

SAND abstract No. 162 from the BEACH program 2010–11

Subject: Pneumococcal vaccination and middle ear infections

Organisation supporting this study: GlaxoSmithKline Australia Pty Ltd

Issues: Pneumococcal vaccination coverage in past five years in patients attending general practice; twelve month incidence of middle ear infection; incidence among those vaccinated for pneumococcus; incidence in those vaccinated with Pneumovax 23 versus Prevenar; treatments and referral rates for middle ear infection.

Sample: 2,920 patients from 98 GPs; data collection period: 04/05/2010 – 07/06/2010

Method: Detailed in the paper entitled *SAND method 2010–11* at:
<<http://sydney.edu.au/medicine/fmrc/publications/sand-abstracts>>.

Summary of results

Sample size and patient demographics: The age and sex distribution of the 2,920 patients did not differ from that of patients at all 2009–10 BEACH encounters.

Pneumococcal vaccination status was given for 2,918 patients, of whom 918 (31.5%, 95% CI: 28.0–34.9) had been vaccinated in the past five years ('vaccinated patients'), 71.4% with Pneumovax 23, 24.5% with Prevenar, and for 4.1% the type not known. Vaccination coverage was 57.1% among those aged < 15 years and 70.2% among those aged 65+ years. Highest vaccination levels among young patients were in 1–4 year olds (83.3%), and < 1 year (61.8%). Among older patients, coverage was 74.6% of 75+ year olds and 65.3% of 65–74 year olds.

Presence/absence of middle ear infection in the previous 12 months ('period incidence') was recorded for 2,901 patients, 147 (5.1%, 95% CI: 3.8–6.4) of whom had had an infection. Incidence was highest among 1–4 (32.9%), < 1 (10.5%) and 5–14 (21.3%), year olds – being 23.9 for all children aged < 15 years. Incidence was negligible (0.5%) among patients aged 65 years and over. Of 137 respondents with a middle ear infection, 58 (42.3%) had been vaccinated for pneumococcus prior to the most recent middle ear infection.

Incidence of middle ear infection among 913 vaccinated respondents was 7.9% (95% CI: 5.6–10.1) and did not significantly differ from the overall incidence.

The vast majority (86.3%) of patients given Pneumovax 23 were aged 65 years or more, in line with guidelines for its administration. The period incidence of middle ear infection (0.6%) aligned with that found for the total sample of older people.

The majority (80.3%) of 223 responding patients given Prevenar were aged < 5 years, in line with guidelines for its administration. Period incidence of middle ear infection was 28.6% compared with the overall incidence in this age group of 25.7%.

Of 136 respondents who had had middle ear infection, 25 (18.4%) had been referred: mostly to ENT specialists ($n = 20$, 14.7%) and/or audiologists ($n = 7$, 5.2%).

Treatments were described for 135 respondents who had had middle ear infection. The majority (92.6%) were treated with medication (+/- other treatments). Of 177 medications given, 59.3% were antibacterials for systemic use (mostly amoxicillin, 36.7%), followed by analgesics (14.1%) (mainly paracetamol 11.9%). Grommets had been inserted for 4 patients.

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PLEASE READ CAREFULLY

The shaded section of the following forms asks questions about **PNEUMOCOCCAL VACCINATION AND EAR INFECTION**.

You may tear out this page as a guide to completing the following section of forms.

INSTRUCTIONS

Ask **ALL** of the **next 30 PATIENTS** the following questions **in the order in which the patients are seen**.

Please **DO NOT** select patients to suit the topic being investigated.

Pneumococcal vaccination

Please use the tick boxes to advise whether this patient has had a **pneumococcal vaccination** in the **past 5 years**.

Vaccination prior to ear infection

Please indicate whether this patient received a **pneumococcal vaccination prior to the most recent middle ear infection**.

Middle ear infection

Please ask the patient whether they have had a **middle ear infection** in the **past 12 months**. If 'no' or 'don't know' you may **end questions here** for this patient.

Number of ear infections

If 'yes' please indicate the **number of infections** this patient has had in the **past 12 months**. If this is **unknown** please tick the box labelled 'Don't know'.

Referral for ear infection

If the patient has been **referred** in the **past 12 months** for the management of ear infection please use the tick boxes to indicate **where referred**. Please tick all that apply.

Treatment of ear infection

Please ask the patient how the **most recent** ear infection was **treated**. Please include **all management used** regardless of whether it was recommended by the GP, another health professional or initiated by the patient.

Please specify any **medications** taken by the patient including prescribed and over-the-counter medications (e.g. antibiotics, paracetamol, natural therapy) and any **other treatments** (e.g. procedures, advice) used in the treatment of ear infection.

If the ear infection was **not treated** please tick the box labelled 'no treatment'.

<p>In the past 5 years has this patient received a pneumococcal vaccine?</p> <p><input type="checkbox"/> Yes - Pneumovax 23 <input type="checkbox"/> Yes - Prevenar <input type="checkbox"/> Yes - Synflorix <input type="checkbox"/> Yes - unknown <input type="checkbox"/> No</p> <p>BL 122C</p>	<p>Has this patient had a middle ear infection in the past 12 months?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p> <p>End questions ←</p>	<p>If 'yes' how many middle ear infections has this patient had in the past 12 mths?</p> <p>_____</p> <p><input type="checkbox"/> Don't know</p>	<p>Was pneumococcal vaccination prior to most recent middle ear infection?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>	<p>Referral(s) made for middle ear infection in the past 12 months were to:</p> <p><input type="checkbox"/> ENT specialist <input type="checkbox"/> Paediatrician <input type="checkbox"/> Audiologist <input type="checkbox"/> Other: _____ <small>(please specify)</small> <input type="checkbox"/> No referral</p>	<p>How was the most recent middle ear infection treated (either with or without clinician involvement)?</p> <p>Medications (prescribed / OTC*): _____ _____ _____</p> <p>Other treatments/procedures: _____ _____ _____</p> <p>(*OTC=over-the-counter) <input type="checkbox"/> No treatment</p>
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