

## **The UNE Flu Crew: An Interdisciplinary Approach to the Assessment of Knowledge, Beliefs and Perceptions surrounding Influenza Immunizations and the Promotion of Preventing Infection**

### **Student Researchers:**

Jeff Wisniowski, MPH, OMS-II, College of Osteopathic Medicine

Christy Tsui, OMS-I, College of Osteopathic Medicine

Samantha Grela, Sophomore, Public Health, Westbrook College of Health Professions

Marissa Laramie, Sophomore, Public Health, Westbrook College of Health Professions

Cameron Bubar, MPH, OMS-II, College of Osteopathic Medicine

## **The UNE Flu Crew: An inter-disciplinary approach to flu prevention**

### **Description:**

The UNE Flu Crew is an inter-professional research and health education program that has two main components: a campus-wide survey and a health education program that will be implemented on the UNE campus and in local community schools. Please see Appendix I for participants and roles.

### **Background and Significance:**

Influenza virus is a common causative agent for respiratory illness, distress, and epidemics annually. While people of all ages can be affected, young adults in college are particularly susceptible to the virus' spread due to close proximity in living quarters and classes (1). Previous census data have identified college-age adults as being the least vaccinated among adult age groups (2). Though there is limited data on vaccination rates among college students, one study estimated that as low as 14-30% of students from eight universities were vaccinated during the time of a major outbreak (3). Despite efforts to make the vaccine readily available to students, there are still underlying barriers to improving vaccination rates (4). Previous risk assessment studies have identified misconceptions about influenza virus and vaccines as primary reasons for vaccine noncompliance among college-age individuals (4,5).

The UNE Public Health Club completed a pilot survey of UNE students and faculty in the spring of 2016. Of the 436 respondents, 84.6% are health professional students or faculty, and 15.4% were undergraduate students. The majority of respondents are white (81.9%), and 12.3% are Asian, 2.8% southeast Asian, and 1.9% are Black. The majority of respondents are female (67.2%) and have Maine health insurance (63.4%). As of February 2016, 31.4% (n=136) of our respondents had not received an influenza vaccination, and 34.4% of respondents do not receive an annual influenza vaccination annually. Of those who did not receive the vaccination,

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17.9% did not want to receive the vaccination because they believed the vaccine does not work (14.2%), they believe they can tolerate being infected by the influenza virus (12.5%), the vaccination could cause serious side effects (11%), the vaccination would give them “the flu” (8.9%), or the influenza strain covered in the vaccination is not the same strain that affects the community (5.4%).

These results indicate that a large portion of the UNE community is not receiving an annual influenza vaccination. For those who had not received an annual influenza vaccination by February 2016, many of them were mistrusting of the efficacy and perceived risks of receiving the vaccination. Additionally, many of the respondents believe they are physically healthy enough to not contract an influenza infection. These gaps in knowledge regarding the efficacy of the vaccination and the benefits of influenza vaccination, not only to those that receive the vaccination but to the community as a whole, are opportunities for the Flu Crew to educate and promote the uptake of the influenza vaccination on our campuses.

The aim of the UNE Flu Crew project is to continue to assess the knowledge and perceptions regarding the influenza vaccine among the University of New England’s student and faculty populations. We will also use this survey to identify whether education on the necessity of the vaccine serves as a motivator for vaccine uptake. The goal of this second survey model is two fold – to assess the impact of a campus wide media campaign and to provide an interdisciplinary education environment that will expose students to the unique health needs of the college population in regards to influenza and infectious disease.

This project seeks to provide a peer-to-peer education model where members of the Flu Crew will design a teaching curriculum and provide community outreach to the UNE Biddeford campus, local high schools, and local middle schools. The project employs an interdisciplinary

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approach by bringing groups of health related major undergraduates and college of osteopathic medicine students, to collaborate on developing Flu Crew programming.

The goal of the project is to utilize the skills and diversity of each stakeholder to develop a comprehensive influenza surveillance and health education campaign. Students work in a multi-disciplinary team to create the multiple components of the project which include: IPE grant writing and scientific publication, survey design, collection and assessment, health education programming and a targeted media campaign. Each project team has at least one representative from the respective disciplines.

### **Research Aims and Specific Objectives**

#### **Specific Aims and Objectives:**

1. Conduct a survey assessment of flu knowledge, perception, and beliefs of University of New England students and faculty.
  - a. Analyze pilot survey data of 436 students/faculty on flu perceptions, knowledge and barriers. (completed February 2016).
  - b. Provide report of findings in order to implement a targeted educational media campaign aimed at specific barriers.
  - c. Implement second survey to measure possible effects of educational intervention. Target sample size (>n=250)
  - d. Analyze second survey results to identify the presence of persistent and/or non-knowledge based barriers.
  - e. Present findings at one UNE research event and/or one state/national conference.
2. Design and implement a targeted media campaign addressing identified knowledge gaps in survey population.
  - a. Identify at least three target education areas based on first round survey results.
  - b. Develop media campaign materials: these include 20 table top pamphlets, 2 large posters, and 100 small flyers.
3. Utilize a peer-to-peer education model to teach local elementary students about flu prevention.
  - a. Recruit 10 undergraduate students to design and implement a Flu Prevention curriculum in elementary schools.
  - b. Design and Implement a Flu Crew Curriculum to be present to 40 elementary level students.

