

Pneumococcal vaccine success in New Zealand children

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Infectious disease experts are this week calling New Zealand's pneumococcal vaccination schedule an unequivocal success.

New studies show that certain strains of [pneumococcal disease](#) have almost been eliminated in [children](#) under five and the number of hospitalisations for invasive pneumococcal disease has plummeted as a result.

Associated studies show the vaccination schedule has also reduced socio economic and ethnic disparities as well as the risk of disease in older, unvaccinated groups through herd immunity.

The studies were presented at the Annual Scientific Meeting of the Australasian Society for Infectious Diseases in Auckland on Wednesday.

"This is great news. These studies emphasise the importance of infant immunisations both for the individual and the community," says Dr Helen Petousis-Harris, Director of Immunisation Research and Vaccinology at the University of Auckland's Immunisation Advisory Centre.

Pneumococcal disease in [young children](#) causes serious illness - in particular pneumonia, meningitis and blood infections - and even death.

In New Zealand, Pacific peoples and Māori ethnic groups are disproportionately affected, with rates four to three times higher than in

the European ethnic group.

In 2008, a [vaccine](#) for children shown to be almost 100 per cent effective against a number of severe strains of pneumococcal disease was introduced into New Zealand.

The vaccine does not cover all strains of pneumococcal disease - there are more than 90 - but it does protect against the majority that result in serious illness in young children.

Since its introduction, hospitalisations of children aged under six for [invasive pneumococcal disease](#) have halved and the strains of the disease the vaccine targets have been virtually eliminated in children under five.

The vaccine has an excellent safety profile.

Routine infant immunisations have also indirectly benefitted non-immunised groups through herd immunity.

In five to 64 year olds the rates of pneumococcal disease targeted by the vaccine has more than halved and in people over 65 this reduction increased to 76 percent.

Although all groups have seen fewer hospitalisations, the greatest reductions were seen in Māori and Pacific children and children from high deprivation areas, where a 70 percent decrease was seen. Such dramatic results were not anticipated.

"We didn't predict the extent of the impact the vaccination schedule would have on these groups," says Dr Helen Petousis-Harris. "The greatest improvements were seen amongst children from groups that carry the greatest burden. This is a very positive result."

The challenge now, say experts, is to continue to develop new vaccines and adapt the ones we have in order to keep pace with rapidly evolving bugs.

Provided by University of Auckland

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