

First time parents' decision making regarding  
childhood immunization.

A Qualitative Descriptive Study

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### **ATTESTATION OF AUTHORSHIP**

I hereby declare that this submission is my own work and that to the best of my knowledge and belief it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the qualification of another degree or diploma of a university or other institute of higher learning, except where due acknowledgement is made in the acknowledgements.

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**Elizabeth Dunn**

## ABSTRACT

The aim of the National Immunisation Strategy is that 95% of children will be fully vaccinated by their second birthday. Statistics indicate that children who receive the first vaccination on time, at six weeks of age, are likely to be fully vaccinated by the due date. However, there appears to be no definitive research regarding how first time parents decide whether their children will be vaccinated at six weeks old. The aim of this small qualitative descriptive pilot study with grounded theory method of data analysis was to describe the decision making process of first time parents regarding vaccination of their six week old baby. Three first time mothers with children aged between, five and seven months of age agreed to take part in this small pilot study and all expressed an initial intention to vaccinate, which they considered to be ‘doing the right thing’ for their child. However findings from this small pilot study suggested that for some participants the eventual decision making process was complex and involved negotiation of various pathways as parents interacted with a variety of health professionals, as well as other sources of information and misinformation, that might help or hinder their decision making process. Findings also highlighted the pervasive influence of health care providers and their need to receive and convey timely and accurate information and support in order to facilitate parental informed choice regarding vaccination of their children.

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**This study was approved by Auckland University of Technology Ethics Committee and the Northern Regional Ethics Committee.**

## KEY TO TRANSCRIPTS

To assist understanding of the discussion the following abbreviations and fonts are used:

*Italics* excerpts of participants' stories – their words.

1. interview number

p. page in the transcript

**The participants in this study have been given a pseudonym or coded name.**

## **Chapter 1**

### **Introduction**

Whether or not their child will be vaccinated at six weeks of age is arguably one of the first health care decisions that parents make on behalf of their child. However, childhood immunization is not compulsory in New Zealand and a major tenet of the immunisation strategy is that is that parents are supported to make informed decisions regarding immunization prior to each vaccination event. The aim of the National Immunisation Strategy (Ministry of Health (MOH) 2003a) is that 95% of all New Zealand children will be fully vaccinated by their second birthday. A New Zealand study found that the majority of children who receive the six week vaccination on time were likely to complete their vaccines within the recommended time (Grant, et al. 2003). My role of Immunisation Coordinator with a Primary Health Care Organisation (PHO) includes coordination of an Immunisation Outreach Program for which I am also the home vaccinator. Within these roles I have become concerned that an increasing number of children who are referred to the program are overdue for the six-week vaccination event. I noted that some of these babies were children of first time parents, who had no prior experience of making such decisions, and I wanted to know how these parents made decisions to accept, decline or defer immunisation for their children at six weeks of age.

Several studies have investigated parental decision making in relation to childhood immunisations (Marshall & Swerissen, 1999; Serpel & Green, 2006; Sturm, Mays & Zimet. 2005; Wroe, Turner & Salkovskis. 2004). However, while some have included first time parents they have not specifically targeted this group for investigation. The reason that I have chosen this topic for my research is that I believe that, if the immunisation rate advocated by the National Immunisation Program is to be achieved, there is a need to understand how first time parents make decisions in relation to childhood immunisation. This knowledge might provide valuable information so that strategies can be developed to facilitate the processes that these first time parents identify as key to decision making.



The vast majority of childhood immunisations in New Zealand are administered by practice nurses in the general practice setting. Many practice nurses have completed vaccinator-training courses that are undertaken in accordance with the National Immunisation Standards and almost every general practice will have at least one practice nurse who has completed a vaccinator-training course and is an approved non- medical vaccinator (Petoussis-Harris, Boyd & Turner (2004). The purpose of these courses is to equip nurses to provide safe vaccination services and to facilitate informed decision-making by supporting parents as they make their decisions prior to vaccination (MOH, 2006). Practice Nurses are thus able to inform parents by discussing the vaccine preventable diseases, the safety and effectiveness of vaccines and the immunisation process with parents and caregivers, as well as identifying and addressing parental concerns (MOH, 2006).

Prior to 1996, general practitioners were the main providers of antenatal care and as such practice nurses saw parents on several occasions during the antenatal period, which has been shown to be a critical time for parent decision-making process. (Marshall and Swerissen, 1999; Serpel & Green, 2006; Wroe, Turner and Salkovalis, 2004). This presented several opportunities to discuss vaccination with parents prior to the birth of their child and then to follow this up during the postnatal period and at the six week mother and baby check, at which the first vaccination was offered. However, since then there have been significant changes in funding and delivery of maternity services and most women see a midwife or obstetrician for antenatal care. Petoussis-Harris et al. (2004) found that parents who attend hospital antenatal classes are mainly first time mothers although Petoussis - Harris, Turner & Kerse (2002) had found that less than 60% of Auckland mothers had discussed immunisation with their Lead Maternity Carer during pregnancy and this had led to a decreased opportunity to discuss immunisation in the antenatal period.

### Aims of the Study:

The aim of this small pilot study is to describe the decision making process of first time parents regarding vaccination of their six week old baby

### Structure of the report:

The research report consists of five chapters.

This initial chapter has provided an overview of the study as well as the structure of this report.

Chapter two reviews the literature related to childhood immunisation.

Chapter three describes how the study was conducted. The methodology utilized in this study is discussed in relation to why a qualitative descriptive method with grounded theory analysis was appropriate for the purpose of this small pilot study.

Chapter four discusses the findings of the research and outlines the four major concepts that emerged from the data. The data has been used to discuss the four major concepts of 'doing the right thing' 'doing the research' 'trusting' and protecting'.

Chapter five is the final chapter and discusses the limitations of the study. Areas for further research are suggested as well as implications of this research for clinical practice.

## Chapter 2

### Literature Review

This chapter reviews the literature relating to childhood immunisation and how parents make decisions in relation to vaccination of their children. The aim of the New Zealand Immunisation Strategy (2003-2006) (Ministry of Health (MOH) 2003a) is that 95% of all New Zealand children will be fully vaccinated by their second birthday. The literature suggests that the strongest predictor of not being up to date with immunisations at 2 years of age is failure to receive the first vaccines on time (Luman, Barker, Shaw & McCauley 2005). Children in this country are offered their primary course of scheduled vaccinations at 6 weeks, 3 months and 5 months of age (Reid, 2006). However there appears to be a dearth of literature that has focused on how first time parents decide whether their child will be vaccinated at six weeks of age.

