

Extended Abstract

H3N2 influenza vaccine rates and other protective behaviours amongst college students

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Abstract

Influenza infections can result in seasonal outbreaks and epidemics in the USA. The 2014-2015 influenza outbreaks were attributed to the H3N2 influenza strain. This outbreak was partly attributed to the mismatch between the causative H3N2 influenza strain and the annual influenza vaccine.

The aim of this study was to determine if the mismatch between the causative influenza strain and the vaccine impacted vaccine rates or other protective health behaviour amongst college students.

In this study, an online survey was used to determine the rate the influenza vaccination rates and any changes in student hygienic behaviours during the 2014- 2015 influenza season amongst college students. Survey responses were collected from Jan. 15, 2015 to Feb. 15, 2015, and elicited 265 responses from undergraduate students.

The total vaccine rate among respondents was 23%, but compared to the previous year (2013-2014) the overall vaccination rate among respondents decreased by 10%. Regardless of vaccination, 53% of total respondents reported a slight change or more in the protective health behaviour of hand-washing.

The influenza vaccination rate amongst college students is within the range of the national CDC vaccination rate of 31% for this age group. The decrease in vaccination rates from 2013-2014 to 2014-2015 was consistent with the mismatch between the influenza strain and vaccine targets.

Beyond vaccination, protection against influenza also involves enhanced personal and hand-hygiene behaviours. Such behaviours are very important on a college campus due to close living conditions and other social and casual behaviours.

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Beyond vaccination, protection against influenza also involves enhanced personal and hand-hygiene behaviours. Such behaviours are very important on a college campus due to close living conditions and other social and casual behaviours. In total, 270 students consented to participate in the survey, but only 265 students completed the survey. The total number of females that completed the survey was 184 (69% of all respondents), while the total number of males that completed the survey was 81 (31% of all respondents). Based on previous studies, it is expected that there would be a greater number of female respondents compared to male respondents.

The number of respondents by academic year of study was as follows: 84 (32%) respondents were freshmen; 84 (32%) respondents were sophomores; 58 (22%) respondents were juniors; and 39 (15%) respondents were seniors. Participating students were also asked to indicate the college of their undergraduate major: 82 (31%) respondents were majors of the College of Arts & Science; 75 (28%) respondents were majors of the College of Business & Economics; 34 (13%) respondents were majors of the College of Education; and 74 (28%) respondents were majors of the College of Nursing & Health Science.

Of the total number of respondents that completed the survey, 80 respondents (32%; 95% confidence intervals: 26%-38%) self-reported receiving the flu vaccine in the prior academic year (2013-2014), while only 55 respondents (22%; 95% confidence intervals: 17%-27%) self-reported receiving the flu vaccine in the next academic year (2014-2015) (Table 1). Forty-six respondents (19%; 95% confidence intervals: 14%-23%) self-reported receiving the flu vaccine during both academic years. This decrease in flu vaccination rate from 2013-2014 to 2014-2015 was statistically significant ($p < 0.05$) with a chi square value of 6.2119 and a p-value of 0.0127.