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Abstract (oral session)

Increasing pertussis vaccination via an automatic vaccine assessment and administration tool

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Objectives: Pertussis (PT) incidence has steadily increased in the United States since the 1980s. Mortality is the highest in children 3 months of age or younger. Incidence of PT quadrupled from 2000 to 2005 and was highest among those younger than 6 months. Because the first PT vaccine is recommended for administration in children at 2 months of age in the US, vaccination of persons caring for or exposed to infants is recommended to decrease transmission and thereby incidence of PT in this at-risk age group. At our rural hospital, opportunities are available to address the vaccination status of patients and a mechanism for administering pneumococcal and influenza vaccines is available. However, no assessment tool or mechanism was available for the nurses to determine appropriateness and administer PT vaccine without a physician order. To increase compliance with the Centers for Disease Control and Prevention (CDC) recommendations, a tool was developed for nurses to assess a patient's eligibility for PT vaccination and to order vaccine. After education sessions, the tool was implemented for the maternity ward in July 2011. The overall objective of this study was to examine the impact of the tool on the rate of vaccination for PT among post-partum women. **Methods:** The number of doses of PT vaccine ordered and administered was recorded monthly from January 2010-October 2011. The number of doses ordered and billed was used as a surrogate marker for the number of doses administered to patients. A comparison of the pre-implementation period (January 2010-June 2011) was made to the post-implementation period (July-October 2011) and trends were noted. The number of admissions to maternity was also recorded per month and the number of doses per admission was calculated. Statistical analysis for homogeneity was done. **Results:** In the pre-implementation period, there were 320 doses ordered in 18 months (18 doses/month). In the post-implementation period, there were 500 doses ordered in 4 months (125 doses/ month). The number of doses per admission for the pre-implementation period was 0.05 and in the post-implementation period was 1. The number of doses billed and ordered were the same. Analysis indicated a significant increase in the number of doses ordered and billed in the two time periods. **Conclusions:** The tool significantly increased the number of patients vaccinated for PT in our rural hospital in accordance with the CDC guidelines.