#### **Immunisation in New Zealand**

The purpose of immunisation is to improve the health of all New Zealanders by controlling or eliminating vaccine preventable diseases (MOH.2003a). Childhood vaccination has been available in New Zealand since 1941 when diphtheria vaccine became available in selected schools and orphanages. Since then the repertoire of vaccines has increased and the New Zealand childhood immunisation schedule now offers children protection against nine vaccine preventable diseases (Reid, 2006). There is no cost to parents for childhood immunisation in this country and early childhood vaccines are administered in General Practices throughout the country. However, although diseases such as polio, diphtheria and tetanus are now considered to be rare, mainly due to immunisation, other vaccine preventable infectious diseases continue to cause avoidable illness and death in New Zealand. It is noted that childhood immunisation rates in New Zealand have never been high enough to prevent outbreaks of vaccine preventable disease (Goodyear-Smith, Petoussis- Harris, Turner & Soe. 2005).

When the Ministry of Health (2003a) released its National Immunisation Strategy for 2003-2006, it was reported that that national epidemics of pertussis occur in New Zealand at 4-5 year intervals and that the rate of disease between epidemics appeared to be increasing with over 50 reported cases per month. The continuing disparity in the immunisation rates for Maori and Pacific Island children means that they remain especially vulnerable to vaccine preventable diseases and this was demonstrated in the higher hospitalization rate for Maori children who contracted pertussis during an epidemic in 2002 (MOH, 2003a). Hospital admission rates were 2.7 times higher than for European and 3.2 times higher than for Pacific Island Nation children. (MOH 2003a). The latest Immunisation Handbook, released in 2006, reports that one child has died from pertussis each year since 1999 and that outbreaks of the disease occur frequently, mainly affecting infants and young children, and continue to cause high rates of hospitalization among Maori and Pacific Island children (MOH, 2006).

International evidence indicates that childhood vaccination is one of the most cost effective activities in health care (World Bank, 1993, cited MOH, 2003). The World Bank report notes that that the cost of controlling a measles epidemic is high compared to prevention by immunisation. The cost of treating 314 New Zealand children who were hospitalized during an epidemic in 1997 was 47.5 million dollars, which at that time was equivalent to 50% of the total national immunisation budget (MOH, 2003).

The literature suggests that ethnicity and socioeconomic status continues to affect uptake of vaccination. A National Childhood Immunisation Survey conducted in 2005 (MOH, 2006) showed that the percentage of children who were fully vaccinated at two years of age had risen from 60% in 1992 to 77.4% in 1998. However, the survey report, based upon benefit claim data, revealed that despite increased uptake and introduction of successive immunisation strategies New Zealand has failed to achieve the 90-95% coverage that is needed to halt transmission of vaccine preventable diseases. The result of the survey also reiterated the continuing ethnic

disparity in coverage in relation to European coverage rate (81%) and that of Maori (69%) (MOH, 2006).

Studies in New Zealand and overseas have investigated the reasons why children are not presented for immunisation on time. Forrest Burgess & McIntyre (1998) found that while most newly delivered mothers are willing and eager to have their children immunised, some parents cited factors that lead to delays in vaccinations such as lack of detailed and balanced information and health providers not listening to mothers' concerns about immunisation. Other issues affecting the uptake of immunisation included the knowledge and attitudes of mothers towards immunisation as well as parental fear of potential adverse effects. Physical and socio-economic barriers such as no transport, limited time and lack of child minding facilities for other children were also identified as factors that hindered "on time" vaccination.

A review of immunisation services in New Zealand (National Health Committee, 1999) involved examination of national and international literature which revealed that, if the New Zealand childhood immunisation rate was to improve, changes would need to be made in order to address the barriers to childhood vaccination. The committee also noted that families who have delayed the first vaccination often require special attention from primary health care providers. It was recommended that a central information system should be instituted to enable health providers to increase the number of opportunistic immunisations while ensuring that children are not given inappropriately timed or unnecessary vaccinations.

The National Health Committee also recommended that Outreach Immunisation Services should be instituted in order to provide immunisation to children whose parents had problems with accessing immunisation from mainstream services. The committee believed that implementation of the recommended strategies would result in improved childhood immunisation rates (National Health Committee, 1999). A National Immunisation Register was instituted in 2004 and Immunisation Outreach Programs have been developed in 16 Primary Health Organizations throughout New

Zealand (MOH.2006). A core requirement of the Outreach Service Providers is that parents and caregivers will have access to sufficient information regarding immunisation to enable them to make autonomous and informed decisions (MOH, 2003b). However, Broadstock (2000) maintains that decisions are not made in a vacuum but within a social context with many degrees of social influence.

### **Parental vaccine decision-making.**

Several studies have identified and discussed factors that might influence how parents make decisions in relation to whether or not their child will be vaccinated. Anderson, Jackson, Wailoo & Peteresn (2001); Hamilton, Corwin, Gower & Rogers (2004); Sporton and Francis, 2004; Wroe, et al, (2003) & Mays, Sturm & Zimet (2004) suggested that, when parents consider whether to have their child immunised, their decision may be influenced by social-environmental and personal factors and the quality of their interaction with the healthcare system. Literature relating to each of these factors is presented in the context of how they might influence parents' decisions in relation to childhood immunisation.

#### ***Social group norms.***

Sturm et al (2005) suggested that social-environmental factors that may influence immunisation decisions include social group norms and peer group influence. Social group norms, in relation to immunisation, indicate what a person's social group considers to be appropriate health behaviour and these norms have been identified as important factors in parental decision-making in relation to immunisation (Forrest, et al, 1998; Sturm et al, 2005).

A qualitative study by Petoussis-Harris, et al. (2002) examined the knowledge and attitudes of New Zealand mothers in relation to immunisation. Findings suggest that some parents who vaccinate their children are traditionalists who value heritage and the patterns of behaviour of their parents and will listen to advice from influencers such as health professionals, family and friends.

