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## ***Experts agree – vaccination against ear infections integral in fight against antibiotic resistance***

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Resistance to antibiotics is rising at a rate that outpaces the development of new drugs.<sup>1</sup> In the latest edition of the *Lancet Infectious Diseases*, a paediatric and infectious disease expert group\* states that an urgent and key action to halt further rises is to prevent the *number one* reason for antibiotic prescriptions in children - middle ear infections.<sup>1</sup>

A recently completed New Zealand study also suggests antibiotics are still prescribed for 51% of Acute Otitis Media (AOM) consultations in children under 5 years of age.<sup>2</sup> Commenting on this study, Dr Arthur Morris, Clinical Director of Microbiology at Diagnostic Medlab in Auckland, said “While it is good to see that antibiotic use for ear infections has reduced, the more antibiotics that are used for this common infection the greater the risk of selecting for antibiotic resistance.”

The authors of the Lancet publication comment that we can no longer ignore high worldwide antibiotic use because it drives increasing resistance leading to increased treatment failures and costs. The authors suggest the reduction of unnecessary antibiotic prescriptions through vaccine prevention of middle ear infections is the best public health strategy to help us tackle this global health concern.

Ear infections may jeopardise quality of life and put economic strain on families and healthcare resources<sup>3,4</sup> – if left untreated they can leave children at risk of development delays due to hearing impairment.<sup>5,6,7</sup> Based on data from an assessment of the treatment costs of otitis media in Australia, the estimated total costs to the New Zealand economy are in excess of \$80 million.<sup>8</sup> In New Zealand, ear infections are one of the most common childhood diseases requiring medical attention, accounting for around 5,000 hospital admissions and an estimated 75,000 GP visits each year for children under the age of five years.<sup>8,9</sup>

Pneumococcal vaccination is available to protect the millions of young children around the world at risk of the pain and potential complications of middle ear infections. The success of the first-generation pneumococcal conjugate vaccine encourages the development of second-generation vaccines that target additional causes of infections. Prevention by vaccination also benefits communities by helping to address the overuse of antibiotics and the resulting resistance, claim the expert group.<sup>1</sup>

The authors of the Lancet publication view prevention of middle ear disease through vaccination and responsible prescribing of antibiotics as critical to reducing pain and suffering in children and combating the threat of antibiotic resistance.<sup>1</sup>

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<sup>1</sup> Vergison A et al. *Lancet Infect Dis*. 2010;10:195-203

<sup>2</sup> GSK New Zealand. Data on file.

<sup>3</sup> Greenberg D et al. *Eur J Paediatr* 2003;162:576-581

<sup>4</sup> Lee J et al. *Laryngoscope*. 2006;116:1798-1804

<sup>5</sup> Cripps AW et al. *Vaccine*. 2005;23:2304-2310

<sup>6</sup> O'Connor T et al. *Med J Aust*. 2009;191:S32-S80

<sup>7</sup> Brouwer C et al. *Clin Otolaryngol*. 2005;30:258-265

<sup>8</sup> Taylor PS et al. *Expert Rev Pharmacoeconomics Outcomes Res*. 2009;9:133-41.

<sup>9</sup> Milne RJ et al. Report to the New Zealand Ministry of Health. November 2009. Data on file.