

Physicians' Role in Improving Adolescent Vaccination Rates

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Over the course of human history, innumerable advances have been made to extend the length and quality of life. It would be difficult to debate the fact that vaccines have saved more lives than any other medical intervention in the past century. Sanitation, especially clean water, may have saved more lives than any other intervention, but sanitation has been mainly in the hands of engineers. Physicians and other health care practitioners, with the help of educators, are responsible for saving millions of lives by vaccinating patients, perhaps as many as 6 million per year.¹

The importance of vaccination is emphasized by the success of the smallpox vaccination program. It is widely stated, without reference, that in the 20th century alone, close to 300 million people died of smallpox; however, by 1980 the World Health Organization declared that smallpox was eradicated. Yet in this day and age, there are many individuals and cohorts of people who refuse to be vaccinated, leading to outbreaks of polio, pertussis, and measles.²

A Google search for "adverse effects to vaccines" provides 2,630,000 hits, a fair number of which consists of poorly reported data and studies on adverse events, such as the retracted study by Wakefield et al,³ often leading parents and patients to be fearful of vaccinations. A search for "food allergy and vaccines" uncovers an alarming number of websites and documents against vaccines. Despite the bad press, pediatricians and family physicians have done a remarkable job of ensuring early childhood vaccine administration. However, even in early childhood there is resistance to having children vaccinated, mainly because of concerns of adverse events.

If vaccinating young children is difficult, consider vaccinating adolescents. How many adolescents and young adults between the ages of 12 and 20 years receive routine health care? If it were not for school

vaccination requirements, I believe few adolescents would be vaccinated. Even with state requirements, a large percentage of adolescents go unvaccinated. For example, the percentage of adolescents (aged 13-17 years) receiving the tetanus, diphtheria, and acellular pertussis vaccine varied from 53.5% in Mississippi to 96.3% in New Hampshire.⁴ The variance was even greater for the meningococcal conjugate vaccine, with 37.5% of adolescents receiving the vaccine in Arkansas and 94.3% receiving it in Rhode Island.⁴

Adherence to the human papillomavirus (HPV) vaccine is even lower, perhaps reflecting social and religious issues interfering with vaccination and leading states to resist making the vaccine mandatory. In Mississippi, only 12.1% of females (aged 13 to 17 years) have received all 3 doses of the HPV vaccine.⁴ Even in Rhode Island, which has one of the highest percentages of child vaccination, less than 60% of females have completed the full course of HPV vaccines.⁴ This lack of HPV vaccination exists despite the evidence demonstrating a reduction of cervical and anal cancer associated with the use of the vaccine.⁵

With the benefits and adversities of vaccination in mind, the articles in this supplement were developed to assist practicing physicians in improving adolescent vaccination rates. The articles discuss which vaccines should be administered to adolescents and young adults between the ages of 12 and 20 years⁶ and what adverse events to expect, with emphasis on the safety of vaccines and the rarity of clinically significant adverse events.⁷ In addition, in light of the fact that more than 8% of patients claim to have a food allergy and thus may insist that the food allergy contraindicates the use of vaccines,^{8,9} Larisa Buyantseva, MD, and Alexandra Horwitz, MD, focus on this issue and report their research on the association between food allergy and vaccines.¹⁰

I am thankful for the opportunity to be the guest editor for this supplement, and I hope readers enjoy this supplement to *The Journal of the American Osteopathic Association* and appreciate the work of the authors. (doi:10.7556/jaoa.2014.042)



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