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- c. Collect and analyze Pre-Assessment and Post-Assessment modified Performance Assessment Communication and Teamwork Survey (PACT) from all grant participants (6).
- d. Present findings at one UNE research event and/or one state/national conference.

### **Project Descriptions**

#### **Flu Survey:**

A 29 questions survey was created based primarily around information deemed integral by the Center for Disease Control online resources. This survey was created using Google survey and was administered via email to UNE undergraduate students, graduate students, and faculty. A \$100 amazon gift card lottery incentive was offered. 436 people responded to the survey and that data is to be analyzed. The results are to be used in order to formulate an educational intervention that targets barriers, misperceptions, and knowledge gaps among the UNE community. In order to track our community over time, the survey will be remodeled in order to focus the questions only toward the pertinent data points used in the previous analysis; this remodeling will be followed by re-administration of the survey. The second round of data will then be analyzed and presented.

#### **Campus-wide Media Campaign:**

The campus-wide media campaign will convene a group of students to design and disseminate targeted media messages across the UNE Biddeford and Portland campuses. The group will utilize the primary report generated from the first round influenza survey to inform the education campaign. Media messages will address specific knowledge gaps in the target population. The media campaign will be implemented during the months of November – February, during the peak of flu season. Targeted messages will include themes of knowledge (peak flu activity, vaccine efficacy information, at risk populations) and perceptions/beliefs (fear

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of side effects, links to autism). Media out reach will consist of table top pamphlets, flyers, large posters, tabling and education outreach in student common areas.

### **Education Outreach:**

Using a peer-to-peer education model members of the Flu Crew Education Outreach project will design a teaching curriculum and provide community outreach to local elementary schools. Medical students will work with undergraduates to design a teaching plan for elementary age students. The teaching plan will consist of multiple sessions of small group activities. After a discussion with local elementary school teachers they emphasized a focus on respecting personal space, hand hygiene and flu prevention. The curriculum will utilize 3-4 student small groups being taught by 2 Flu Crew members. The purpose of this small ratio is to provide interactive learning experiences for the children. These will include hand washing demonstrations, interactive activities and work book assignments. The Flu Crew participants will be asked to complete a modified interprofessional performance assessment both prior to and after the program. In addition, the group will be required to convene at the end of the project to reflect on the successes and challenges while working in interprofessional teams. Students will complete a structured debrief centered around the Interprofessional Education Collaborative (IPEC) competencies. This survey data and reflection will be used to generate a presentation on the benefits, challenges and lessons learned while working in interprofessional teams.

### **Dissemination Plan:**

The final project will be a scientific poster presentation and oral presentation assessing the challenges and successes of working in an interdisciplinary team to construct comprehensive health education programming. In addition, survey data will be analyzed and prepared for oral

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and scientific poster presentation. The group plans to disseminate its findings to the UNE Student Health Services staff and across the respective UNE health colleges in March/April. In addition, the group plans to submit these presentations to state/national annual meetings and conferences. Specifically, the group hopes to target the UNE Akesis Narrative Medicine Journal, UNE Rising Tide Research Magazine, the UNE COM Fall or Spring Research Symposium, the Maine Public Health Association's Annual Conference and the American Public Health Association's Annual Conference.

**Timeline:** See Appendix II.

Currently, the first stages of the project have been completed such that the first round of data collection and analysis have been completed. Additionally, the interprofessional team has worked together to complete this grant, which in itself was a learning tool for undergraduate students. The next phase planning has begun on November 1, 2016 which included formulating actionable items for creating the educational intervention, the remodeling of the survey, and the scheduling of community outreach dates. These phases will be completed through the months of November and December 2016. The final phase will begin in February 2017 when the survey is to be implemented for the second time and the results are to be analyzed and presented throughout the month of May 2017. At this time the project will be completed and undergo review for continuation during the following years.

**Budget Justification:** See appendix III.

In order for the media campaign on the Biddeford and Portland campuses to be successful, materials for information dissemination are required. Analysis from the survey will be portrayed on media such as table-top pamphlets for eating and study areas, large banners for

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libraries and student common areas, as well as flyers and posters for dormitories and hallways. Information will also be verbal delivered by Flu Crew members and T-shirts designed by students will be used in community activities.

The education outreach phase of the project requires materials for conducting successful classroom sessions. These interactive activity materials include: hand sanitizers, antibacterial soap for hand hygiene demonstrations, teaching models and black light powder to demonstrate how germs are transferred and where they collect, workbooks and materials for students to complete educational assignments and take home, and incentives for kid's such as pencils, stickers and certificates. For the older age groups Flu Crew water bottles and hand sanitizer will help successfully engage high school students with learning and are to be given out at high school health fair and community education campaigns.