Ethnographic data of studies conducted by the World Health Organization's Expanded Program on Immunisation was used to describe and discuss patterns of vaccination acceptance in Bangladesh, Ethiopia, India, Malawi, the Netherlands and the Philippines (Streefland, Chowdhury & Ramos-Jiminez, 1999). Findings indicate that acceptance might or might not be rooted in an informed and knowledgeable vaccination culture, although peer group influence is an important factor. The authors concluded that many mothers take their children to the health clinic and have their babies vaccinated because everyone else does it, they see it as the normal thing to do and something that good mothers do.

Sturm et al. (2005) suggest that another social-environmental factor that influences vaccine decision-making is media coverage of immunisation issues. The literature indicates that the print and electronic media are influential in relation to vaccination decision-making. Leask and Chapman (1998) note the important role played by media campaigns in promoting immunisation, although their examination of anti-immunisation literature which was published between 1993-1997 revealed that the anti-immunisation lobby has the potential to use the print media to damage public confidence in immunisation.

The influence of the media on vaccine decision-making was demonstrated in an area of South Wales when a local newspaper ran a campaign against the controversial Mumps Measles and Rubella (MMR) vaccine. A comparison of the vaccine uptake rate in this area with uptake of the vaccine in other areas of Wales indicated that the impact of the campaign had affected local coverage rates, as there had been a greater drop in the rate of immunisation coverage in the distribution area of the newspaper than in other areas of the country. (Mason and Donnelly, 2005).

Serpel and Green (2006) also discuss the influence of the media coverage of the MMR controversy, which they describe as emotive and extensive. A review of media coverage in Britain found that parents whose views were covered on television programs were five times as likely to be against MMR, often because they had a

'vaccine damaged child' (Lewis and Speers, 2003). Another review of the media found that while most programs focused on the risks of the vaccine rather than risk of the diseases, articles about the risk of not vaccinating were rare (Lawrance; 2004).

Smailbegovic, Laing & Bedford (2003) explored the knowledge, attitudes and concerns, with respect to immunisation and vaccine preventable infections, of parents whose children had not completed their recommended course of immunisation, they found that most parents used three or more sources of information, including websites, to gather information.

Nasir, (2000); Davies, Chapman & Leask (2002) & Wolfe, Sharpe & Lipsky (2002) contend that web-based anti-immunisation information has become particularly prominent and suggest that the content of most of these sites is unscientific but is packaged in a way that may persuade parents that the sites are credible.

Wolfe and Sharpe (2005) found that the tenor of the websites accessed is dependent upon the search term used. For example, a search using "Vaccination" will access a high number (60%) of anti-vaccination web sites and 40% pro-vaccination sites, whereas "Immunization" will connect with mainly pro-vaccination sites (98%) and 2% anti-vaccination sites. The authors expressed concern that any combination of terms that include vaccination will result in a significant amount of anti-vaccination information. They suggested that this might be influential in deterring parents from making decisions in relation to vaccinating their children.

### ***Family interface with the healthcare system***

This factor relates to how parents and health professionals and the health system interact with each other and how providers are able to influence parental decision making about vaccines. The knowledge, attitudes and recommendations of health professionals towards immunisation has been described as a major influence in vaccine decision making. Smailbegovich et al. (2003) acknowledge that health professionals are the most commonly used source of information about immunisation



and that most parents considered them the most helpful source of information. However, some parents, who have not yet vaccinated their children, reported that they were dissatisfied with the amount, and quality, of the information they received from health professionals and that this had influenced their decision to defer immunisation or decline vaccination.

Serpel and Green (2006) maintain that the behaviour of health care professionals has recently come under scrutiny in relation to vaccine uptake. The authors claim that 78-97% of incidents where children have presented to a clinic, and have not been vaccinated appropriately, are due to failure of health professionals, either because of lack of information, ambivalence towards the vaccine or fear of litigation following an adverse event. Koepke, Vogel & Kohrt (2001) studied immunisation provider behaviours in relation to immunisation coverage rates and found that behaviours with significant association to higher immunisation rates were:

- Administration of vaccines according to the immunisation schedule
- Willingness to give at least 4 injections at one visit
- Holding immunisation in-service training

Recent New Zealand studies have investigated the immunisation behaviour and beliefs of health care providers in relation to barriers and contraindications to immunisation. (Petoussis-Harris, et al 2005).

Telephone surveys were utilized to study the views, knowledge and experience of New Zealand GPs and practice nurses in relation to immunisation. Both groups identified parental fear and misinformation about immunisation as the greatest barriers to achieving better uptake of immunisation and disagreed with the concept that access to services and health professional knowledge might be a barrier. However findings indicated that, despite feeling confident about their knowledge base, many of these providers lacked knowledge of contraindications to vaccination although they did not see a need for educational updates. Goodyear- Smith et al

(2005) considered that poor provider knowledge of contraindications to immunisation might lead to missed opportunities to vaccinate. The authors concluded that to focus on provider support and education is more likely to gain higher immunisation coverage than programs purely directed at barriers to access.

There is evidence that provider attitudes influence parental decisions in relation to acceptance of new vaccines. Rosenthal, Kottenham & Biro (1995) investigated parental acceptance of Hepatitis B vaccination for adolescents and found that a parental belief that their health provider considered vaccination to be important was the best predictor of parental acceptance of the vaccine.

Freeman and Freed (1999) found that 60% of parents, who decided to accept a new varicella vaccine for their two-year-old children, cited doctor's recommendation as influential. However, only 17% of those who declined the vaccine cited providers' recommendations as important. Taylor and Newman (2000) found that the provider's policy in relation to recommendation of the vaccine was uniquely associated with the positive or negative views of parents towards vaccination. The authors found that parents who attributed their decision to the influence of their pediatrician's opinion held more positive health beliefs about the vaccine.

### ***Personal factors.***

Other factors that influence parental decision making in relation to childhood immunisation have been identified in several studies and include parental health beliefs, knowledge and attitudes towards vaccines and the vaccine preventable diseases as well as socio-economic factors such as ethnicity and access to vaccination services. (Bond, Nolan, Pattinson & Carlin, 1998; Eyres-White & Thompson, 1995; Petoussis Harris, et al 2003; Serpel & Green, 2006; Smailbecovic, et al. 2003).

