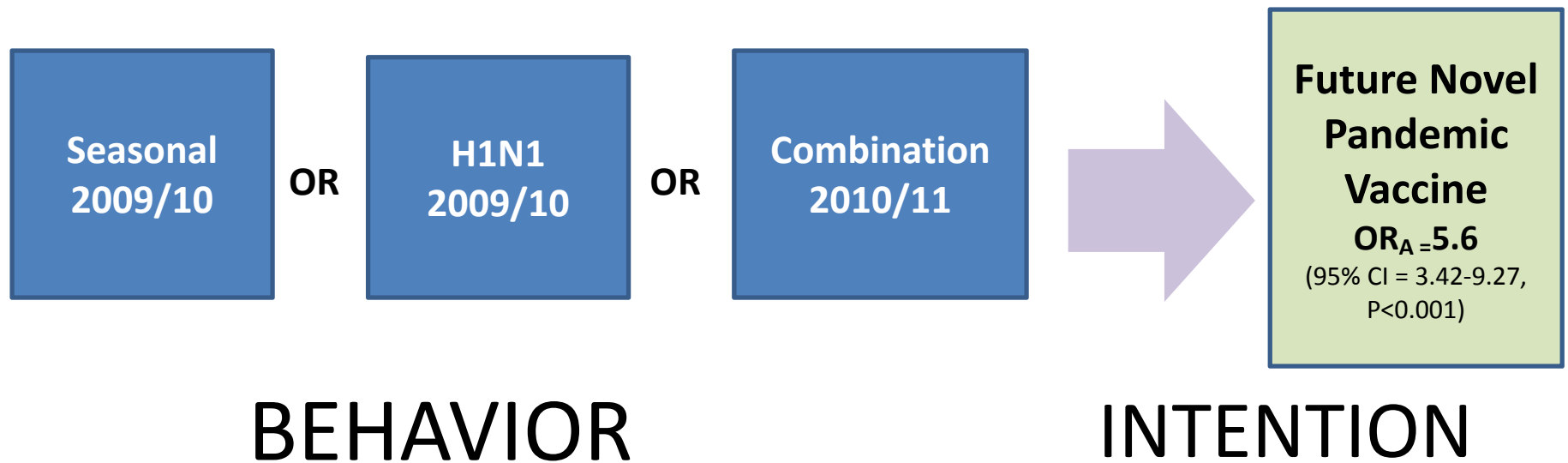
(n=258)

- Took Seasonal Flu Vaccine, RR=2.6, P<.001
- Took H1N1 Vaccine, RR=3.5, P<.001
- Took Combi Vaccine 2010/11, RR=5.9, P<.001
- Seriousness, RR=1.5, P<.01
- **Concern**, RR=1.8, P<.001
- More Knowledge, RR=1.4, P<.05
- Married/Partner, RR=1.4, P<.05

H3 N=428

The relationship between intent to receive vaccine and actual vaccination has not been well studied and additional research between the relationship is needed,

(MMWR Vol 58/50, 2009).



Study Results 2011, regardless of occupation

K.A. Crowley *et al*, AJIC 41 (2013) 824-30

Relations between past vaccine history and willingness (intention) to take a future novel pandemic vaccine

Reported Vaccine Taken	Likely-extremely likely to take a future novel pandemic vaccine			
	OR	(95% CI),	OR _A [‡]	(95% CI),
	P <.001		P <.001	
Seasonal 2009/10	7.3	(4.9-11.4)	6.1*	(3.8-9.7)
H1N1 2009/10	7.8	(4.8-12.7)	6.6*	(3.9-11.2)
Combination 2010/11	10.0	(6.1-16.4)	9.6	(5.6-16.9)
Any one or more Vaccines	6.7	(4.3-10.4)	5.6*	(3.4-9.3)

‡Mantel-Haenszel Adjusted OR for personnel group (Clinical vs. Non-clinical), P<.001 for all.

