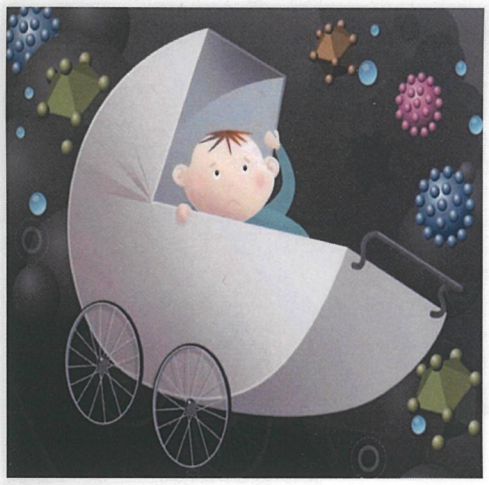

What are the key determinants of non-immunisation in New Zealand children aged six weeks to two years old?

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National Immunisation Schedule

Age given	Diseases covered and vaccines
6 weeks	Diphtheria/Tetanus/Whooping cough/Polio/Hepatitis B/ *Haemophilus influenzae* type b 1 injection (INFANRIX® -*hexa*) Pneumococcal 1 injection (Synflorix®)
3 months	Diphtheria/Tetanus/Whooping cough/Polio/Hepatitis B/ *Haemophilus influenzae* type b 1 injection (INFANRIX® -*hexa*) Pneumococcal 1 injection (Synflorix®)
5 months	Diphtheria/Tetanus/Whooping cough/Polio/Hepatitis B/ *Haemophilus influenzae* type b 1 injection (INFANRIX® -*hexa*) Pneumococcal 1 injection (Synflorix®)
15 months	*Haemophilus influenzae* type b 1 injection (ACTHIB®) Measles/Mumps/Rubella 1 injection (MMR®) Pneumococcal 1 injection (Synflorix®)

Introduction

Immunisation is critical to the prevention and eradication of infectious diseases that have the potential to result in serious illness and even death. Since vaccines were first developed there has been a dramatic decrease in reported cases of infectious disease where devastating illnesses like polio and smallpox have been entirely eradicated. It is clear from the evidence that vaccines have been proven to be effective. Yet surprisingly high numbers of children are still not being immunised. Why? The Ministry of Health has set health targets for 90% of eight-month-olds to have their primary course of immunisations by July 2014 and 95% by December 2014. In order to achieve these targets, a number of key issues need to be addressed.

Literature review

Literature shows that lack of antenatal education and lack of education from lead maternity carers is associated with lower immunisation rates. Misconceptions about vaccines also cause lower coverage. It is clear that better education is needed to overcome this.

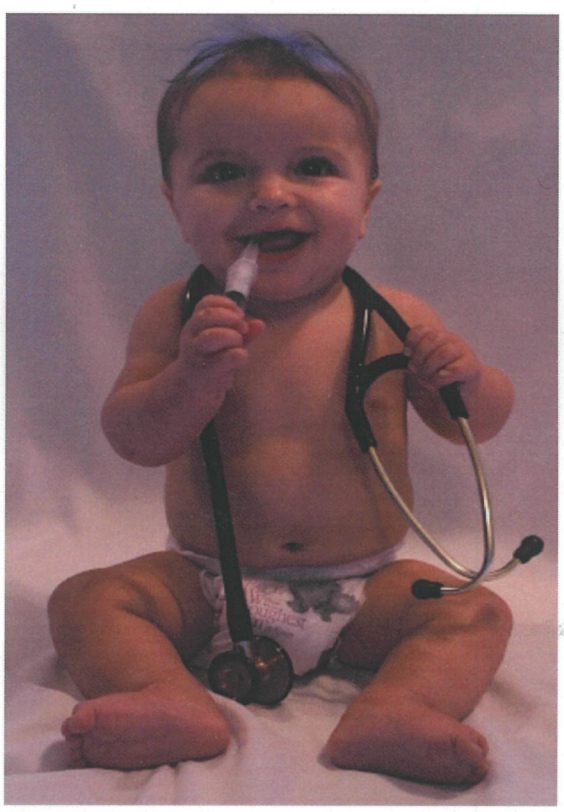
- Mothers of children who had not been immunised were more likely to have not attended antenatal classes

- Many parents who choose not to immunise their children did not discuss immunisation with their LMC

- Some parents view vaccination for "non-deadly" illnesses as an unnecessary risk

- Physicians report a barrier to vaccination being parental concern over vaccine safety

- Many health professionals are misinformed about the risks of vaccines and are unsure whether the MMR vaccine is associated with autism



Misconceptions clarified

✖ Vaccines are dangerous
✓ The risk of adverse reactions is extremely low compared to risks of contracting the disease

✖ Vaccines can cause autism
✓ This rumour originates from a fabricated research paper that has since been retracted. Since then multiple studies have disproved any association between vaccines and autism.

✖ Protection from infection can be achieved though diet, traditional or alternate remedies and/or spiritual balance.

✓ Good health aids in preventing illness. However infection can strike anyone no matter their fitness or health.

✖ Natural immunity from disease exposure is superior.
✓ Exposure to antigens (whether naturally or through vaccine) will still produce the same immune response. Natural exposure carries the risk of contracting potentially fatal diseases

Recommendations

- Encourage Antenatal classes to expectant parents. These classes provide education surrounding immunisation and have qualified health professionals who are able to answer questions and clarify concerns.

- Education for health professionals regarding vaccine safety and risks, targeting those working with children and expectant mothers.

- Implementation of mandatory immunisation education from lead maternity carers.

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PECOT Category	Information Related to question	Explanation
Population	New Zealand children aged 6 weeks to two years of age	At the age of six weeks the first dose of vaccines is given thus it is here where many decisions about whether or not to have their child immunised are made. Children then receive subsequent doses and it is here that loss to follow up may occur resulting in children not being fully immunised.
Exposure	Children between the age of 6 weeks and 2 years who have been fully immunised	Investigation of articles regarding immunisation rates in under two year-olds will allow analysis of any determinants that encourage immunisation and factors associated with non-immunisation
Comparison	Children between the age of 6 weeks and 2 years who have not been fully immunised	Evaluation of articles surrounding immunisation rates will allow assessment of what factors contribute to non-immunisation
Outcome	Full immunisation status at the age of two.	A number of doses of vaccines are given over the first months of life. If the timing of these doses is late then looking at two year-olds will account for any late doses.
Time	Two years	Children should have received their full course of primary immunisations by the age of two.

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