Frequency and Predictors of Refusal of Seasonal Influenza Vaccination Among Patients at a Large Tertiary Referral Hospital

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Abstract (revised)

Background: Seasonal influenza vaccination rates in the US are far below desired levels. Vaccination of hospitalized patients is considered an underutilized opportunity to increase vaccination rates. Our objective was to evaluate rates of influenza vaccination at admission and vaccination refusal for eligible patients, and to identify factors associated with refusal, at a large tertiary referral hospital in Baltimore, MD.

Methods: We obtained electronic medical record data for all patients ≥18 years admitted during 5 influenza seasons (Oct. 1 to Mar. 31, 2008 to 2013). Only the first admission to a season per patient was included. We described vaccination and refusal rates by season, and identified factors associated with refusing the vaccine using multivariable logistic regression.

Results: There were 52,141 first admissions assessed for vaccination status over 5 influenza seasons. Self-reported vaccination status prior to admission ranged from 39% in 2008-2009 to 48% in 2012-2013. Of the 29,113 unvaccinated patients, 3% (n=742) had contraindications. Of 28,371 vaccine-eligible patients, refusal rates ranged from 60% in 2009-2010 to 71% in 2010-2011. Reasons for refusal included "believes not at risk" (50%; n=9,243), "wants further advice" (16%; n=2,950), and "fear of adverse events" (13%; n=2,416), and "other" (22%; n=4,102). Distributions of refusal reasons were similar for individual influenza seasons.

Conclusions: Influenza vaccination rates prior to admission were similar to those of the general adult US population. During the past 5 influenza seasons, nearly two-thirds of vaccine-eligible patients, refusal rates ranged from 60% in 2009-2010 to 71% in 2010-2011. Reasons for refusal included "believes not at risk" (50%; n=9,243), "wants further advice" (16%; n=2,950), and "fear of adverse events" (13%; n=2,416), and "other" (22%; n=4,102). Distributions of refusal reasons were similar for individual influenza seasons.

After controlling for influenza season, female sex and being currently employed were associated with higher odds of refusing vaccine. Current smoking and admission to an ICU were associated with lower odds of refusing vaccine.

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