

Could Pneumococcal vaccination rates be improved by increasing awareness of Pneumococcal disease amongst Physicians?

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Introduction

Pneumococcal disease spans a wide spectrum of clinical manifestations, from acute otitis media to the more serious presentations of pneumonia and meningitis (Blasi et al, 2012). When the bacteria *Streptococcus pneumoniae* is isolated from a normally sterile site, such as the bloodstream, pneumococcal infections are classified as invasive pneumococcal disease (Blasi et al, 2012).

The burden of pneumococcal disease is high in adults (Fedson et al, 2011), with the elderly and those with chronic diseases, asplenia or a compromised immune system at high risk of contracting the disease (Butler & Schuchat, 1999). This is despite the availability of two types of pneumococcal vaccines for adults (23-valent purified capsular polysaccharide vaccine [PPV-23](Sanofi Pasteur MSD, 2013) and 13-valent pneumococcal conjugate vaccine [PCV-13] (Pfizer, 2013) and recommendations for pneumococcal vaccination being in place throughout much of Europe, although it would appear that uptake rates vary considerably between countries (Fedson et al, 2011).

A European survey of pneumococcal disease awareness and attitudes towards vaccination

A survey was conducted amongst 1,300 primary care physicians and 926 specialists (mostly respiratory or infectious disease specialists) from 13 European countries, to gauge awareness of pneumococcal disease and attitudes towards vaccination. Attitudes of the general public towards vaccination were also surveyed in 6,534 adults aged >50 years. Full results of the survey have been published in *Advances in Therapy* (Lode et al, 2013).

Pneumococcal disease awareness

When asked to name pneumococcal infections, pneumonia was the most commonly named infection amongst physicians, with 78% of both primary care physicians and specialists naming pneumonia, whilst 54% and 60%, and 25% and 36%, named meningitis and sepsis/septicaemia, respectively. When presented with a list of terms for pneumococcal infections (**Table 1**), 93% and 96% of primary care physicians and specialists, respectively, were aware of non-invasive pneumococcal pneumonia, compared with just 50% and 71% who were aware of the term invasive pneumococcal disease. In fact, awareness was as low as 30% amongst primary care physicians in some countries. Interestingly, awareness of individual pneumococcal conditions categorised as invasive pneumococcal disease, such as meningitis, sepsis, bacteraemic pneumonia and bacteraemia, was considerably higher than for invasive pneumococcal disease.

Attitudes towards vaccination

The factors that primary care physicians and specialists most frequently stated as being of high importance in influencing a decision when recommending or prescribing pneumococcal vaccination were a patient's health condition, recommendations from health authorities, a patient's age and tolerability of the vaccine (**Figure 1**). Factors disclosed as leading to a physician not recommending vaccination included that pneumococcal vaccination only concerns specific subgroups of adults, vaccination not being at the fore-front of the physician's mind and a lack of time.

Among the general public, 10% claimed to have received a pneumococcal vaccination in adulthood, compared with 70% and 49% who had received vaccines for tetanus/diphtheria or influenza, respectively. Perceptions of vaccination were positive, with vaccines considered by the majority of adults to be lifesaving. Few adults had concerns regarding side effects. The main factors influencing patients to receive vaccination were protection against illness and a recommendation to receive a vaccine from their physician. Conversely, factors leading to adults not receiving a pneumococcal vaccination included the vaccine not being recommended by their physician, lack of awareness of the availability of a vaccine and a lack of concern for catching pneumonia/pneumococcal infections.

Summary

This European survey highlights a striking lack of familiarity with the term invasive pneumococcal disease amongst primary care physicians and even some specialists. It also reveals that physician recommendations for vaccination are pivotal in encouraging individuals to be vaccinated. Rates of uptake of pneumococcal vaccination could potentially be increased through increasing awareness of pneumococcal disease, especially in patients most at risk of contracting the disease, and by encouraging these patients to receive a pneumococcal vaccination.

References:

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Table 1.
Awareness amongst primary care physicians and specialists of terms for pneumococcal infections^a

	Primary care	
	physicians, %	Specialists, %
	(n = 1,300)	(n = 926)
Pneumococcal pneumonia (non-invasive)	93	96
Pneumococcal meningitis	94	96
Pneumococcal sepsis	91	97
Bacteraemic pneumococcal pneumonia	82	92
Pneumococcal bacteraemia	75	92
Invasive pneumococcal diseases	50*	71*

^a Physicians were presented with a list of terms and asked which of them they knew. * $P < 0.001$

versus other terms

Reproduced from Lode et al. *Adv Ther* 2013;30:387-405.

Figure 1.
Factors influencing physicians' decision when recommending or prescribing pneumococcal vaccination^a
Reproduced from Lode et al. *Adv Ther* 2013;30:387-405.

	Primary care physicians	Specialists
Patient's health condition	174	174
Recommendation from health authorities	161	159
Patient's age	161	157
Tolerability of the vaccine	155	156
Your personal experience using the vaccine	41	141

^a Physicians (primary care physicians: $n = 1,277$; specialists: $n = 891$) were asked to indicate how important the above factors (using a 7-point scale) were when recommending or prescribing pneumococcal vaccination for adult patients. Figure shows percentage of physicians rating each factor 6 or 7

Patient's request for the vaccine

134

141

Reimbursement of the vaccine

21

20

Price of the vaccine if not reimbursed

18

19