Sturm, et al (2005) discuss health beliefs in relation to perceived susceptibility of the child to the disease, the perceived severity of the diseases and the perceived safety and efficacy of the vaccine. The authors suggest that as the incidence of vaccine

preventable diseases has declined, mainly due to vaccination, parental health beliefs regarding potential side effects of vaccines have emerged as important determinants of the acceptability of vaccines.

A New Zealand study of mothers' knowledge and attitudes towards immunisation found that, regardless of the immunisation status of their children, mothers from all socioeconomic groups had a pervasive underlying fear of vaccines and perceived side effects (Petoussis-Harris, et al. 2002). However, Serpel and Green (2006) suggest that, having formed an impression of the risks associated with vaccination or non-vaccination, parents still need to make a decision whether or not to vaccinate. They suggest that some people show systematic biases in their preferences of costs versus benefits and that these might affect the decisions they make in regard to immunisation. Ball, Evans & Bostrom, (1998) suggest that these cognitive heuristics, or decision shortcuts, aid individuals in the information processing demands of affect and reasoning during complicated decision making.

### ***Cognitive Heuristics.***

Wroe et al (2004) suggested that vaccine decision outcomes are associated with particular patterns of beliefs. For example a study by Eyres-White and Thompson (1995) found that participants were more concerned about the side effects of immunisation than the side effects of disease. The literature provides several examples of cognitive heuristics that are used in vaccine decision-making (Serpel and Green, 2006; Sturm, et al, 2005).

- Compression – this involves the overestimation of rare risks and underestimation of common risks.
- Availability of an accessible or rare event that becomes overestimated because of its perceived salience.
- Omission bias – a greater feeling of personal responsibility for harm in secondary to acts of commission than for omission of action.
- Protected values – zero tolerance of any risk whatsoever.

- Ambiguity avoidance - in which risk from the familiar is preferred to risk of the new or ambiguous and parents prefer to stick to the status quo.

### ***Omission Bias***

Ritov and Baron (1990) cited in Serpel and Green (2006), found that some parents considered that, despite the intent of vaccination to reduce overall risk of harm from potential disease, it was worse to vaccinate a child when there was a risk of harm to the child than not to vaccinate. Omission bias therefore favours omission rather than equivalent commission of acts. New and Senior (1991) interviewed a small group of parents in England. Findings indicated that some parents justified their decisions not to vaccinate because of their great feeling of personal responsibility and anticipated regret for possible injury following immunisation. However other parents voiced anticipation of regret if the child was harmed by disease as a result of not vaccinating. Serpel and Green (2006) suggest that some parents might favour omission because a decision not to vaccinate is reversible whereas a decision to vaccinate is not.

A longitudinal study of New Zealand mothers investigated the factors that influence actual decisions about whether or not to vaccinate (Wroe, et al. 2004). Women in their third trimester of pregnancy were asked to:

- Rate the likelihood that their child would be vaccinated.
- State the reason for and against immunising.
- Rate their perception of the benefits and risks of immunisation.
- Rate their perception of responsibility.
- Rate their perception of anticipated regret if harm occurred.

Immunisation status was followed up when babies were 8-10 weeks old, to ask about the final decision and when parents felt that they had made the decision. Findings suggest that perceptions of risks and benefits associated with immunisation and omission bias factors were both significant predictors of the likelihood of immunisation. The results also indicated that anticipated regret if harm occurred after inaction, *omission bias*, and

anticipated responsibility if harm occurred following action, *commission bias*, were influential factors in parental decision making.

***Competing health claims.***

A further factor that has been identified, as influential in parental decision-making about childhood immunisation is that of competing health claims. Warren (2005) maintains that the postnatal period is a time when mothers are faced simultaneously with learning how to care for themselves and their new infants. Knauth (2001) found that the addition of a newborn infant brings about more profound changes to nuclear and extended family life than any other developmental stage of the family life cycle. Other studies have investigated the impact of parenthood from the perspective of first time parents. Issues such as learning to perform new tasks involved with caring for a baby, dealing with sleepless nights, feeding problems and negotiating work within and outside of the home. Other factors identified as having an impact on how new mothers and fathers cope within the first few weeks were family and peer interaction, social support, new roles to be learned and new family, social and marital relationships to be negotiated (Cronin, 2003; Johnstone, 1999; Pridham & Chang, 1992).

National and international research has shown that timeliness of immunisation is an important factor in the prevention of vaccine preventable disease (Grant et al., 2005; Lumen et al. 2005). Statistics show that New Zealand has experienced epidemics of vaccine preventable diseases such as pertussis, to which small infants are especially vulnerable (Ministry of Health, 2006). The first vaccines are offered to New Zealand children at six weeks of age and parents in New Zealand need to decide whether to accept, defer or decline immunisation of their child at a time when many other issues of childcare claim their time and thought. Yet a lack of studies in this area means that little is known about the process by which first time parents, among all their other new responsibilities and activities, make their decisions as to whether their child will be vaccinated at six weeks of age.

## **Chapter 3**

### **Method**

#### **Introduction**

My aim in conducting this small pilot study was to describe the decision making process of first time parents regarding vaccination of their six week old baby. For this reason, a qualitative descriptive design that “has as its goal a comprehensive summary of events in the every day terms of these events” (Sandelowski, 2000, p.334) was chosen for this pilot study. This design has allowed me to enter the social world of first time parents and better understand the unique and context dependent meaning of participants’ lives. (Roberts and Taylor, 1998). A qualitative descriptive design has allowed me to take parents’ subjective experiences and to describe their experience of deciding whether their children would be vaccinated. New perspectives arising from the findings of this pilot study may identify areas of practice in which first time parents might be supported to make informed decisions regarding childhood vaccination.

This chapter outlines the process and methods that have been utilized in the study and presents the methodology, sample recruitment, data collection and analysis as well as ethical considerations as they pertain to the study.

#### **Methodology**

##### ***Qualitative descriptive research***

This small pilot study has utilized a qualitative descriptive research approach, with grounded theory, as described by Glaser (1978), as the method of analysis. A qualitative, descriptive research design is used when the aim of the researcher is to focus on who, what and where questions. It also allows the researcher to gain information about situations as they naturally occur, when a straight description of the situation is required (Burns & Grove, 2001; Sandelowski, 2000) and when little is known about the phenomenon of interest (Grimes & Schultz, 2002).

