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Effects of a multi-faceted program to increase influenza vaccine coverage among health care workers

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775. Patterns and Predictors of Rotavirus Vaccine Use among Commercially-Insured U.S. Infants

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Background: In February 2006, a new pentavalent rotavirus vaccine (RV5) was recommended for routine use among U.S. infants, and in June 2008, a monovalent rotavirus vaccine (RV1) was also recommended by the Advisory Committee on Immunization Practices (ACIP). RV5 requires three doses, while RV1 requires just two doses to complete the series.

Objectives: Our study compared individual, provider, and ecologic predictors of rotavirus (RV) vaccine use among commercially insured U.S. infants from 2006 to 2010. We also examined the timeliness of vaccine administration as per the ACIP recommendations, and completion of the vaccine series.

Methods: RV vaccination status and nine potential predictors were obtained from the MarketScan[®] Research Databases. An additional variable measuring rurality was abstracted from the U.S. Department of Agriculture, Economic Research Service. Cohort eligibility included continuous enrollment, a birthing code prior to October 2010, residence in a state without a universal RV vaccination program, and data on all predictors. We calculated simple frequencies, and performed bivariate analyses and multivariable logistic regression.

Results: Nearly 69% of 423,869 eligible infants received at least one dose of RV vaccine. In multivariable analyses, the strongest predictors of RV vaccination were receipt of the diphtheria, tetanus, and acellular pertussis (DTaP) vaccine (OR = 24.48, 95% CI = 23.63–25.37), and visiting a pediatrician vs. family physician (OR = 3.57, 95% CI = 3.47–3.68). Most infants received the RV vaccines at the recommended ages, but more infants completed the series for RV1 than RV5 or a mix of the two vaccines (87.0% vs. 80.0% vs. 72.9%).

Conclusions: A variety of individual, provider, and ecologic variables were important predictors of RV vaccination. Interventions to increase RV vaccine coverage should consider targeting family physicians.

776. Effects of a Multi-Faceted Program To Increase Influenza Vaccine Coverage among Health Care Workers: A Hospital-Based Cluster Randomized Controlled Trial

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Background: Immunizing health care workers (HCWs) against influenza has proven to protect their patients. Despite recommendations of the World Health Organization and the Dutch Health Council, influenza vaccine uptake among hospital HCWs remains low in the Netherlands

Objectives: To assess the effects of implementing a hospital-based multi-faceted influenza immunization program on vaccine coverage in health care workers (HCW) and on patient morbidity.

Methods: We conducted a cluster randomized controlled trial among all eight University Medical Centers (UMC) of The Netherlands during the influenza seasons of 2009–2010 and 2010–2011. Participants were hospital staff of three intervention (n = 27,900 in 2009), three control (n = 22,451) and two external non-randomized intervention UMCs (n = 16,893), and 3,367 patients admitted to the departments of pediatrics and internal medicine during both influenza epidemics. We offered a vaccination implementation program to staff of intervention and external UMCs, but not to control UMCs. The primary outcome measure was influenza vaccine coverage among HCW. Secondary outcome measures were work absenteeism and patient morbidity.

Results: In 2009, the coverage of seasonal, first pandemic and second pandemic vaccine was 32.3%, 61.7% and 45.8% in the intervention UMCs. Corresponding figures for control UMCs were significantly lower at 20.4%, 38.0%, and 17.8%, respectively (p < 0.05). In 2010, the coverage of the seasonal vaccine was 28.6% and 17.8% in intervention and control UMCs, respectively (p < 0.05). During their stay, influenza and/or pneumonia was reduced in patients of intervention UMCs compared to control UMCs (work in progress). Rates of HCWs' absenteeism and influenza testing rates during epidemics were higher in intervention than control UMCs.

Conclusions: Adoption of the program improved the influenza vaccine coverage among hospital staff. An increase in coverage was associated with decreased patient morbidity from influenza and/or pneumonia.