*OR-ORA > 10% difference, which suggests confounding. Breslow-Day for all vaccines X2 = ns. CI = Confidence Interval

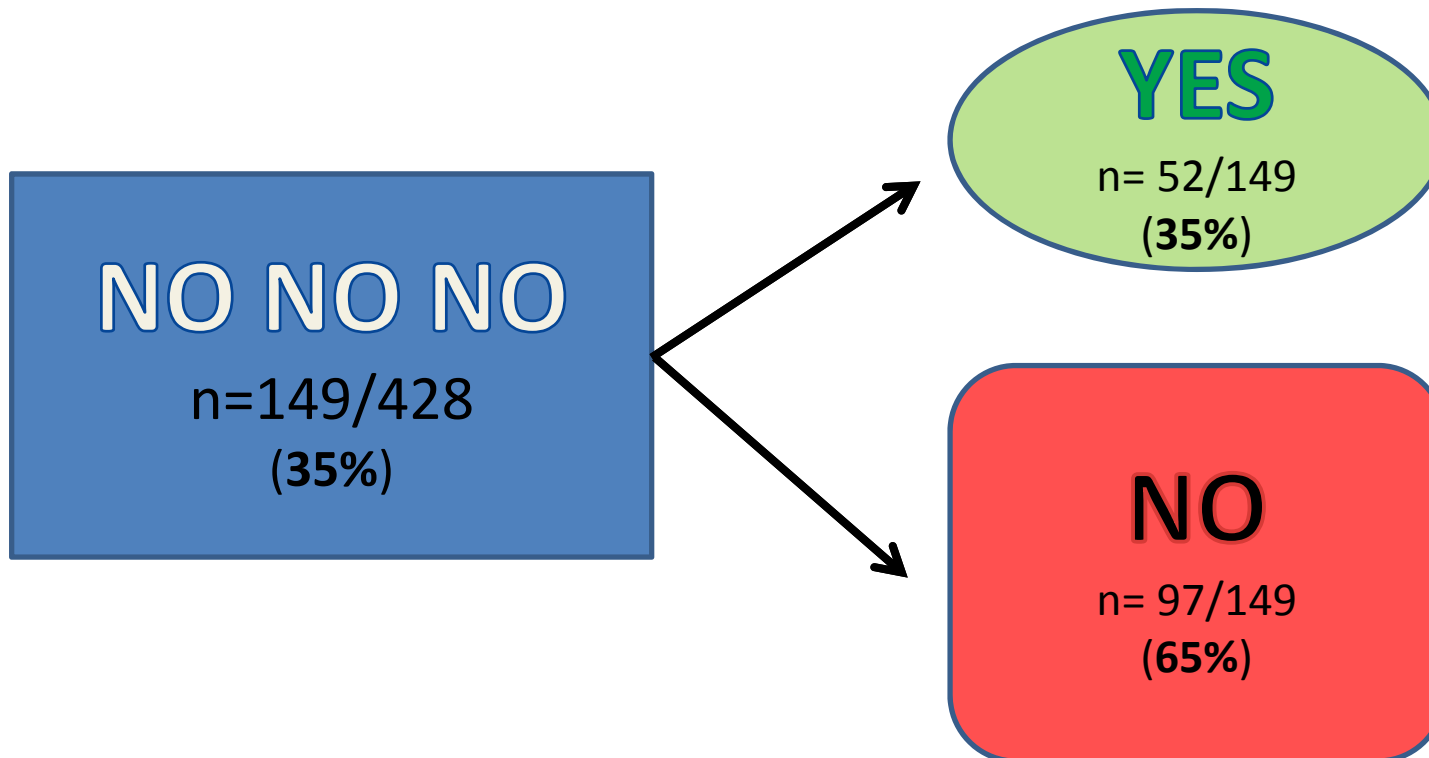
Vaccine History: YES YES YES

- **34%** (n=146) of the study respondents took all three influenza vaccines (Yes, Yes, Yes), and
- **91%** (n=133) reported they would take a novel pandemic vaccine
 - Past history or behavior associated with future intentions
 - Prior vaccine “take” behavior YES was significantly related to intentions to “take” a hypothetical future novel pandemic influenza vaccine

Vaccine History: NO NO NO

Reported
Seasonal, H1N1, Combination

Intention
Hypothetical future novel pandemic



Significant barriers associated with NO NO NO NO vs. NO NO NO YES

- **Not Concerned about getting ill** RR,1.3 (95% CI:1.07-1.65); P<.05
- **Do not like needles** RR, 1.5 (95% CI:1.28-1.82); P<.01

Significant factor associated with NO NO NO YES vs. NO NO NO NO

CONCERN RR, 1.7 (95% CI:1.3-2.3); P<.001

Those respondents that said NO NO NO but **YES**
to a hypothetical future novel pandemic influenza vaccine,
were

1.7 times to report **concerned-extremely concerned**
about catching the influenza during a pandemic.

