

Proposal

Title – Patterns of influenza-like illness and vaccination coverage on Liberty University’s campus

Program of Study – Public Health

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Category – Applied

Abstract

Students who attend university experience a higher risk of contracting influenza or influenza-like illnesses (ILIs). There is evidence that adequate vaccination coverage on university campuses can significantly reduce influenza morbidity rates among students. Many people assume vaccinations are only helpful if received before the influenza season, however public health authorities encourage vaccination just before and throughout the influenza season. Liberty University (LU) experienced a high incidence of influenza and ILIs during the 2016-2017 academic year, causing school officials to investigate possible flu-prevention methods for future academic years. A major flu-prevention method implemented in the 2017-2018 academic year was the provision of free flu shots offered to residential students through monthly on-campus clinics and walk-in services at the Student Health Center. This research aimed to identify patterns of influenza and influenza vaccination coverage on LU’s campus and determine whether flu vaccine coverage was associated with reduction in rates of ILI. After obtaining from the Student Health Center data on vaccination coverage and diagnosis of ILI on campus, we

analyzed campus-wide vaccine coverage for both Fall 2017 and Spring 2018 semesters and evaluated rates of ILIs on campus for Spring 2017, Fall 2017, and Spring 2018.

A prior survey carried out in the Fall 2017 semester showed that around 17.8% of the residential LU undergraduate students had received the flu vaccine, while 18.8% of them intended to get the flu vaccine this flu season, but almost two-thirds (63.4%) did not intend to receive the flu vaccine. Despite increased effort to create awareness about the flu and promote flu vaccination, the on-campus flu vaccine coverage for the Fall 2017 semester was very low – only 176 students received flu shots (approximately 1.2% of the residential undergraduate population). This falls extremely short of the Healthy People 2020 target of 80% flu vaccination coverage for adults aged 18-64 years. However, among students of the LU School of Nursing the flu vaccine coverage was around 67%. Many misconceptions may explain the low vaccination rates in LU – including doubts about the vaccine’s safety and efficacy, low perceived susceptibility to the flu, religious beliefs, and beliefs that the vaccine is harmful. There were 141 reported cases of ILI at the LU Student Health Center in the Fall 2017 semester, four (2.8%) of which were confirmed to be the flu. At the time of this report, 192 ILIs had been reported to the LU Student Health Center for the Spring 2018 semester, of which 14.1% have been confirmed. This is a significant improvement compared to the Spring 2017 semester when 766 ILIs were reported to the LU Student Health Center, 80.3% of which occurred in the month of February, and 29.0% confirmed as the flu. A strong negative correlation was found between the number of flu shots given and the number of ILIs reported monthly during the Fall 2017 semester ($r = -0.82$). This implies that increasing the flu vaccination coverage on the Liberty University campus has great potential to reduce the rates of influenza and ILIs on the campus.