



## Why do parents choose not to immunise their children?

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### Abstract

**Aims** To ascertain the reasons why some parents choose not to immunise their children and where these parents obtained their immunisation information.

**Methods** Seventy general practitioners (GPs) in Christchurch who kept a record of children whose parents declined immunisation were asked to recruit these parents. Half of the GPs were able to invite the 76 parents of children declining immunisation to take part in this study. Twenty one (28%) of these parents agreed to completing a structured questionnaire.

**Results** Parents in this sample were highly educated and had used information from a variety of sources in making their decision not to immunise. Almost half of the parents had not discussed immunisation with their lead maternity carer. They viewed information from the Ministry of Health as biased. They were concerned about vaccine safety and efficacy and the effects of immunisation on their child's immune system.

**Conclusions** Parents who choose not to immunise their children are distrustful of information provided by the Ministry of Health. General practitioners are the main source of immunisation information for these parents and they must be able to provide accurate, unbiased information regarding the risks and benefits of immunisation.

New Zealand has very poor rates of immunisation compared with other countries. Despite the implementation of the National Immunisation Strategy, with its target of 95% immunisation coverage by the year 2000, there is little reason to believe that immunisation rates nationally have risen above the 60% at age two years identified in the 1992 national survey.<sup>1,2</sup> It is estimated that between 3% and 6% of New Zealand parents make a conscious choice not to immunise their children (personal communication, Dr Nikki Turner, Immunisation Advisory Centre, University of Auckland, 2003).

There has been little research on the reasons why parents choose not to immunise their children. A study of 68 parents from a large English health authority found that religious beliefs and a preference for homeopathy were the two most common reasons given for not immunising.<sup>3</sup> Another study of parents' perspectives on the measles, mumps and rubella (MMR) immunisation found that parents who had chosen not to immunise their children with MMR felt the potential risks of the vaccine outweighed the risks of contracting the diseases.<sup>4</sup> Another qualitative study from the UK examined the decision-making process in thirteen parents who had chosen not to immunise their children and found that parents perceived health professionals to be providers of unbalanced information regarding immunisation.<sup>5</sup> A recent discussion paper on immunisation has suggested the need to actively involve the population in immunisation policy.<sup>6</sup> It furthermore suggested that this change in approach from compliance to concordance requires ongoing qualitative research into how both

immunisers and non-immunisers think. This study aimed to ascertain the characteristics of parents who have chosen not to immunise their children, their reasons for making this choice, and their sources of information.

## Methods

Pegasus Health is an independent practitioners association of 230 general practitioners (GPs) constituting about two thirds of practising family doctors in Christchurch city (population 318 000), New Zealand. Children registered with Pegasus Health GPs have a 92.5% immunisation rate at age two years (personal communication, Dr Kim Burgess, Pegasus Health, Christchurch, 2003). Those GPs who reported to the immunisation coordinator for Pegasus Health the details of children for whom immunisation was declined (about one third of all Pegasus members) were asked to participate in this project. Parents were identified from the Pegasus Health immunisation database and their own GPs were asked to invite them to take part in the research. The lead researcher then contacted consenting parents and a face-to-face interview was arranged. Using a questionnaire to guide the interview, the researcher sought demographic information about the parent and details about the child including age, immunisation status and health professionals the child attended. The researcher asked where parents obtained information about immunisation and how they rated the quality of that information. Parents were asked specifically about immunisation information obtained from health professionals and about their reasons for choosing not to immunise. The interview took 20–30 minutes to complete. One researcher conducted all interviews. Ethical approval for the study was granted by the Canterbury Ethics Committee.

## Results

The 70 GPs who recorded 'declined' children were invited to assist with the research. Thirty five (50%) GPs agreed to assist, 15 (21%) declined and 20 (29%) did not respond. Seventy six families registered with the 35 participating GPs who had at least one child registered as having declined immunisation were invited to take part in this project. Twenty two (30%) of these parents agreed to take part, 8 (11%) declined and 46 (60%) did not respond.

