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RESEARCH NOTES

The impact of an immunization check-up at a pharmacist-provided employee health screening

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ABSTRACT

Objectives: To determine which types of vaccine recommendations were accepted and acted upon by patients after an immunization check-up at a pharmacist-provided employee health screening, and to evaluate if there was a difference between influenza and non-influenza vaccines.
Design: Retrospective, observational.
Setting: Supermarket chain.
Patients: Employees and covered spouses.
Intervention: Immunization check-up.
Main outcome measures: Acceptance rate of immunization recommendation.
Methods: This retrospective observational study evaluated the impact of an immunization check-up in individuals who participated in one of the 252 pharmacist-provided health screenings in central Virginia in 2015. All employee health screenings were completed from July 1, 2015, to September 30, 2015. Because immunization status was assessed 6 months after each person received his or her health screening, data were collected from January 1, 2016, to March 30, 2016, and analyzed to collect the number and type of vaccines recommended during the immunization check-up. Each eligible participant's profile was evaluated to determine if he or she received the vaccines at any Kroger pharmacy within 6 months. Patient identifiers were not collected; however, demographics including age, relevant disease state history, and smoking status were collected with immunization recommendations and uptake. Data were analyzed with the use of descriptive statistics.
Results: A total of 349 immunization recommendations were made, including 248 influenza; 42 pneumococcal polysaccharide (PPSV23); 40 tetanus, diphtheria, and pertussis (Tdap); 12 herpes zoster; 4 pneumococcal conjugate (PCV13); and 3 hepatitis B. Both influenza and PCV13 had acceptance rates of 50%, and herpes zoster, Tdap, hepatitis B, and PPSV23 had 42%, 35%, 33%, and 24% acceptance rates, respectively. Influenza recommendations had a 50% acceptance rate compared with a 32% acceptance rate of non-influenza recommendations ($P = 0.002$).
Conclusion: An immunization check-up performed at a pharmacist-provided employee health screening can lead to patient acceptance of recommendations and receipt of needed immunizations.

In 2010, the Office of Disease Prevention and Health Promotion released Healthy People 2020, outlining a 10-year agenda to increase the health of our nation. One of its goals is to increase immunization rates among the United States population, resulting in a decrease in preventable infectious diseases. Despite the general understanding that vaccines prevent disease and decrease morbidity and mortality linked to certain bacteria and viruses, adult vaccination coverage remains low for recommended vaccines, and immunization rates continue to fall short of national health goals.[1,2] More specifically, Healthy People 2020 aims to increase the number of adults 18-64 years of age who receive the influenza vaccine annually to 80%.[3] As of 2014, the national average of adults in this age group who receive an annual influenza vaccine was only 38%.[4] Per recommendations from the Community Preventive Services Task Force and the National Vaccine

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Advisory Committee, health professionals should incorporate vaccination needs assessment and recommendations at every patient encounter to improve vaccination coverage and reduce the consequences of vaccine-preventable diseases in adults.[1]

Health professional recommendations are associated with patients' receipt of vaccines.[1,5-12] Pharmacists are widely recognized as some of the most accessible health professionals and should raise awareness of available and appropriate immunizations and encourage patients to receive indicated vaccinations.[5-8] When patients were educated about influenza, herpes zoster, and pneumococcal vaccines as a result of a pharmacist-driven intervention in community pharmacies, they were influenced to receive the vaccination.[5,10-18]

Along with advocating for and administering vaccines, pharmacists are able to provide valuable preventive health services, including blood pressure and cholesterol screenings. Kroger Company pharmacists offer these services during annual employee health screenings and in pharmacies to the general public.

Although the literature has demonstrated the benefits of recommendations made by health professionals,[6] there is currently no information regarding patients' acceptance of pharmacist-made vaccination recommendations during an annual health screening. The present study evaluated the effect of an immunization check-up added to the annual employee health screening.

Objectives

The objectives of this study were to determine which type of vaccine recommendations were accepted and acted on by patients after an immunization check-up at a pharmacist-provided employee health screening, and to evaluate if there was a difference in acceptance and uptake between influenza and non-influenza vaccines.

Methods

This retrospective observational study evaluated the impact of a new component of the employee health screening, the immunization check-up, in an effort to get employees up to date on immunizations.

Kroger pharmacy health screenings

Each year Kroger employees and their covered spouses are encouraged to participate in health screenings. By electing to complete a health screening in 2015, employees were granted the ability to choose their insurance plan and received monetary incentives for meeting predetermined targets. Employees were allowed to decline the health screening, have their screening completed by a physician, or have a pharmacist perform their screening. Because pharmacists provide screenings at all Kroger Pharmacy locations in central Virginia and there was no charge for the health screening, more than 200 employees chose that option. All employee health screenings were completed from July 1, 2015, to September 30, 2015.

At the health screening, 4 main markers were assessed—blood pressure, blood glucose, cholesterol, and body mass index. In District B of the Mid-Atlantic Division, the immunization check-up was included in the health screening. During the immunization check-up, the pharmacist assessed each participant's need for the following immunizations: influenza; pneumococcal; herpes zoster; tetanus, diphtheria, and pertussis; and hepatitis B. The pharmacist made vaccine recommendations based on guidance from the Advisory Committee on Immunization Practices (ACIP) and the Centers for Disease Control and Prevention (CDC). The pharmacist also assessed self-reported immunization history, disease-state history, age, and smoking status to determine recommendations.

At the annual health screening, the pharmacist measured the aforementioned markers, counseled patients on their results, made lifestyle recommendations, performed an immunization check-up, provided immunizations when applicable, and referred patients to primary care physicians or more urgent medical care as appropriate. After the health screening, the pharmacist added a note to the patient's profile in EasyFill PRN, the Kroger Pharmacy computer system, indicating which vaccines were recommended for the patient. Because the employees who participated in the health screenings were insured through Kroger, the immunizations were covered at no charge to the patient if received at any Kroger pharmacy. Pharmacy staff also reminded patients of the recommended vaccines as stated in the note in the patient's profile when they picked up prescriptions as a normal standard of practice.

Because immunization status was assessed 6 months after each person received his or her health screening, data were collected from January 1, 2016, to March 30, 2016. The profiles of each person who completed a screening were reviewed to determine if he or she received the vaccines at a Kroger pharmacy within the prespecified time frame. Patient identifiers were not collected; however, self-reported baseline demographics and the medical and vaccination history relevant to recommendations were collected with study data. Data were analyzed with the use of descriptive statistics to determine the acceptance of vaccine recommendations and to differentiate the acceptance of influenza and non-influenza vaccine recommendations. The study was approved by the Virginia Commonwealth University Institutional Review Board.

Results

A total of 252 employees and covered spouses participated in a pharmacist-provided health screening in central Virginia in 2015. The mean age was 45 years (range 21-73 years; 36 patients 60 years of age or older), 50.4% of the population were male, and 78.6% of the study participants identified themselves as white. Tobacco users composed 15.9% of the study population, 5.6% of participants reported a diabetes diagnosis, and 2.4% of participants had chronic lung disease.

During the health screening immunization check-ups, a total of 349 vaccine recommendations were made to participants (Table 1), including 248 influenza; 42 pneumococcal polysaccharide (PPSV23); 40 tetanus, diphtheria, and pertussis (Tdap); 12 herpes zoster; 4 pneumococcal conjugate (PCV13); and 3 hepatitis B. Both influenza and PCV13 had acceptance rates of 50%, and herpes zoster, Tdap, hepatitis B, and PPSV23