Pneumococcal Disease
Call to Action

Pneumococcal Vaccination Is Everyone’s Responsibility

A Task Force Report

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Too many US adults remain at risk for pneumococcal infection.

Pneumococcal disease is common in adults and is associated with substantial morbidity, mortality, and healthcare costs. It can be especially dangerous in those age 65 years and older and in younger adults with chronic health conditions. Yet, an estimated 73 million US adults who have an indication for pneumococcal vaccination have not received it.¹

One reason may be that too few providers are recommending vaccination.² A recommendation by a healthcare professional is the greatest vaccination motivator for patients.³ Increasing pneumococcal vaccination rates will take multiple strategies, and all healthcare professionals can play a role in protecting those at risk from the worst outcomes of the infection. (See boxes at right and Table 1 on page 4 for more information about the impact of pneumococcal disease and specific vaccination recommendations.)⁴⁻⁸

A multidisciplinary task force identified strategies for healthcare professionals to increase adult pneumococcal vaccination rates.

The National Foundation for Infectious Diseases (NFID) brought together a task force of healthcare professionals, public health officials, and consumer educators representing more than 20 organizations to prioritize barriers to pneumococcal vaccination among US adults and to identify solutions. Attendees also discussed the roles that various healthcare professionals can take to implement these solutions.

Every healthcare professional who sees patients with pneumococcal risk factors should strive to ensure these patients are vaccinated.

Although not all healthcare workers have the authority to administer vaccinations, they nonetheless can serve important roles:

- **All healthcare professionals** can educate patients and their caregivers and **strongly urge** patients to receive pneumococcal and other adult vaccines.
- **Physicians** can drive implementation of systems in their practices to promote vaccinating all at-risk patients.
- **Physician assistants** and **nurse practitioners** can prescribe and administer vaccines, and along with **nurses**, they can identify and educate patients in need of vaccination, anticipate and address patient questions or concerns, and lead in-office efforts to use educational materials like posters, signs, and fliers.
- **Specialists** can screen, educate, and refer patients to venues for vaccination.
- **Pharmacists**, where authorized, can administer pneumococcal vaccine to recommended adults and can mention pneumococcal vaccination and can target outreach and messages to patients based on their birth date, their use of Medicare or Medicaid, or their need for medications commonly used to treat chronic conditions.

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### Annual Public Health Burden of Pneumococcal Disease in the US

- **Pneumococcal bacteremia:** 50,000 cases annually, case-fatality rate about 20 percent.⁵
  - Includes 25–30 percent of pneumococcal pneumonia cases that progress to bacteremia.
- **Pneumococcal meningitis:** 3,000 to 6,000 cases annually, case-fatality rate about 30 percent.⁶
- **Pneumococcal pneumonia:** 175,000 people hospitalized each year; case-fatality rate of 5–7 percent.⁶
  - Patients hospitalized with pneumococcal pneumonia are at increased risk for concurrent cardiac events, such as myocardial infarction, arrhythmia, or congestive heart failure.⁷

### The Considerable Costs of Pneumococcal Disease

- In 2004, pneumococci caused an estimated 4 million illness episodes resulting in direct medical costs (inpatient and outpatient) of $3.5 billion.⁸
  - About half of these costs ($1.8 billion) were related to care of patients age 65 years and older, many of whom have chronic health problems.⁸
- Factoring in lost work and productivity, costs related to pneumococcal infections in younger working adults nearly equal those for the older population.⁸
• **Public health officials** can educate community members, and where possible, offer pneumococcal vaccination or arrange for vaccination opportunities elsewhere in the community.

• **Support staff** in any healthcare setting can be given ownership of important prevention activities, particularly patient screening, notification, and chart preparation with reminder materials for physicians, nurses, etc.

• **Hospital staff** can advocate for and/or implement standing orders programs and make sure electronic medical records reflect needed vaccines. The Joint Commission has included pneumococcal vaccination as a 2012 performance measure, and the potential effect on accreditation may be a strong motivator for compliance.

Acting in concert, all professionals and the organizations with which they are affiliated can improve pneumococcal vaccination rates.

Multiple strategies can be employed to increase patient awareness of and receptivity to pneumococcal vaccination.

Four out of five US adults don’t know about pneumococcal disease but most will be motivated by simple messages that address the potential impact of pneumococcal disease, the effectiveness and safety of pneumococcal vaccination, and knowledge that CDC recommends vaccination for them. It is therefore imperative that healthcare professionals deliver these motivating messages. Concerns about cost may deter some people from asking about pneumococcal vaccination, making it important to tell patients that Medicare covers the costs of both the vaccine and its administration by a recognized provider.

Message delivery is as important as content, and the following strategies can help ensure patients are educated about and receptive to vaccination:

- Provide information in simple, compelling, easy to understand language in written and verbal communications.

- Use strong language, eg, “You should be vaccinated before you leave the office today,” or “Call your pharmacy this afternoon about vaccination,” rather than, “It’s a good idea to get vaccinated.”