Twenty one interviews were conducted in the location of the parents' choice, which was usually their own home. Nineteen of the interviewees were female and two were male. In the four cases where both parents were present demographic questions were directed to the parent who felt they had taken the lead role in the immunisation decision-making process. All interviewees had a partner. The characteristics of these parents are summarised in Table 1. Parents choosing partial immunisation most often chose tetanus and rubella for girls. Fifteen (71%) parents made the decision not to immunise with their first child. In 20 cases (95%) this was a joint decision made between the interviewee and their partner. Most parents (18/21, 86%) said the health professional from whom they received the most information about immunisation was their own GP.

Twenty parents were able to tell us about the immunisation advice they received during the pregnancy of their unimmunised child. Only 5 of the 12 (42%) women who used independent midwives as their lead maternity carer (LMC) had received information on immunisation from their midwife. Only one of the three women who used a specialist obstetrician as their LMC had discussed immunisation with their specialist. All four women who used GPs as their LMC had either received immunisation information or discussed immunisation with their GP. One woman had a hospital midwife as her LMC and received information on immunisation from her.

**Table 1. Characteristics of 21 parents who chose not to immunise their children**

<b>Characteristic</b>	<b>n (%)</b>
<b>Age (average)</b>	39 years
<b>Ethnicity</b>	
New Zealand European	20 (95)
Singaporean Chinese	1 (5)
<b>Highest educational qualification</b>	
Master's degree	2 (10)
Bachelor's degree	11 (52)
Other tertiary qualification	5 (24)
Secondary qualification	3 (14)
<b>Immunisation status of the 59 children of these parents</b>	
Completely unimmunised	24 (41)
Partially immunised	29 (49)
Fully immunised	6 (10)
<b>Health professionals consulted by parents</b>	
General practitioner	20 (95)
Homeopath	10 (48)
Naturopath	9 (43)
<b>Other sources of immunisation information</b>	
Family and friends	18 (86)
Immunisation Awareness Society	16 (76)
Books	15 (71)
Magazines	11 (52)
Internet	8 (38)

Parents usually had a number of reasons for choosing not to immunise, which are summarised as follows:

**Concerns about the risk of side-effects and complications from immunisations**

Eighty five per cent of parents were concerned about the risk of side-effects from immunisations. There was a belief expressed that adverse reactions are poorly recorded and underestimated in New Zealand. Parents often mentioned the possible link between immunisation and diseases such as autism, diabetes, Crohn's disease and asthma. Nine parents (43%) thought the risk of side-effects outweighed any possible benefit gained by immunisation.

**Concerns regarding children's immune system** Fifty seven per cent of parents thought that children's immune systems should be given the opportunity to develop naturally by delaying immunisation or not immunising at all. Many parents thought that immunisations were given too early and that immunisation weakens rather than enhances the immune system. They also thought that if children contracted diseases naturally they would develop better, lifelong immunity and this would strengthen their immune systems.

**Beliefs regarding diseases immunised against** One third of parents regarded most of the diseases immunised against as rare and not threatening to life. They saw immunisation as an unnecessary risk to take to protect against diseases that, as one mother said, are 'few and far between'. Parents were more likely to immunise their children against diseases they viewed as an immediate threat, such as tetanus or meningitis.

**Concerns about the effectiveness of vaccines** One quarter of parents thought that vaccines were not fully effective and did not provide lifelong immunity. Parents often mentioned cases of whooping cough in children they had known to be immunised against this disease.

**Having or knowing a child thought to have suffered an adverse effect from an immunisation** Two of the participants were the parents of children they considered to have been permanently disabled by reactions to a vaccine. Two other mothers' children had experienced short-term adverse reactions such as convulsions and extensive swelling. Based upon their experience they had chosen not to have any of their other children immunised. Two parents mentioned that knowing a child believed to have been damaged by a vaccination had prompted them to look at immunisation carefully. Three parents identified the possible link between immunisation and their own children's health problems, including autism, Crohn's disease and food intolerances, as a reason for choosing not to immunise.

**Other reasons for not immunising** Other reasons mentioned included the protective effect of breast-feeding, not wanting to see a child in pain, too many vaccines delivered at once, belief in Rudolf Steiner philosophy, a child spending its early months close to its mother therefore lowering risk of disease, and the use of complementary medicine and healthy living to build up immunity.