Megel, Heser & Matthews (2002) used a qualitative descriptive design to determine parents' naturally occurring assistive actions when their child received immunisations. Their study identified nine psychological preparation strategies that were utilized by parents before, during and after the immunization thus contributing to an area of practice in which there was limited knowledge and providing information that parents and nurses might find useful in the care of children.

***Grounded theory.***

Grounded theory methodology is based on a constructionist epistemology and an interpretive paradigm. The methodology was originally developed by Glaser and Strauss, (1967) and is a systematic process of generating theory that is grounded in the reality of the social world (Smith and Biley,1997). Grounded theory is based upon the theoretical perspective of symbolic interactionism that originated from the work of Mead (1934) who described the process through which a sense of self develops (Burns and Grove, 2001). The basic assumptions of symbolic interactionism are that

- Human beings individually and collectively act on the basis of the meanings that things have for them.
- The meanings of such things are derived from or arise out of social interaction that one has with one's fellows.
- These meanings are handled in and modified through an interpretive process, used by the person in dealing with things he encounters. (Blumer (1969) cited in Dey, 1999).

These assumptions suggest that making a decision regarding childhood immunisation is not static, but a dynamic and interactive process that is dependent upon the context in which the decision needs to be made. For example, a parent may decide to accept vaccination at one event but may decide to decline vaccination at subsequent events due to doubts about safety or efficacy of a vaccine component following adverse media publicity.

Based on these assumptions, Glaser and Strauss (1967) developed a prescriptive and systematic research method to develop theory from data collected in a social setting. They developed the constant comparative method of data analysis which is a process whereby data is collected and analyzed line-by-line, moving within and back through the data to compare incident with incident, incident with concept and concept with concept. Within this method, with systematic coding and theoretical sampling, the ultimate aim is the emergence of theory that is grounded in the data that is being analyzed. The focus of the grounded theory method is to look for a core variable or process that is grounded in the data and accounts for most of the behaviour being examined. However, grounded theory studies have been reported at a descriptive rather than theoretical level when the researcher has stopped at a descriptive point of analysis and reported their findings.

The grounded theory method of analysis has been used with other research methods, especially descriptive research studies where little is known about the phenomenon. Sandelowski (2000) suggests that qualitative descriptive research asks, “What are the concerns of people about an event? “What are people’s thoughts, feelings and attitudes towards the event? “What reasons do people have for not using a service or procedure?” “Who uses a service and when do they use it?” The grounded theory method (Glaser, 1978) asks “What is happening here?” Within a qualitative descriptive mode these questions can provide data that allows organization of observations and descriptions into meaningful concepts that could engender further research. Grounded theory concentrates on the interactional processes at work in the social world from the perspective of the participants themselves (Smith and Biley, 1997). My research question “How do first time parents describe the process of deciding whether or not their child will be vaccinated at six weeks of age?” aims to discover how first time parents make decisions regarding vaccination of their six week old baby. Therefore it was important that the voices and subjective experiences of the first time parents who participated in this small pilot study were heard.

The constant comparative data analysis method of grounded theory (Glaser, 1978) requires the researcher to stay close to the data, so that theory is not forced, but emerges



from the data. Sandelowski (2000) notes that the qualitative descriptive research method also allows the researcher to stay close to the surface of the data. Therefore I chose a qualitative descriptive research design with a grounded theory method of data analysis for this small pilot study.

### *The Sample*

For this small pilot study I chose a purposive/theoretical sampling method. In qualitative research the participants are selected through purposive or theoretical sampling, which ensures that all participants will have experience of the phenomenon of interest and will be able to richly describe their experiences and thoughts. Benzies and Allen (2001) suggest that the tenets of symbolic interactionism are based on the belief that the individual and the context in which that individual exists are inseparable because meaning changes depending on the context. The aim of this small pilot study was to describe how first time parents' decide whether or not their child would be vaccinated at 6 weeks of age. Therefore, first time parents, whose children were aged between 5 weeks and 7 months of age, were invited to take part in the study. It was anticipated that these parents would have made or would be in the process of making their decision and as such would be able to provide rich in-depth descriptions of their experiences. All parents who participated in this small pilot study were first time parents of children who were aged between 5 months and 7 months of age and all were able to provide rich detail of how they negotiated the decision making process.

Following ethical approval of the study, first time parents were recruited by using a network sampling technique. A social contact of the researcher approached one of her friends, who met the criteria, and invited her to take part in the study. This mother agreed to participate and offered to recruit other parents, from her post-natal coffee group, to participate. Two to four participants were deemed adequate for this small pilot study that could then be used to guide further studies. Three parents agreed to participate in the study. Each potential participant was provided with an information sheet (Appendix 1), outlining the purpose of the study and contact details of the researcher. Each parent was

contacted by phone to confirm their willingness to take part and to arrange a suitable time and venue for an initial interview.

Criteria for participation in this pilot study were that

- Participants were first time parents with
- Babies who were aged between 5 weeks and 7 months.
- Spoke English as a first language

While first time mothers and fathers were welcome to participate in the pilot study, no fathers did so. This may have been due to work commitments or because mothers were considered by the fathers to be the main caregivers. Three first time mothers who met the criteria agreed to participate in the study. They were all self reported European/Pakeha and aged between 25-35 years. Two families lived within the city boundary while one lived in a rural area. Each mother had one child aged from 5 months to 7 months old at time of interviews.

### ***Ethical issues***

Ethical approval for this research was obtained from AUTECH and Northern X Regional Ethics Committee (NTX/05/10/138). Ethical approval for research studies requires consideration of anonymity, confidentiality, informed consent, potential for harm and conflict of interest. Ethical approval in New Zealand also includes ensuring that obligations as set out in the Treaty of Waitangi are honoured.

