

Employing a Multifaceted Approach Aimed at Increasing Influenza Vaccination Rates

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Commentary

Improving influenza vaccination rates continues to be a challenge faced by healthcare providers every flu season. A great amount of time and resources are devoted each year towards advertisement and awareness campaigns aimed at improving public participation. However, despite continued efforts by providers to improve influenza immunization rates in their respective communities, it was reported by the CDC that the influenza immunization rate for all people's ≥ 6 months of age during the 2013-2014 flu season was 46.2%. The results reported were obtained via an analysis of state and national telephone survey data in the United States that captured an unweighted sample size of 481,432 individuals through the use of the NIS-Flu and BRFSS telephone survey systems [1]. The 2013-2014 influenza immunization rate falls far short of influenza vaccination goals set by Healthy People 2020. This goal aims to achieve an 80% influenza vaccination rate among individuals 6 months to 64 years old including all pregnant women and a 90% rate among all high risk or institutionalized adults, adults >64 years, and healthcare personnel [2]. Pharmacists have the opportunity as one of the most trusted and accessible healthcare professionals to positively impact vaccination rates throughout their community.

Influenza vaccination is recommended for all persons who are 6 months of age and older according to the Advisory Committee on Immunization Practices (ACIP) [3]. Reducing the occurrence and transmission of disease through awareness and prevention efforts grounded in improved vaccination rates among the general population continues to be one of the most cost-effective approaches targeting infectious disease mitigation. Patient perceptions of influenza vaccine formulations and delivery systems available might influence their decision to receive the seasonal flu vaccine, thereby impacting vaccination rates. A number of different delivery systems and dosage formulations of influenza vaccine currently exist: Intramuscular (IM), Intranasal (IN), Intradermal (ID), and Needle-free IM injection (NF). Previous research has attempted to focus on the perceptions regarding tolerability of administration, risk, efficacy, and past experiences that guide preferences regarding dosage form selection [4,5]. Foy et al. compared patient preferences for ID, IN, and IM vaccines reporting that 67.8% of patients surveyed preferred the ID vaccine as compared to the IM experiencing less pre-injection anxiety and post-injection pain [6]. Another study examining pediatric preferences reported that patients preferred delivery of the vaccine via a nasal spray over a shot [4].

Pharmacists are in a unique position to provide improved influenza vaccine access and education to their patients culminating in improved vaccination rates. The selection of dosage form availability by a provider may likewise be driven by its impact on the business model. A dosage form with greater pre and post-vaccine acceptance

might improve vaccination rates and in-turn support the provider's business plan. However, a dosage form with a less favorable acceptance could serve to reduce overall vaccination rates for current and future flu seasons while adversely impacting the pharmacist-patient relationship and the viability of the service offered. While working as a provider of influenza vaccines during the 2013-2014 influenza seasons, all of the aforementioned dosage forms were made available to patients receiving immunizations from a partnering clinic and its mobile outreach sites. The intent was to increase the understanding of pre and post-vaccine patient perceptions about the respective dosage forms provided. Previous vaccine experience appeared to drive the selection of the IM dosage form by the majority of patients. The majority of those not selecting the IM formulation instead selected the ID citing less perceived pain as the most influential factor. It was also noted that the majority of patients selecting the needle-free delivery system would instead opt for the IM form in the future citing increased post-immunization pain and bruising as the most influential factor. Furthermore, most patients choosing not to receive the seasonal flu vaccine believed that they were not likely to contract the flu. This resulted in their decreased motivation to receive the influenza vaccine irrespective of the availability of additional formulations or delivery systems. Johnson et al. (2008) reported that the most consistent reason provided by the participants of their study as to why they had declined receipt of the flu vaccine was "that a healthy person does not need it." They also noted that the majority of their participants would have likely accepted receipt of a vaccine if it were recommended by their healthcare provider [7].

The previously discussed patient perceptions raise the question as to whether the increased availability of novel alternate administration forms alone can contribute to significantly increased patient immunization rates. Bennett et al. (2009) reported findings from a cross-sectional study of U.S. adults ≥ 65 years that "health literacy significantly mediated both racial/ethnic and education-related disparities in self-rated health status and receipt of the influenza vaccination" [8]. A patient-centered approach focusing on improved health literacy through patient education incorporating motivational interviewing (MI) techniques might also be substantially influential in increasing influenza vaccination rates. Miller and Rose (2009) reviewed three decades of research related to motivational interviewing. They reported that motivational interviewing is effective at promoting health behavior change [9]. Pharmacists and other providers can use motivational interviewing skills to positively influence patients to immediately opt to receive the influenza vaccine at their current visit. Alternately, providers can use motivational interviewing to encourage their patients to attend a community based vaccine site at some later time. Furthermore, providers might be able to employ novel communication efforts that include social media applications aimed at reminding individuals who decide not to receive

the vaccine immediately in office or who have no intention to actively seek out a provider of the vaccination service at a later time. The National Vaccine Advisory Committee

(NVAC) recommended in their 2011 report that faith-based and community organizations can likewise be utilized as a novel yet effective means by which to improve vaccination rates throughout the U.S [10].

A multifaceted approach focused on increasing vaccine accessibility in concert with providing patient-centered care is needed to positively impact future vaccination rates. Although advertising, increased provider accessibility, and the improved availability of alternate dosage forms or delivery systems can assist with efforts to meet goals set by Healthy People 2020, it is important to acknowledge that the incorporation of a patient-centered approach can aid in the provider's ability to improve vaccination rates. A complementary tool that providers might employ is their ability to actively engage a patient in person, via social media, or in partnership with a community organization in a meaningful and motivational discussion about the benefits patients can realize for themselves as well as friends and loved ones from their annual receipt of the influenza vaccine.

Conflicts of Interest

Neither the author nor any members of his immediate family have any conflicts of interest nor financial interests to disclose in any product or service affiliated with this commentary, including grants, employment, gifts, stock holdings, or honoraria.

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