Several parents in our sample thought that their children's health problems were caused by immunisation. Some of these children had received compensation from the Accident Compensation Corporation. We made no attempt to ascertain the likelihood that their children's problems could be attributed to immunisation. Many parents thought that adverse reactions to immunisation were not accurately monitored and therefore underestimated.

Parents were given the opportunity to comment on any aspect of immunisation at the conclusion of the questionnaire and many parents stated that the information supplied by their general practitioner was biased in favour of immunisation and downplayed the risk of side-effects from immunisation. Since both the Ministry of Health immunisation pamphlets and books and the information available from the Immunisation Advisory Centre at the University of Auckland (IMAC, funded by the Ministry of Health) clearly promote immunisation, these sources are viewed as biased by these parents. Many parents expressed the desire to have information that is provided by a neutral, third party outside the 'medical establishment'.

## **Discussion**

The parents we interviewed were well educated and had sought information about immunisation from a variety of sources. They chose not to immunise their children due to concerns regarding vaccine safety and efficacy as well as beliefs that diseases immunised against are now rare and not life threatening.

A weakness of this study was its small size. The interviews were conducted over the summer-holiday period and many GPs and families could not be contacted, which led to a poor response rate. Non-responding GPs and parents were not contacted again. Nevertheless, 73% of parents we were able to contact agreed to be interviewed and these parents were uniformly eager to give their reasons for choosing not to immunise their children.

Another weakness of this study is that all parents were recruited from GPs' registered patients. Parents who do not use a GP at all for their child were not studied. We are unable to say how representative our sample was of all parents who choose not to immunise their children. Furthermore, we are unable to give any reliable estimate of the percentage of parents choosing not to immunise in Christchurch as there is no comprehensive regional record kept of this information.

Many of our findings were similar to results from other studies of parents declining immunisation. Sixty two per cent of the parents in our sample had a bachelor's degree or higher tertiary qualification, which is much higher than the New Zealand average of 11.8%.<sup>7</sup> Studies from overseas have also suggested that choosing not to immunise is more common in parents with higher socioeconomic status.<sup>8</sup> Previous New Zealand research has indicated that better educated women were more concerned about the perceived safety of vaccines.<sup>9</sup>

Our findings on the provision of immunisation information by lead maternity carers confirms the findings of a New Zealand national study that found that only 61% of mothers using midwives as LMCs had discussed immunisation with their midwife, only 20% of women using specialists as their LMC had discussed immunisation with their specialist, but that 81% of women who used GPs as their LMC had discussed immunisation with their GP.<sup>10</sup> It would appear that the statutory obligation to provide immunisation information to parents is being ignored by a large proportion of both midwives and specialists. Lead maternity carers are obliged only to provide Ministry of Health immunisation information to mothers and are free to offer anti-immunisation information from groups such as the Immunisation Awareness Society at the same time. Over one third of our sample had already made a decision not to immunise before the birth of the child, which highlights the need to give women accurate information during their pregnancy.

Parents' reasons for choosing not to immunise were similar to those given by parents in studies from the UK and Australia, where worries about side-effects, the effects of immunisation on the immune system, and 'natural' immunity were the major concerns.<sup>4,11</sup> The next most common reason was the belief that the illnesses immunised against are not serious risks to health.<sup>5,12</sup>

The parents in this study were highly educated, caring people who had all undertaken personal research and sought information from a variety of sources before choosing not to immunise their children. The parents we interviewed retain a high level of trust in their individual GPs, who are their most important source of immunisation information. In contrast to the UK, where parents have expressed distrust of GPs' advice knowing that they are rewarded for achieving high immunisation rates, there is no direct financial incentive to immunise children amongst New Zealand GPs.<sup>4,5</sup> This may serve to increase parental trust in their GPs' advice regarding immunisation, and any incentives to GPs to increase the immunisation rate amongst their patients could lower parental trust and conceivably lead to lower immunisation rates. General practitioners and practice nurses need to become familiar with the concerns that motivate parents to make a conscious choice not to immunise their children and be prepared and funded to provide accurate, detailed information on the benefits and risks of immunisation in what will often be difficult and time-consuming consultations.

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