### ***Anonymity and Confidentiality***

Each participant was assigned an identity code and this was used with all data collected. Participants were advised that they could receive their own audiotapes and transcripts at the end of the study and had the right to withdraw or refuse to give information at any time during the time of the study. A pamphlet containing information about the Health and Disability Commissioner Code of Rights (1996) and appropriate telephone numbers was supplied to each participant, to ensure that they knew of their rights and my obligations to them. At the end of the pilot study audiotapes were returned to the participants or

destroyed-according to parents' wishes. Computerized records were password protected, with access to files limited to my research supervisor and myself. At the request of the Northern X Regional Ethics Committee, transcripts and data files relating to participants will be retained in a confidential file situated, in my supervisors office at Auckland University of Technology, for a period of six years and will then be destroyed.

Informed, written consent (Appendix 2) was obtained from all participants prior to interviews taking place. Prior to giving consent each participant was given an information sheet and was given the opportunity to ask questions and to discuss participation with others if they wished. Participants were contacted prior to and on the day of the planned interview to confirm their willingness and availability to take part. Prior to the interview, participants were made aware of their right to withdraw from the study, to refuse to answer any question and to ask for the tape recorder to be turned off at any stage of the interview, without having to explain why. None of the participants made such requests and no participants withdrew from the study. Signed consent forms were kept in a locked filing cabinet to ensure confidentiality.

While I felt that it was unlikely that harm to participants would occur, I was aware that my clinical role as home vaccinator for an immunisation outreach program might raise issues, within the interview process, that for mothers who may have deferred or declined immunization for their child, might be sensitive. Ensuring that the participants understood that my interest was in the process of how they had reached a decision, rather than about the decision itself, minimized this risk. From the beginning of the pilot study, I made it clear that my role was that of researcher and not a vaccinator. I also reiterated my firm belief that parents have a right to make an informed decision regarding this issue and purposely did not ask whether the child was vaccinated.

I was also aware of the possibility that my role of researcher might be compromised by requests from parents for information about vaccination or to have their child vaccinated. Prior to undertaking the pilot study I made a decision that if this occurred I would explain to the parents that this was not within my role as a researcher and refer them to their usual

well child provider or doctor. Neither situation arose, as all children were up to date with vaccinations at the time of interviews.

***Data Collection.***

Each participant chose to be interviewed in her own home, during the day. Participants were interviewed twice, over an eight-week period. Initial interviews lasted between 40-60 minutes. Each mother was asked an open ended question “tell me about how you made your decision as to whether your baby would be vaccinated at six weeks old” this allowed mothers to tell their stories, in their own words, with only occasional probing questions from me, such as “how did that help?” “Can you tell me how you felt about that?” Interviews were audio taped and field notes taken, using key words regarding actions, gestures and expressions. Audiotapes were delivered to a professional typist, who had signed a confidentiality agreement (Appendix 3). While the data was being transcribed I listened to a copy of the taped interviews several times in order to maintain closeness with the data. This also enabled me to identify areas for clarification and topics of inquiry for the next interview.

After all initial interviews were completed, each parent was interviewed a second time and this interview lasted approximately 30 minutes. The second interviews included more focused questions which helped to clarify some the statements made by participants in the previous interview and to introduce topics raised during interviews with the other participants. For example, asking one participant “can you tell me what you meant when you said that you “needed” to vaccinate at a certain time?” revealed that this mother liked to be organized and wanted make sure that she “kept to the rules” so that the child would be vaccinated at the right time. Another participant raised the issue of adverse media coverage about MeningococcalB vaccine, during the first interview. Introducing the topic to the other parents at the second interview enabled them to reveal their thoughts and reactions to the event. Each participant was welcoming and spoke with ease throughout each interview

### *Data Analysis.*

The constant comparative method of data analysis as described by Glaser (1978) was used to analyze the data in this small pilot study. Within grounded theory method researchers are required to simultaneously collect code and analyze data from the beginning of the study. As each interview transcript was returned to me each sentence was open coded line-by-line and incident-by-incident in order to identify processes in the data. Data was constantly compared with data from all other interview transcripts to identify similarities and differences. This entailed reading through the data with no preconceived codes and asking four questions of the data.

What is the data saying?

What is actually happening in the data?

What are the basic psychological issues faced by the participants?

What category does this incident fit?

Throughout the open coding process I read and reread interview transcripts comparing incident with incident and coding each sentence to arrive at as many codes as possible. These first level codes were constantly compared with first level codes from other transcripts and grouped into categories /concepts that described the underlying meanings and patterns of the data. Throughout the coding process concepts/categories were compared with other categories to see if they could be included in a core category. A core category represents a category that is central to the data, recurs frequently, relates meaningfully and appears to describe a dimension of the problem that could have a relationship to a formal theory (Glaser, 1978).

In order to capture analytic thought and hunches and to help put fractured data together memos were written throughout coding process and the rest of the study. These memos were handwritten and have been kept as part of the data. The grounded theory method regards theoretical saturation an integral part of the process of theorizing (Glaser and Strauss, 1967). While the sample in this small pilot study was too small for theoretical saturation to occur, four categories related to how these first time parents made decisions

regarding childhood immunisation, emerged from the data. These will be described in the next chapter.

## **Chapter 4**

### **Description of Parents Experiences**

Four key concepts emerged from the data. These concepts describe the experiences of first time parents as they made their decisions as to whether their baby would be vaccinated at six weeks old. The four key concepts are: ‘doing the right thing’ ‘doing the research’ ‘trusting’ and “protecting”

#### **Doing the right thing**

The first key concept that emerged from the data was ‘doing the right thing.’ This can be defined both as a goal and as a process. As a goal, participants in this study described ‘doing the right thing’ as meeting their responsibility as good parents to make a decision about immunisation that would be in the best interests of their children. As a process ‘doing the right thing’ relates to how these parents described the way in which various factors influenced their perception of what was the right thing to do for their child in relation to immunisation.

The first time parents who participated in this study were aware, in the early stages of pregnancy of the need to consider the issue of childhood immunisation and all indicated an initial intention to vaccinate their child. Parents’ eventual decisions, based on achieving the goal of the ‘doing the right thing” for their child, were made in the context of past and current personal experiences and knowledge as well as the socio-cultural and environmental factors that prevailed during the time that decisions were being made. Doing the right thing includes sub-concepts of ‘being responsible’ ‘conforming to the norm’ ‘keeping to the rules’ and ‘doing things properly.

