

Pneumococcal Vaccination in Different Specialties

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Introduction

Pneumococcal disease can be dangerous, and sometimes fatal, in people above the age of 50 years and with certain chronic medical conditions. This may be true even when the chronic medical condition is well controlled with medication and/or lifestyle management. Pneumococcal vaccination needs to be used more consistently to reduce the risk of pneumococcal infection in these individuals.¹ The Centers for Disease Control and Prevention (CDC)², Advisory Committee on Immunization Practices (ACIP), other international bodies and Association of Physicians of India (API) recommends pneumococcal vaccination for adults who smoke or have chronic medical conditions, such as liver, lung, or kidney disease; asthma; cardiovascular disease or stroke; diabetes; hemoglobinopathies; and immunocompromising conditions like HIV.

Yet, only 17.5 percent of adults younger than age 65 years with one or more of these chronic conditions have been vaccinated according to a 2009 national survey³ conducted in US. One reason may be that too few healthcare professionals are recommending pneumococcal vaccination. A recommendation by a healthcare professional is the greatest vaccination motivator for patients⁴. Increasing pneumococcal vaccination rates will take multiple strategies, and all healthcare professionals – specialists as well as generalists, nurses, pharmacists, and others – share the responsibility for ensuring at-risk patients are protected. In this review we are discussing

the ways & roles of different health care workers in improving pneumococcal vaccination among eligible adults.

Pneumococcal Vaccination Recommendations for different specialty patients

CAP and invasive pneumococcal disease represent a significant but preventable burden in adults from the age of 50 years⁵. With increasing life expectancy, vaccination recommendations should address these population at risk. The Table 1 will provide the different risk population to be considered for pneumococcal vaccination.

Most adults recommended for pneumococcal vaccination only need to be vaccinated once in their lifetime, but some will need

revaccination⁶. A primary dose of Pneumococcal conjugate vaccine (PCV 13), followed 6-12 months by Pneumococcal polysaccharide vaccine (PPV23) is the schedule recommended for most of the adults.

Role of different specialties of health care professionals in the Implementation of Pneumococcal vaccination

Through outpatient visits, hospital stays, and regular trips to a pharmacy for medication, patients with chronic conditions may interact with any number of health care professionals, including physicians, specialists, nurses, pharmacists, physician assistants, public health professionals and clerical staff. Every one of these professionals can play a role in pneumococcal prevention efforts.⁷

Table 1: Patients to be considered for Pneumococcal vaccination against different medical specialties

Patients considered to be immunosuppressed or immunocompromised	<ul style="list-style-type: none"> • Hodgkin's disease, leukaemia, lymphoma • Multiple myeloma • Stage 4-5 chronic kidney disease^a • Stage 3^b chronic kidney disease with increased risk (nephritic syndrome, diabetes mellitus or treatment with immunosuppressant drugs) • Solid organ or haematopoietic stem cell transplantation^c • Chemotherapy or immunosuppression^d • Human immunodeficiency virus (HIV) infection^e • Autoimmune inflammatory rheumatic disease^f • Inflammatory bowel disease (includes Crohn's disease and ulcerative colitis)^g
Immunocompetent patients with other underlying pathologies or risk factors	<ul style="list-style-type: none"> • Chronic respiratory disease (includes chronic obstructive pulmonary disease, severe asthma^h and diffuse interstitial lung disease) • Chronic liver disease (includes cirrhosis) • Chronic cardiovascular disease (includes coronary heart disease, congestive heart failure and stroke) • Diabetes mellitus treated with oral anti-diabetic drugs or dependent on insulin • Smokingⁱ • Alcohol abuse^j

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All healthcare professionals can educate patients and their caregivers and *strongly urge* patients to receive pneumococcal and other adult vaccines.

Physicians can drive the implementation of systems in their practices to assure vaccination of all eligible 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. In other cases, pharmacists may be able to mention pneumococcal vaccination as a preventive health measure to patients filling prescriptions for medications commonly used to treat chronic conditions.

Public health professionals 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 clinical staff.

Hospital staff can advocate for and/or implement standing orders programs and make sure medical records reflect needed vaccines.

Professional associations can also support pneumococcal prevention by:

Listing pneumococcal and other adult vaccines in the clinical guidelines for the treatment of individuals with chronic health conditions.

Publicizing the inclusion of vaccines in the guidelines.

Educating members about pneumococcal prevention.

Adding pneumococcal vaccination to accountability measures.

Conclusion

The aging population and the epidemics of chronic illness will lead to a sharp increase of pneumococcal infection rates and costs. Prevention of pneumococcal infections by vaccination may be a valid strategy to reduce the burden of diseases, antibiotics resistance and costs⁸. Vaccination strategies based on the use of more effective vaccines and involving all sectors of health care professionals will expected to have a substantial public- health impact on infectious disease and health services costs, reducing the burden of pneumococcal infection.

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