Factors Influencing Influenza Vaccination among Medical Center Personnel

Facilitators to Vaccination

- To protect myself and family
- To protect patients
- Work/study environment puts me at risk
- No cost and convenient to take
- Always take influenza vaccine
- Worried about catching influenza at work
- Email reminder(s) from administration
- Recommended by public health authorities
- Knowledgeable about the flu
- Past history of influenza illness

Barriers to Vaccination

- **Generally healthy and not concerned about infection**
- **Feel safe at work/school (because of infection control practices)**
- **It is not mandatory**
- **Afraid of vaccine side effects**
- **Never get the influenza**
- **Do not like to take any vaccines**
- **Afraid I am going to get influenza from the vaccine**
- **Do not like needles**
- **Lack of convenience**
- **Lack of time**

RESULTS OF A Participatory Action Research

Summary of recommendations for increasing vaccine uptake made by non-clinical personnel

- Coordinate vaccine availability with other medical center events (make the vaccine a part of the regular schedule of events, e.g., during health-fairs, the annual ice-cream social, and provide vaccine during the annual health reviews). ^a
- Inform, meet, and educate local Community Board and community groups to help support and influence vaccine uptake within the community.
- Have supervisors send out personal vaccination reminders.

^a Strategies most highly recommended by team members

Summary of recommendations for increasing vaccine uptake made by clinical personnel

- Identify vaccination role model/champion, such as the department chair, but also include diverse role models, to lead by example. ^a
- If vaccine is refused, mandate training session. Target those that do not take vaccine as those who take it do not want to sit through training about why they should. ^a
- Routinize vaccination and make it part of the regular schedule of events similar to medical staff credentialing and employee benefit/health fairs. ^a
- Make vaccine mandatory. Require vaccination or declination for all medical center personnel, including non-clinical. ^a
- Consider a vaccine 'reminder system' with an appointment scheduler.
- Send multiple communications over time reminding personnel to take the vaccine, and reasons why they should.

^a Strategies most highly recommended by team members

Summary of recommendations for increasing vaccine uptake made by both the clinical and non-clinical personnel.

Use a multi-media communication campaign to promote vaccination:

- Messaging on electronic screens in building lobbies.
- Posters on bulletin boards, elevator banks, work areas, bathrooms, lunch break rooms, cafeteria.
- Distribute educational pamphlets and repeat messaging including email and newsletters.
- Provide in-person announcements (i.e., at grand-rounds, administrative and staff meetings, classrooms, etc.), as personnel pay better attention to in-person messaging than electronic.

Easy access and convenience are essential elements of vaccination campaign:

- Provide vaccine at no cost.^a
- Bring the vaccine into the workplace for easy and timely accesses (i.e., utilize a roving 'flu-cart' and mobilize a 'flu-table' in satellite locations).^a

^a Strategies most highly recommended by team members

Summary of recommendations for increasing vaccine uptake made by both the clinical and non-clinical personnel.

Educate medical center workers about influenza and dispel myths about vaccination:

- Provide education on influenza when the flu cart circulates and at the satellite flu vaccine tables. ^a Unless staff understands what influenza is they will not take the vaccine, regardless of convenience.
- Emphasize what the flu is (vs. a cold); provide influenza facts to dispel common myths (fear of adverse effects, vaccine safety, perceived ineffectiveness, and that one does not contract influenza from the vaccine).^a
- Provide in-person announcements (i.e., at grand-rounds, administrative and staff meetings, classrooms, etc.), as personnel pay better attention to in-person messaging than electronic.
- Use brief and entertaining vaccine promotion and publicity.
- Stress the importance and seriousness as a public health threat.
- Acknowledge adverse effects from vaccine and talk about effectiveness.
- Address cultural differences regarding compliance.
- Provide and promote alternative route of vaccination.

^a Strategies most highly recommended by team members

Summary of recommendations for increasing vaccine uptake made by both the clinical and non-clinical personnel

Provide incentives:

- Supply a healthy snack and stickers at the time of vaccine, similar to blood donation programs. ^a
- Distribute stickers to vaccine recipients (e.g., “Be nice to me – I took the Flu Shot”)
- Consider a full or half day *healthy* paid leave.
- Provide a (healthy) food coupon that can be redeemed at the cafeteria or local eatery.
- Serve a healthy snack or lunch during the education program and make the vaccine as accessible after the educational session

^a Strategies most highly recommended by team members

Summary of recommendations for increasing vaccine uptake made by both the clinical and non-clinical personnel.

Mandate vaccination training sessions.

