Influenza and Pneumococcal Vaccination Among Native American Elders in a Primary Care Practice

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Abstract

BACKGROUND: More than 2 million Native Americans (i.e., Native Americans and Native Alaskans) live in the United States; 60% reside in cities. This population, especially its elders, is especially susceptible to respiratory diseases; yet, adherence to guidelines for influenza and pneumococcal immunizations is unknown.

OBJECTIVES: To evaluate how frequently older and high-risk adults received vaccinations for influenza and pneumococcal infection and to identify patient characteristics associated with adherence to published recommendations.

METHODS: Retrospective medical record review of 550 Native American elders seen in an urban primary care practice defined using a culturally appropriate age threshold (≥50 years) and standard criteria (≥65 years). Univariate analyses examined demographic and clinical information by vaccination status. Logistic regressions identified factors associated with adherence to immunization guidelines.

RESULTS: Among patients aged 50 years and older with any indication according to published recommendations, rates were low for influenza (31%) and pneumococcal (21%) immunizations. Likewise, few subjects at least 65 years of age had been immunized appropriately against influenza (38%) or pneumococcus (32%). Younger age and alcohol use were significantly associated with less frequent immunization; Medicare insurance, depression, and more health problems and taking more medications predicted significantly higher immunization rates. Aged 65 years or older and having cardiovascular disease or diabetes mellitus were specific indications significantly correlated with receipt of influenza and pneumococcal vaccine.

CONCLUSIONS: Regardless of age or risk, inadequate vaccination rates were observed in elderly Native Americans. Our findings suggest the need to identify obstacles to immunization and to conduct prospective and elderly intervention studies in Native American populations. MORE THAN 2 million Native Americans (hereafter referred to American Indians [AlIs]) and Alaska Natives (ANs) live in the United States. The number of urban dwellers has increased dramatically since World War II; only 25% of AlIs/ANs reside on reservations and trust lands and 60% reside in cities. Although vast strides have been made in recent years, AlIs/ANs still lag behind the general population for major health status indicators. Infectious diseases such as tuberculosis and gastroenteritis have been replaced as the leading causes of death by diabetes mellitus, cardiovascular disease, and hypertension. It is not surprising, then, that AI/AN life expectancy is 8 years less than nonnative peoples and is accompanied by higher age-specific mortality rates than the population at large. Yet, despite the emergence of chronic health conditions and increased mortality rates, virtually no information exists on the implementation of preventive measures among AlIs/ANs. American Indians/Alaskan Natives are especially susceptible to respiratory tract diseases, including pneumococcal infections. According to Indian Health Service statistics, influenza and pneumonia constitute the sixth leading cause of death among AlIs of all ages and the fourth leading cause of death among American Native elders. Moreover, the mortality rate increases markedly with age: for persons 65 years or older, mortality due to influenza and pneumonia is greater for AlIs/ANs than the general US population. However, although data specific to AlIs/ANs are unavailable, national sources indicate that minority populations receive influenza and pneumococcal vaccines at substantially lower rates than white persons. Since minority adults use preventive services less, are initially seen for care at more advanced stages of disease, and have greater morbidity and mortality than higher-income individuals, AI/AN elders may be at great risk for not obtaining recommended interventions such as influenza and pneumococcal vaccinations. In this retrospective study, we reviewed the medical records of 550 AlIs/ANs who were at least 50 years of age seen in a primary care practice during a 1-year period. Our OBJECTIVES were to evaluate how frequently influenza and pneumococcal vaccinations were given according to 2 age thresholds as well as published guidelines applicable to persons with chronic medical conditions. A secondary goal was to identify factors associated with nonadherence to immunization recommendations. In contrast with studies relying strictly on self-report, review of medical records allowed us to document compliance with vaccination guidelines.