#### ***Being responsible***

Participants in this study felt that, as parents, they were in a position of responsibility that compelled them to make decisions that they perceived to be the right thing for their child. Childhood vaccination is not compulsory in New Zealand. Parents have the right to make

informed decisions and to choose whether they will either accept or decline vaccination for their child. Decisions made on behalf of others are described as ‘surrogate’ decisions and Claasen (2000) claims that this takes decision making into the realm of ethics. Tessa considered that by vaccinating her child she was doing her duty as a good parent and that there is a moral imperative to do the right thing for him.

*“It never entered my head that we would not vaccinate. It is just one of those things that you have to do. I know it is not compulsory but as parents, you have a responsibility to do the most you can to keep your child safe.”*

Tessa: 1. p.1

Sam and her husband reserved their right to make their decision based upon what they perceived to be the right thing for their child. They acknowledged that they might need advice from friends or family at some stage although they considered that, as parents, it was their responsibility to decide whether their baby would be vaccinated and did not want anyone else to interfere with their decision-making process

*“My husband and I more or less made it plain when we were pregnant that this was our baby and that we would make any decisions that were to be made. We might ask for someone’s opinion about things but otherwise we would make any decisions ourselves and others could keep out of it.”*

Sam: 1. p.6

Ange’s feeling of responsibility and accountability for M’s welfare was expressed as she described how after he was born she anticipated that she would suffer feelings of regret if he suffered from a vaccine preventable disease for which he had not been vaccinated. Following M’s birth Ange decided that vaccination was the best way that she could think of to keep him safe from these diseases and give him the best start.

*“I would lie there looking into his cot and think “I would absolutely die if anything happened to you and I think I should get you vaccinated – because it’s the best I can give you”. Yeah - we wanted to do the right thing -give him the best start – keep him as safe as possible. That was the right thing for us an*

Ange: 1. p.3



McMurray et al. (2005) found that many vaccination decisions were based on personal experience rather than scientific evidence and that parents who accepted vaccination for their child were more likely to have experienced the long-term negative results of vaccine preventable infectious diseases. Ange's knowledge and fear of the potential consequences of vaccine preventable diseases and her commitment to keeping M safe, was a strong influence in her decision regarding immunisation of her child.

Sam also had experience of the potential consequences of vaccine preventable diseases and describes why she could not understand why parents would not vaccinate their children.

*My friend died from Meningitis B (MeNZB) at 22 years old. It's a horrible disease. Why would you wish that on anyone? If there is something you can do to prevent it, why not? The last thing you want is for your kids to get sick - and a lot of these diseases can have lifelong effects. I've never personally known anyone that had a reaction so for us it was the right thing to do.*

Sam: 1. p.6

As previously mentioned, Sam reported that she always intended that her son would be vaccinated. Raithana, Hilland, Gerrard & Harvey (2003) noted that parents feel very responsible for the potential consequences of their decision regarding childhood immunisation. Their study, regarding parental decisions to accept the controversial MMR vaccine, found that while some parents had a philosophical attitude towards potential side effects to vaccines others felt that a serious side effect would be intolerable. In contrast, other parents felt that they would be very exposed to criticism if their child suffered dire consequences as a result of a preventable infection. Sam's personal experience of the fatal consequences of meningococcal meningitis, as well as her confidence in the safety of vaccination in general, reinforced her perception that as a parent she had a responsibility to keep her son safe from diseases that can be prevented by immunisation.

While all participants in this small pilot study reported an initial intention to vaccinate there was considerable variation in the way that they made the final decision. Despite

Ange's knowledge of the potential adverse consequences of vaccine preventable disease she reports that, as a first time parent, deciding what was right for her son in relation to immunisation was a complex and daunting process.

*“Being first time parents it is quite nerve racking wondering what they are actually injecting into him and it was really daunting. I don't like needles myself and my first thought was “how on earth am I going to cope with taking him in for needles.”*

Ange: 1. p.7

In contrast Sam and her husband found that the decision to vaccinate their baby was not difficult to make.

*“It wasn't a huge decision for us, I guess that I sort of thought that we wanted to do all the right things for our baby. We were always going to vaccinate, there was no reason not to really.”*

Sam: 1. p.7

While personal experience and fear of the consequences of vaccine preventable diseases were major influences in participants' decision making relating to immunisation for their children, participants indicated that other personal experiences and socio-cultural factors influenced their perceptions of what was 'the right thing to do' for their children. In this study the socio-cultural influence of family and friends was cited as a major factor for some participants.

### ***Conforming with the norm***

The concept of 'conforming with the norm' relates to how family tradition and expectations regarding immunisation, as well as the attitudes and vaccination behaviour of friends and health providers, influenced parental decision-making regarding immunisation. Tessa describes how social norms and family tradition were influential in her decision regarding whether her son would be vaccinated.

*“Mainly I guess because it has been something that has always been done in my family and Paul's family too. I had been vaccinated as a child myself, I remember having all my inoculations at school and when we*

*were traveling overseas –so it never entered my head not to get him vaccinated - it just seemed to me the right thing to do.”*

Tessa: 1. p.3

Basing her decision on her personal experience and familiarity with immunisation, Tessa felt that she was doing the right thing by vaccinating her son and saw no reason not to do so.

Although Sam and her husband indicated that they did not want anyone to interfere or influence their decision regarding immunisation for their son, Sam describes how family and social norms did influence their decision.

*“All of us kids were vaccinated and so were my husband’s family. I don’t think that my parents would have thought twice about having us immunised, it was just something that needed to be done - so you did it. All my friends had immunised their babies. Although, I think that if we had said that we were not going to immunise him people would have had a bit to say. I don’t think that our parents would have approved.”*

Sam: 1. p.7

Petoussis – Harris et al (2002) maintained that parents such as Tessa and Sam, who value tradition and heritage, would listen to advice from influencers such as health professionals or family. The pervasive influence of health professionals is illustrated in this study as Tessa describes how, shortly before her son was due for his first vaccines, she learned that the MeNZB vaccine had been approved for administration to children from six weeks of age. While she was undecided about whether he would have MeNZB at six weeks old, Tessa took him for his routine vaccines at the times stipulated by the childhood immunisation schedule and sought advice from the practice nurse who was to administer the vaccines.

