Influenza Vaccination Rates among High Risk Groups in the United States

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Abstract

Objective: Given increasing concerns about a global influenza pandemic, the aim of the current study was to investigate influenza vaccination rates among high-risk adults and the general U.S. population.

Methods: Data from the 2007-2010 U.S. National Health and Wellness Surveys (NHWS) were used. Demographics, comorbidities, and vaccination behavior in the past year were assessed for all respondents, in addition to health-related quality of life (SF-12v2) and resource use (number of emergency room visits and hospitalizations) in the past six months.

Results: Overall, vaccination rates in the U.S. have steadily increased in the past several years (2007: 30.0%; 2008: 32.8%; 2009: 34.3%; 2010: 37.6%). In 2010, 54.1% of respondents (n=40,541) were at high risk for influenza complications (e.g., over age 50, had chronic conditions such as asthma, diabetes, COPD, cardiovascular conditions, or HIV/AIDS). These high-risk respondents reported significantly lower levels of health-related quality of life (SF-12v2) and in the past six months (Means:0-15 vs. 0.07, p<0.0001) and hospitalizations in the past six months were also recorded.

Conclusions: There was a significant positive correlation between vaccination rates and health outcomes (PCS, ER visits, and hospitalizations) between high-risk groups and low-risk groups were substantially below 50% (caregivers of high-risk patients, respondents with multiple sclerosis, and pregnant women reported vaccination rates of 43.6%, 37.1%, and 39.5%, respectively). In fact, many high-risk subgroups reported vaccination rates substantially below 50% (caregivers of high-risk patients, respondents with multiple sclerosis, and pregnant women reported vaccination rates of 43.6%, 37.1%, and 39.5%, respectively).

Results

Vaccination rates were significantly higher for these high-risk respondents (48.6% vs. 23.2%, p<0.0001). No high-risk subgroup reported vaccination rates higher than 67% (respondents with kidney disease and HIV/AIDS reported vaccination rates of 66.5% and 67.3%, respectively). In fact, caregivers (43.58%) and women who were pregnant (30.49%) both reported the lowest vaccination rates among the high-risk subgroups (see Figure 3).

Conclusions

Even as new universal recommendations issued by the CDC have some beneficial impact, overall vaccination rates were well below 50% for the general U.S. population, even among certain high-risk subgroups (e.g., pregnant women, caregivers). Greater emphasis on influenza vaccination, particularly among high-risk patients, may have a long-term health outcome benefit.

References

1. World Health Organization (WHO) has estimated that future global pandemics may result in a best-case scenario, in deaths of 2 to 7 million with tens of millions requiring medical attention.
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3. Annual influenza vaccine has been demonstrated as the most effective mechanism for reducing the incidence of influenza.
4. The National Influenza Vaccine Information Center (NIVIC) is a self-administered, internet-based questionnaire from a nationwide sample of adults aged 18 or older that is stratified by gender, age, and race/ethnicity to represent the demographic composition of the U.S. adult population.

Figure 2. Prevalence of High-Risk Status for Influenza Complications among the U.S. Population

Figure 3. Vaccination Rates for High-Risk Groups

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