- Use a signed declination that acknowledges that the person refusing the vaccine is putting themselves and others at risk by not taking the vaccine.
- Make declining the influenza vaccine more effortful than taking it
- Target those that refuse vaccination that vaccinated personnel do not receive excessive training.
- Consider mandatory vaccination for all new hires as part of employment.

^a Strategies most highly recommended by team members

H4 Results

PAR Teams will identify creative interventions including organizational strategies that differ from investigator-identified interventions.

Most of the recommended strategies were aimed at **addressing individual-level barriers through organizational-level strategies.**

Results

Feasible, creative and low-cost interventions were identified, including organizational strategies that differed from investigator-identified interventions

The two team's approaches also differed from each other's:

- Non-clinical team was more likely to identify educational programs to dispel vaccination-related myths;
- Clinical team focused more on strategies that emphasized the importance of protecting themselves in order to protect their patients

Additional Conclusions

- Address No No No barriers to routinize
 - Flu education
 - ‘What is the flu, why take vaccine’, ‘dispel vaccine myths’
 - address ‘Concern’
- Promote needle-less entry to address those reported “they do not like needles” (barrier NO NO NO NO)
 - Intranasal (LAIV) or intradermal, (90%) smaller needle

And what did we do
at CUMC

???

Season 2013/14

Public Service Announcement

Influenza Vaccine 2013/14

**Available at no cost
for Faculty, Staff and Students**

Melanie Bernitz, MD, MPH Student Health
Kathleen Crowley, PA-C, MPH, DrPH EH&S

Columbia University Medical Center
Human Resource Network Meeting
October 3, 2013
Administrator's Network (CAN) Meeting
October 4, 2013

Public Service Announcement

One word ~

VACCINATE

Influenza season will soon be upon us!!!



**DON'T
GET
THE FLU.
DON'T
SPREAD
THE FLU.**

**GET
VACCINATED.**

cdc.gov/flu



What you can do to prevent the spread of the flu:

Get vaccinated. The CDC recommends annual influenza vaccination as the first and most important step in protecting yourself, patients, coworkers, family and friends.

CUMC Faculty and Staff: Visit Workforce Health & Safety in the Harkness Pavilion 7th Floor “fast-track”, Monday-Friday, 7:30 am - 4:00 pm for your flu vaccine. Also daily at satellite locations: MHB & CHONY lobbies. (You must bring CU Identification Badge).

Students enrolled in the Student Health Service (SHS) may receive influenza vaccination at no charge in the SHS at 60 Haven Avenue during normal hours of operation.



**COLUMBIA UNIVERSITY
MEDICAL CENTER**

Prevention

Vaccination against the flu is the best way to protect ourselves, our families, and our patients.

CDC recommends **annual influenza vaccination** as the first and most important step in protecting against influenza.

The influenza vaccine is safe, as well as effective, and all CUMC faculty and personnel are strongly encouraged to receive it.



A vertical graphic with a black border. The top section contains the text "DON'T GET THE FLU. DON'T SPREAD THE FLU." in large, bold, blue, sans-serif capital letters. Below this is a black horizontal bar with the text "GET VACCINATED." in white, bold, sans-serif capital letters. At the bottom left is the URL "cdc.gov/flu" in blue. At the bottom right are the CDC logo (a stylized eagle) and the text "CDC" in black.

**DON'T
GET
THE FLU.
DON'T
SPREAD
THE FLU.**

**GET
VACCINATED.**

cdc.gov/flu 

Prevention

- The annual seasonal influenza vaccine is available at no charge at WH&S located in the Harkness Pavilion 7th floor and in hospital building lobbies and cafeterias.
- Vaccinated staff will now be given a **sticker** to affix to their ID badges.
- Faculty and staff who enter NYP Hospital space without a sticker may need to wear a surgical mask.
- Participation in the influenza vaccination program is mandatory for all clinical students at CUMC.



Prevention

- Because influenza is such a serious illness, the ***New York State Department of Health is requiring health care workers who decline, or have a medical contraindication to the vaccine, to wear surgical masks in areas where patients may be present.***
- These areas include inpatient and outpatient locations, lobbies, elevators, corridors, cafeterias, gift shops, and common areas. The official “**masks on**” date will be determined by the State Health Commissioner based on regional flu activity.



Prevention

- Both injectable and intranasal formulations **available free-of-charge.**
- The deadline for being vaccinated or signing a declination is **November 15, 2013.**
- In keeping with State regulations, once the “masks-on” mandate is in effect, unvaccinated staff who do not comply will be subject to corrective action.

