

Influenza Vaccination Among Healthcare Workers at a Community Hospital: A Comparison of Vaccination Rates and Resulting Impact on the Healthcare System.

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Background

- The influenza virus is a highly communicable disease which can cause rampant outbreaks of illness within healthcare facilities.
- Healthcare workers (HCW's) are at an increased risk of contracting the influenza virus.
- Vaccination is a primary method by which HCW's can help prevent nosocomial influenza and influenza-related absenteeism.
- In the United States, studies indicate only 40% of HCW's receive the seasonal influenza vaccination each year.
- The primary focus of this study was to look at the seasonal influenza vaccination rates of employees at Lawrence Memorial Hospital and secondarily assess the impact of vaccination on absenteeism due to influenza-like illness.

Hypothesis

- Vaccination rates among employees at Lawrence Memorial Hospital is less than 50% and absenteeism due to contagious illnesses among employees not vaccinated occurs at a significantly higher rate than those who receive the influenza vaccine.

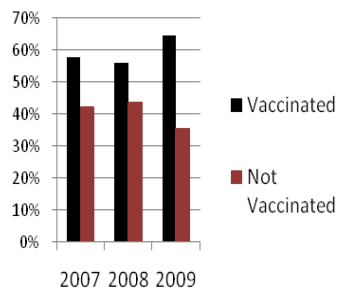
Methodology

- Employee vaccination records were obtained through the business health office.
- The employee time card system, KRONOS, was accessed to obtain employees absent secondary to a contagious illness subset.
- Vaccination records and information from KRONOS were then merged to determine if a relationship between influenza vaccination and absenteeism due to a contagious illness existed.
- Employees absent due to contagious illness were then separated into direct-patient care and non-direct patient care categories to determine if a relationship existed between vaccination status and patient care areas.
- Number of days missed due to contagious illness were compared between vaccinated and non-vaccinated employees.
- Chi square testing was then used to determine if this relationship was statistically significant. (a priori, $p=0.05$)

Discussion

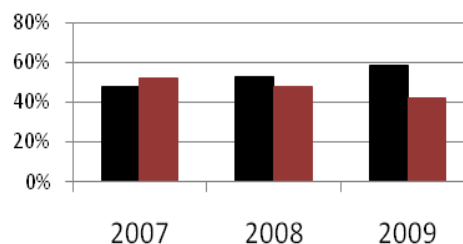
- Absenteeism secondary to contagious illness during 2007 occurred at a statistically significant rate in the group of employees who received the influenza vaccination. This may be due to the variation in the influenza vaccination as well as employees who chose to receive the influenza vaccination may have had an increased risk of illness due to other health conditions.
- 2008 and 2009 data showed there was no statistical difference between the employees who received the influenza vaccination and those who did not.
- There was no statistical difference noted between the number of employees obtaining influenza vaccination.
- Vaccination status of direct patient care vs. non-direct patient care providers had no significant effect on absenteeism due to contagious illness during 2007 and 2008. During the 2009 season, direct patient care providers had a statistically significant probability of being vaccinated and being absent due to a contagious illness. ($p<0.0001$).
- There was no statistically significant difference between the number of days missed due to contagious illness and those vaccinated vs. not vaccinated.
- More consistent documentation of absenteeism secondary to a contagious illness needs to be implemented to make a determination of the impact of Influenza vaccination on a healthcare system.
- An additional category for absenteeism due to illness was added to the KRONOS system, illness due to pandemic, to track influenza-like illnesses occurring among employees during the 2009-2010 season.

Absent Due to Contagious Illness



2007 $p= 0.009^{\wedge}$
2008 $p= 0.284$
2009 $p= 0.250$

Employee Vaccination Rates



References

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Limitations

- Employees who received influenza vaccination through other venues than Lawrence Memorial Hospital were not captured.
- Documentation by departments for absences secondary to a contagious illness may be incomplete or lacking
- Influenza virus subtypes used in the influenza vaccine vary year to year providing variable coverage of the influenza virus.
- Employees who chose to receive the influenza vaccination may have an increased risk of illness due to other health conditions.

Conclusion

• Influenza vaccination rates at Lawrence Memorial Hospital were less than 50% for 2007, however reached 52.4% for the 2008 and 58.1% for the 2009 season exceeding the national rate of 40%.

• Absenteeism due to contagious illness among employees vaccinated occurred at a statistically significant higher rate during 2007. There was no statistical difference between vaccinated and non-vaccinated employees absent for contagious illness during 2008 and 2009 seasons.

Disclosure

• Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:
Lisa Weedin – none to disclose
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