The research and dissemination phase of this project will be facilitated by having the flu survey analysis completed by a statistician for accurate and expeditious turnaround. It will also be important to compile survey report and analysis for publications on materials such as scientific posters and journal articles.



**Reference:**

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6. Chiu, C.J., Brock, D., Abu-Rish, E., Vorvick, L., Wilson, S., Hammer, D., Schaad, D., Blondon, K., and Zierler, B. Performance Assessment of Communication and Teamwork (PACT) Tool Set. Retrieved 10-24-16 from: <<http://collaborate.uw.edu/educators-toolkit/tools-for-evaluation/performance-assessment-of-communication-and-teamwork-pact-too>>

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**Appendix I**

Participants and Roles

College/Title	Participants	Roles - Project Focus
Faculty Advisor	Jennifer Gunderman MPH	Faculty Advisor – Assistant Lecturer, School Community and Population Health
UNE College Osteopathic Medicine	Cameron Bubar OMS-II Kelly Carreiro, OMS-II Jeff Wisniowski, OMS-II Jessica Harnisch-Boyd, OMS-II Christy Tsui, OMS-I Sonia Biswas, OMS-I Victoria Molina, OMS-I	Flu Survey, IPE Grant IPE Grant, Education Outreach IPE Grant, Education Outreach Flu Survey, Media Campaign Flu Survey, Education Outreach Education Outreach, Media Campaign Flu Survey, Media Campaign
UNE Undergraduate	Sahra Hassan Samantha Grela Marissa Laramie Allison Bubar	IPE Grant, Education Outreach IPE Grant, Media Campaign IPE Grant, Flu Survey, Media Campaign Flu Survey, Education Outreach

# The UNE Flu Crew: An inter-disciplinary approach to flu prevention

## Appendix II

### Project Timeline



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Appendix III

Budget

Item	Quantity x Unit Price	Sub-Total
<b>Biddeford and Portland campus Media Campaigns</b>		
Table-top pamphlets (8.5x11")	100 x \$0.15	\$15
Large vinyl banners via Staples	2 x \$48	\$96
Color posters (11x17")	100 x \$0.25	\$25
Survey incentive, Amazon gift card	3 x \$50	\$150
<b>Education Outreach: BIS Materials and High School Health Fair</b>		
Flu Crew adult T-shirts	40 x \$12	\$480
Large hand sanitizer bottles	2 x \$5	\$10
Anti-bacterial hand soap (80 Fl Oz)	2 x \$20	\$40
Teaching models, demonstration items (Plush germs, bacteria models)	10 x \$10	\$100
Black light flashlight	4 x \$10	\$40
Black light powder & gel	4 x \$16	\$48
Poster paper	2 x \$15	\$30
Markers	4 x \$7	\$28
Student notebooks/workbooks	40 x \$6	\$240
Crayons (24 count pack)	10 x \$2	\$20
Certificates	5 x \$5	\$25
Flu prevention pencils	100 x \$0.50	\$50
School posters	20 x \$0.25	\$5
Classroom/bathroom window decals	40 x \$0.90	\$36
Flu prevention box of stickers	5 x \$5	\$25
Personal Flu Crew hand sanitizers	100 x \$2.60	\$260

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<b>Incentive Flu Crew water bottles</b>	<b>20 x \$10</b>	<b>\$200</b>
<b>Research and Dissemination</b>		
<b>Flu Survey-Graduate Analyst</b>	<b>1 x \$200</b>	<b>\$200</b>
<b>Poster printing</b>	<b>2 x \$50</b>	<b>\$100</b>
<b>Total</b>		<b>\$2,223</b>

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## Appendix IV

### Faculty Letter of Support

November 3, 2016

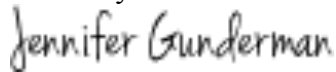
Dear CEIPE Mini-grant Review Team,

I am writing to confirm my support for UNE COM's Public Health Club interprofessional influenza project entitled: "The UNE Flu Crew: An Interdisciplinary Approach to the Assessment of Knowledge, Beliefs and Perceptions surrounding Influenza Immunizations and the Promotion of Preventing Infection."

As the faculty advisor for the UNECOM Public Health Club, I supported the group during their initial efforts to assess the UNE community's influenza knowledge and beliefs in the spring of 2016. This pilot project was a successful endeavor for the medical students and the university community as they collected survey data from 436 faculty and students. From this work the group identified a need to involve students from multiple disciplines. The new project outlined in the IPE grant is an evolution of their previous work. As assistant lecturer in the Westbrook College of Health Professions, I have connected undergraduate students with medical students in hopes of providing a more enriching educational experience.

I am writing this letter to affirm my continued support for the interprofessional UNE Flu Crew project to provide mentorship, consultation and oversight. I am confident that the assembled group is capable of delivering a project worthy of IPE grant funding. I offer my letter of support to ensure the project is successfully completed while maintaining the principles of interprofessional practice. I am available at the contact information below if you would like to discuss this matter further.

Sincerely



Jennifer Gunderman, MPH  
School of Community and Population Health  
Westbrook College of Health Professions  
University of New England  
716 Stevens Ave.  
Portland, Maine 04103  
(207) 505-1452