**DON'T
GET
THE FLU.
DON'T
SPREAD
THE FLU.**

**GET
VACCINATED.**

cdc.gov/flu



TO: CUMC Faculty & Staff
FROM: Mark McDougle, Senior Vice President/Chief Operating Officer
DATE: October 1, 2013
RE: Influenza Vaccination Program 2013/14

The CDC recommends annual influenza vaccination as the first and most important step in protecting against influenza. The influenza vaccine is safe, as well as effective, and all CUMC faculty and personnel are strongly encouraged to receive it in order to protect themselves, patients, coworkers, family, and friends.

We are pleased to announce the annual seasonal influenza vaccine is now available at no charge at Workforce Health & Safety (WH&S) located in Harkness Pavilion on the 7th Floor and in hospital building lobbies and cafeterias. A list of locations and hours is available on the [CUMC HR website](#). Vaccinated staff will now be given a sticker to affix to their ID badges. Faculty and staff who enter NYP hospital space without a sticker may need to wear a surgical mask (please see below). If you were vaccinated elsewhere, please complete the [Influenza Vaccine Outside Documentation](#) form and bring it to WH&S to receive a sticker. Students enrolled in the Student Health Service (SHS) may receive influenza vaccination at no charge in the SHS at 60 Haven Avenue. Participation in the influenza vaccination program is mandatory for all clinical students at CUMC.

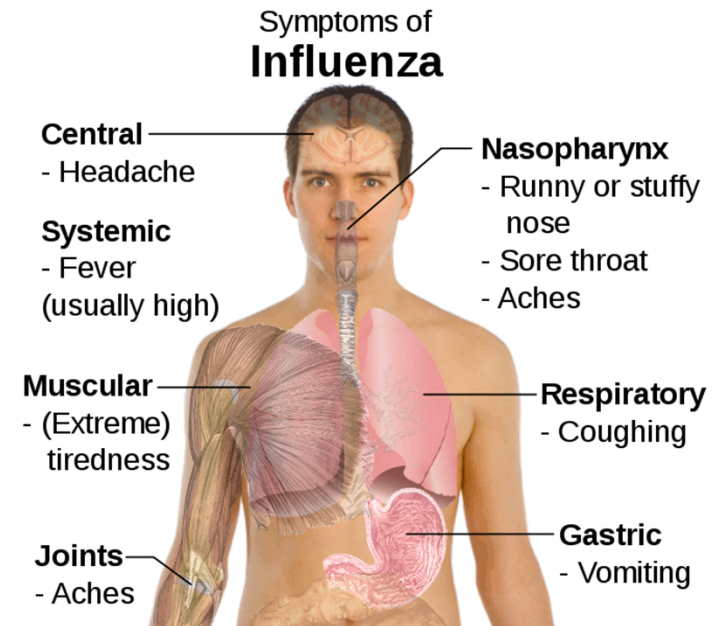
This year, the New York State Department of Health is requiring health care workers who decline the vaccination or who have a medical contraindication to the vaccine to wear surgical masks in any hospital locations where patients may be present. These include inpatient and outpatient locations, hospital building lobbies, elevators, corridors, cafeterias, gift shops, and common areas. University faculty and staff working in hospital space will be required to comply with these guidelines. Faculty and staff who do not work in NYP hospital space will not be required to wear a mask unless they enter NYP hospital space. In the event of a flu emergency, off-campus FPO practice sites may require unvaccinated faculty and staff to wear masks. Departments will notify faculty, staff, and students if masks will be required. The official "masks on" date will be determined by the State Health Commissioner based on regional flu activity. All faculty, staff, and students should be vaccinated or sign a declination before November 15, 2013.

CUMC personnel, volunteers, and physicians who work in NYP hospital space who are considering declining the vaccination will be required to take an educational course about influenza and those who choose to decline the vaccine after taking the educational course must sign a declination form.

