SUMMARY

Adolescence is characterized by unique growth, developmental, psychosocial and epidemiological challenges that elevate the risk of certain Vaccine Preventable Diseases (VPDs). The very same factors may also create barriers that discourage immunization. Prevention of VPDs should be a health care imperative in adolescents, not only to protect them from current illness, but also to prepare them for both life-long immunization and ownership of personal health care as a norm. Whereas progress in improving adolescent health has been made, immunization coverage remains low and there is room for improvement.

In May 2017, a global, multi-disciplinary panel of experts sponsored by Pfizer Inc. was convened at the Advancing Adolescent Health Spring Forum. The goal was to explore avenues for helping improve adolescent health through immunization. The panel discussed the VPDs for which adolescents are at risk, the importance of ensuring good immunization coverage rates, the need for achieving the herd immunity threshold for key diseases, capitalizing on missed opportunities, and the key role played by health care providers (HCPs) in advocating for adolescent immunization. Barriers to improving adolescent immunization rates were exposed, and the panel shared regional perspectives and insights, identifying common elements that are important in all immunization programs. The Advancing Adolescent Health Spring Forum is an educational initiative sponsored by Pfizer Inc.

This Position Statement is a call to action to help improve adolescent immunization rates. Information on VPDs and vaccines should be readily available to adolescents and their families. Education and communication about all aspects of adolescent health care are a public health imperative and an ethical obligation. The panel suggests that HCPs play a pivotal role by proactively addressing these issues face-to-face with parents and adolescents, emphasizing the benefits of immunization compared with safety aspects and the dangers of remaining susceptible to VPDs. Future work for the panel will include developing guidance derived from the identified common elements of successful adolescent immunization programs. These will be explored in a second expert forum in the fall of 2017. There the panel will further assess the feasibility of putting these suggestions into action.

SITUATION OVERVIEW

Social and environmental factors can elevate the risk of certain VPDs in adolescents. A classic example of this is the close physical contact inherent in teenage social life that puts adolescents at risk for invasive meningococcal disease. A recent example of a meningitis outbreak following close physical contact of teenagers is the World Scout Jamboree in Japan where eight cases occurred in Scottish and Swedish teenagers attending the event. A large scale measles outbreak in Europe has impacted thousands of people with potential to continue to cause large outbreaks wherever immunization coverage rates fall below recommended threshold levels. As of April 2017, the measles outbreak has affected over 1600 people in Italy alone, most over age 15, prompting travel advisory recommendations that include vaccination. Mumps outbreaks in older teens and young adults have been facilitated by close living quarters on college campuses, military bases and residences.

Biological factors are at play also as immunity from certain vaccines given in childhood wanes with time, and booster doses may be needed to maintain protection. For these reasons, it is important that adolescents receive all recommended primary and booster immunizations. Immunization also can serve as a catalyst for engaging adolescents and their parents in other preventive health actions, as well as on early intervention in health issues that may arise during the teenage years.
However, challenges to adolescent immunization are widespread at the health system, provider and parent/adolescent levels. These include:

- A lack of information, education and communication about vaccines, and a correspondingly low understanding of the value of immunization among HCPs, parents and teens, the media and society as a whole;\textsuperscript{10,11,12}
- Absence of well-established adolescent immunization schedules and platforms (milestone ages where immunizations are emphasized) that facilitate adolescent immunization;\textsuperscript{9,13}
- Underdeveloped and/or inadequate infrastructure (e.g., immunization information systems) and at the provider level, insufficient time, staff and financial resources to support adolescent immunization;\textsuperscript{14}
- Vague ownership for adolescent immunization (e.g., adolescents themselves, parents, schools, public health authorities, governmental agencies);
- Underutilization of health system services and a patient-centered primary care approach for adolescents.\textsuperscript{15}

When combined with the assumption that adolescents are generally healthy and the perception that they are not at risk in the short term, adolescent immunization is often de-prioritized by parents, their adolescent children and HCPs alike. Opportunities to discuss and administer vaccines—such as visits for acute illness or injury, sports physicals, or contraception—are often missed. This is especially true for older adolescents, who may have transitioned from pediatric care to family medicine, internal medicine, general practice or obstetrical/gynecologic care, specialties that may be less focused on immunizations.

Adolescent immunization also may bring forth a complex set of potentially conflicting ethical imperatives. The developing autonomy of adolescents must be respected, while simultaneously considering benefits of immunization to their social group and to society as a whole. Conflicts between the attitudes, beliefs and values of adolescents and their parents and efforts to achieve these benefits can necessitate a delicate balancing. Health care providers should discuss all vaccine options available, while striving to be sensitive to cultural, religious and economic circumstances of the adolescents and families they serve.

Despite these challenges, progress is being made in communities where key stakeholders have come together to improve adolescent immunization rates. Successful initiatives share several characteristics, including:

- Strong, cohesive leadership at the individual and organizational levels;
- Involvement of multiple stakeholders—including adolescents themselves—in program planning and execution;
- Motivational drivers for program participation and achievement of objectives;
- Clear focus on target age groups (e.g., 10- to 14-year-olds vs. 15- to 18-year-olds) and recognition that strategies for each group may differ;
- Information and education based on scientific evidence and delivered in a compelling, attractive, emotion-inducing, and dynamic youth-friendly manner.

Numerous studies show that HCPs are the ones parents trust and rely on the most for healthcare information and guidance.\textsuperscript{16,17}

**A CALL TO ACTION FOR HCPS**

- Immunization (primary, booster, and catch-up, as appropriate) should be a high priority during all medical encounters with adolescents;
- HCPs should proactively discuss the benefits and risks of all available adolescent vaccines and listen to adolescent / parents to understand their perspectives;
- Public health efforts should be aimed at increasing the availability of credible information about VPDs and vaccines relevant to adolescents;
- Promising practices for adolescent immunization should be identified and disseminated;
- Leadership in adolescent immunization should be cultivated at the local, regional, national, and global levels;
A bottom-up approach should be encouraged, where the experience and insight of front-line providers should be accessed; this includes those who work in vaccine clinics, doctors’ offices, schools, pharmacies, public health clinics, and community agencies.

Successful immunization programs illustrating promising practices will be featured at an upcoming Advancing Adolescent Health Fall Forum later in 2017.

ACKNOWLEDGMENTS

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Panel of Experts:

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8 Centers for Disease Control. Preventing tetanus, diphtheria, and pertussis among adolescents: use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccines. MMWR. 2006(55):1-34.