- Inform patients about Medicare and Medicaid coverage for pneumococcal vaccination.

- Tell stories that motivate patients to get vaccinated by illustrating the impact of the disease.

- Provide information for non-English speakers in their native language when needed.

- Encourage patients to make all appropriate adult vaccines part of their wellness program.

There are many activities that professionals can conduct to educate patients inside and outside the practice, including:

- Display educational materials (eg, posters, fact sheets) in offices to prompt patients to ask about vaccination, and have public health officials look for public locations for placing the educational and promotional materials.

- Educate patients through practice websites, newsletters, on-hold/voicemail scripts, or other communications.

- Engage local media such as newspapers, radio or television stations to help educate community members.

- Reach out to community members who serve older populations, or younger adults with risk factors, about collaborative activities to educate and vaccinate these adults.

- Engage trusted community leaders in delivering prevention information to their constituencies to encourage them to seek vaccination.

Healthcare professionals can help develop and implement systems in any healthcare setting to help pave the way for vaccination.

Every encounter with a patient who has a pneumococcal vaccine indication is an opportunity. Unfortunately, prevention activities compete for attention alongside acute problems and other ongoing concerns of patients and professionals alike. Healthcare professionals in any setting can advocate for the implementation of systems to screen, educate, and either vaccinate or refer patients so that these opportunities are not lost.

One of the most effective strategies at an organizational level is implementation of a standing orders program. Standing orders enable nurses and other qualified professionals to administer pneumococcal vaccine routinely to indicated patients. Although standing orders can be applied in any practice setting, they may be particularly impactful for pneumococcal prevention when
used in hospitals. About 60 percent of patients who get pneumococcal disease that requires hospital treatment were hospitalized within the previous four years. Most of these are patients with high-risk conditions.13

Ideally, pneumococcal vaccines should be stocked and administered in any healthcare setting where at-risk patients are treated. At a minimum, professionals in settings where vaccination is not available should educate patients and refer them to a place in the community where they can be vaccinated.

In any setting, multiple approaches will be necessary to have a meaningful impact. Among those to consider are:

- Implement standing orders programs.
- Use screening tools at check-in to determine whether patients need pneumococcal vaccination.
- In settings where vaccination is not offered, equip check-out staff with information to refer patients to venues for vaccination, such as a primary care practices, local health departments, or pharmacies.
- Include notations or standardized checklists in charts to remind clinicians about the importance of pneumococcal vaccination for indicated patients.
- Link pneumococcal prevention efforts with annual influenza vaccination activities (while using care to educate patients and staff that pneumococcal vaccination is not needed annually and it can be given at any time of the year).
- Engage multiple professionals in vaccination activities (as discussed above).

Multiple strategies will be needed to improve pneumococcal vaccination rates; resources are available to support these efforts. NFID has a Pneumococcal Disease Professional Practice Toolkit available with tools and materials to help practices improve adult pneumococcal vaccination rates and promote patient education among adults in their care. These include ready-to-use and template resources for healthcare professional and patient education (English and Spanish), screening and tracking forms, and links to information about standing orders programs. To access the toolkit, visit: Adultvaccination.org/Pneumotools.

### Table 1

#### Recommendations for Use of Pneumococcal Polysaccharide Vaccine

<table>
<thead>
<tr>
<th>Recommendations</th>
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<tbody>
<tr>
<td><strong>All adults age ≥ 65 years</strong></td>
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<tr>
<td>Adults 19 through 64 years with:</td>
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<tr>
<td>- Chronic medical conditions (eg, cardiovascular disease or stroke; liver, kidney or lung disease, including asthma; diabetes; sickle cell disease; alcoholism)</td>
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<tr>
<td>- Immunocompromising conditions (eg, lymphoma or leukemia, damaged or no spleen) or treatments (eg, steroids, radiation therapy)</td>
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<tr>
<td>- HIV/AIDS</td>
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<td>- Environments with increased risk (eg, nursing homes)</td>
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<td>- Cochlear implant or leaks of cerebrospinal fluid</td>
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**Adults age 19 through 64 years who smoke cigarettes**

- Most adults only need to be vaccinated once in their lifetime, but some will need revaccination.

The US Food and Drug Administration recently approved a 13-valent pneumococcal conjugate vaccine (PCV13) for use in adults age 50 years and older. The CDC’s Advisory Committee on Immunization Practices has not yet provided guidance for the use of PCV13 in adults.

Pneumococcal vaccines are contraindicated in anyone who has had a severe (ie, anaphylactic) reaction to a previous dose or to any component of the vaccine or to any diphtheria toxoid-containing vaccine (for conjugate vaccine only).

For more information, visit www.cdc.gov/vaccines.

CDC. MMWR. 2010;59(34):1102-1106.4 CDC. Chart of Contraindications and Precautions to Commonly Used Vaccines.5

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**Footnotes**

1. More than 20 medical and health organizations served on or supported the pneumococcal disease task force and helped shape the content of the meeting described in this document. Click here to see a full list.
References