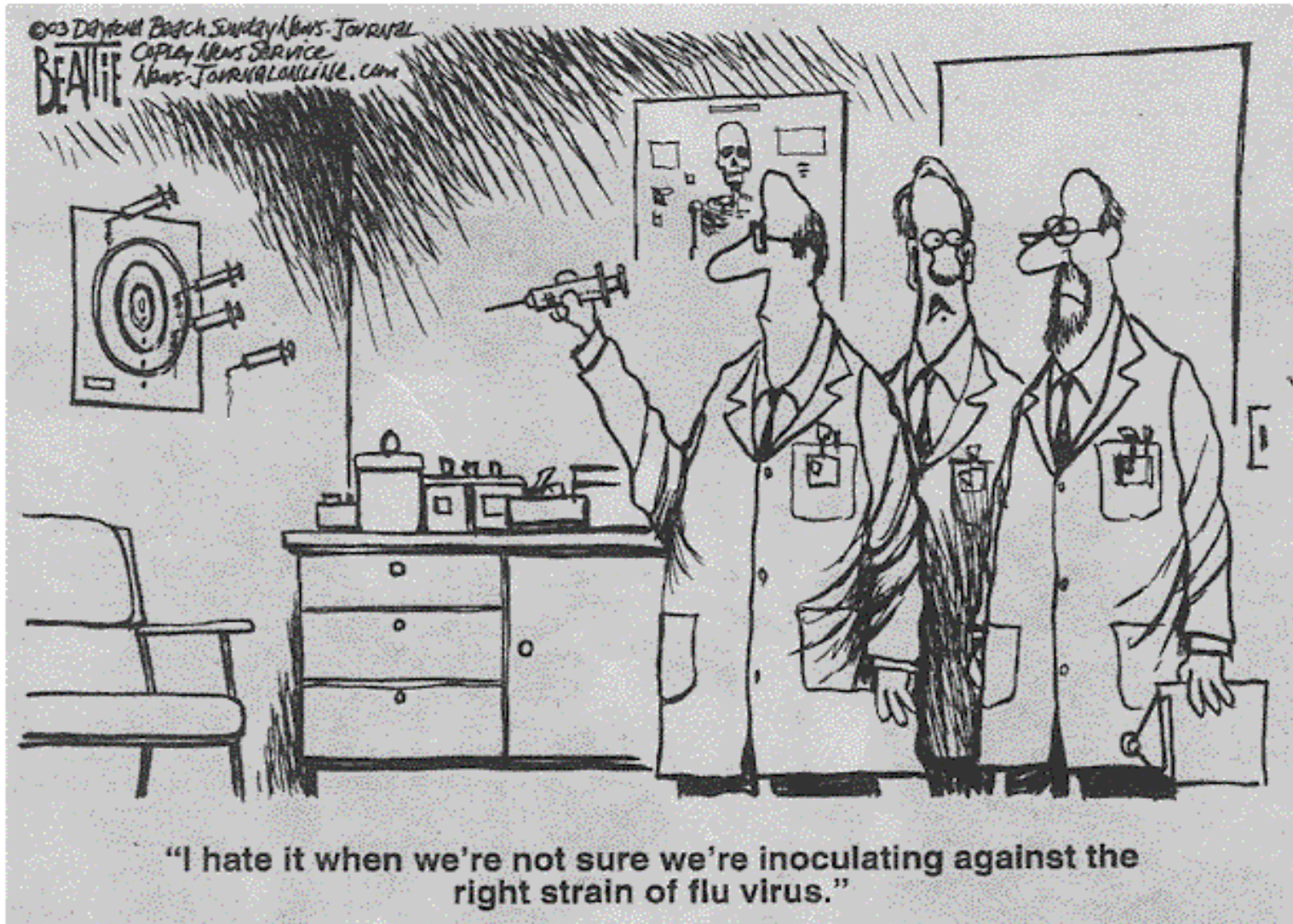
Thank you for supporting this important health initiative. I hope you will join me in getting vaccinated and protected against this season's flu. For more information, please click on [Influenza FAQs](#), contact CUMC Human Resources at 305-HELP or Student Health Services at 212-305-3400 or studenthealthservice@cumc.columbia.edu

Symptoms

- Fever 102-106 F
- Cough
- Congestion
- Body aches
- Fatigue
- Headache
- Nausea, vomiting
- Sudden onset of symptoms (1-2 days post infection)
- Usually resolves in 4-7 days



Seasonal Flu Vaccination



How can faculty & staff get vaccinated?

Conveniently available at NO cost

- **TODAY** at the CAN Meeting!!!
- Faculty & Staff can also:

Go to **Workforce Health Safety**

“Fast-track” located on Harkness Pavilion 7th floor
Monday-Friday 7:30 am-4:00 pm

- Also daily at **satellite locations:**

MHB 2, CHONY lobbies

Must bring CU Identification Badge

Spread the word, not the flu!



Thesis Committee

Robyn Gershon, MHS, DrPH*

Professor in Residence, UCSF School of Medicine, Institute for Health Policy Studies
Professor of Clinical Sociomedical Sciences (in Nursing) , Columbia University MSPH

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***Thesis Advisor**

Questions



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cdc.gov/flu 