*“I hadn’t made up my mind about the meningitis one. I had about the others and took him in for those and asked the nurse whether he should have that vaccine then. She said that it (MeNZB) wasn’t being given till six months, although I knew that it was six weeks as I had read it in the media. Then she said that she wasn’t comfortable giving three injections at six weeks. She said “We’ll just do two this time and see how he reacts to those and we can give him this with the next one. So I thought well, if*

*that is what she is comfortable with, I trust her to make that judgment. So I went with the advice of the nurse.”*

Tessa: 1. p.4

My discussions with nurse vaccinators, at the time that MeNZB vaccine was initially approved for administration at six weeks of age, did indicate that while many were confident in giving multiple injections to older children during catch up vaccination events, some nurses did not initially feel confident in administering two injections into the small thigh of six-week-old infant.

Rather than acknowledging that she was not following the approved administration process, Tessa’s practice nurse had indicated that she did not feel comfortable in giving three injections because of an increased risk of side effects. Tessa was aware that the nurse was mistaken about the timing of the MeNZB vaccine but she believed that, in advising that the new vaccine be deferred until the baby was a little older, the nurse, as an expert in the field of vaccination, was following normal vaccination protocol. This created an impression that giving three injections at the same time might not be safe. Tessa’s perception of a potential risk to her child, as well as her indecision regarding MeNZB vaccination, led her to conform to what the nurse portrayed as a “normal” vaccination regime and therefore she agreed to defer this particular vaccine till the three month immunisation visit.

***Doing things properly.***

The concept of ‘doing things properly’ relates to how some parents in this pilot study perceived that by conforming to what they perceived as normal vaccination practice they believed that they were ‘doing things properly, in accordance with the standard criteria for administration for the MeNZB vaccine. Tessa describes how for her, doing things properly meant that each vaccine was given at the right time and in the right way.

*“I guess I wanted to follow the rules of how the vaccines should be given and make sure that he was vaccinated on time. Then we could relax, knowing that he was covered and that everything we have done for him had been done properly”.*Tessa: 2. p.1

Eyres-White and Thomson (1995) suggest that the experience a mother has with the first immunisation strongly influences her beliefs about, and behaviour to, subsequent immunisations and this was evident in my study. The practice nurse's reluctance to give M three injections at the at the six week visit had led Tessa to believe that she was acting properly in that this was the safe and correct way to approach to vaccination. Therefore when she took M for his second lot of vaccines, at three months of age, she expected that the same vaccination regime would be followed and was surprised when the nurse said that M could have all three sets of vaccines at the same time. Tessa had based her expectations for this vaccination event upon her previous experience and therefore did not consider that the process of administering three sets of vaccines at the same time was a safe and proper way to do things.

*For some reason I hadn't prepared myself to give him the three because that had really made me wonder if it was safe to give them all together. When I thought about it, I said "No, I won't have it today (MeNZB.) I decided to have it later, on its own. I made an appointment for four weeks before the next one was due so that I had the meningitis just on its own.*

Tessa: 2. p.5

Tessa felt that to continue to do things properly, she needed to make a decision based on what she perceived was the right thing for her child, regardless of the current advice of the nurse. The right thing for Tessa was to have the schedule vaccines at this visit but defer the Meningococcal B vaccine based upon what she saw as the rules of normal and safe practice.

By contrast, Sam describes how she felt when she discovered that she had not been informed that that her son could have the MeNZB vaccination when she took him for the six week vaccines.

*I found out about it at a coffee group. "My doctor never told me. I had to actually go in and enquire about having them done. My baby had already had his six-week ones but not the meningitis one. So he didn't get his first meningitis shot till he was twelve weeks. It should have been recommended, I would have had it with the six week jabs"*

Sam: 1. p.2.

As mentioned previously, Sam's friend's death from meningococcal disease had made her determined to vaccinate her son against this disease. Sam felt that the staff at the doctor's rooms had been remiss and had not acted properly towards her and her son by not advising her that the vaccine was available at the six week vaccine visit.

Participants in this pilot study indicated that deciding how to do things properly in regards to immunisation is dependent upon the context in which the decision is to be made. Tessa's previous reference to the 'rules' of immunisation were related to the correct way to manage the vaccination process so that the vaccines are given properly, such as when and how the specific vaccines should be given. However other rules, in the form of socially introduced regulations regarding childhood immunisation, influenced their how some participants made their decisions regarding vaccination for their child.

***Keeping to the rules.***

As seen in Tessa's story, participants in this study suggested that 'doing things properly' was closely related to following the rules. In Tessa's case it related to the correct way to manage the vaccination process so that the vaccines could be given properly such as when and how the specific vaccines should be given. However other rules, in the form of socially introduced regulations regarding childhood immunisation, influenced how parents made their decisions regarding vaccination for their child.

Sam and her husband indicated that they were always intending to vaccinate their child. Shortly after she became pregnant, someone told Sam that if her child was not vaccinated he or she would not be able to attend kindergarten.

*Just after I got pregnant someone told me that some kindergartens wouldn't let kids in if they haven't been vaccinated. I don't know whether that was true but it definitely added weight to our decision – because we knew that we would want our baby to go to kindergarten at some stage – so it seemed the right thing to do”.*

Sam: 1. p.2

The Health (Immunisation) Regulations (1995) confirm that parents are free to choose whether or not to vaccinate their child. However, a new regulation introduced at that time requires that when any child enrolls at school or pre-school the parents must present an immunisation certificate. This documents parental choice regarding immunisation and the child's immunisation status (Ministry of Health, 2006). Parents might see this as a coercive measure that compels them to vaccinate, however, children cannot be excluded from state schools or kindergartens because of immunisation status. Sam and her husband always intended that their baby would be vaccinated but their decision was reinforced when they thought that that he might be excluded from kindergarten if not vaccinated.

All participants in this pilot study identified 'doing the right thing' for their child as a major influence on their decision about whether their child will be vaccinated. While all participants declared an initial intention to vaccinate and having established that they wanted to do what they perceive as the right thing for their child, some participants found that "doing the right thing" for their child included the choice and ability to decline or defer vaccination. Participants in this pilot study found that they needed to look for information that would enable them to decide what was the "right thing to do" for their children.

### **Doing the research**

The next concept to emerge from the data was "doing the research". This concept relates to parents descriptions of how they sought and processed information that would help them to decide whether vaccination would be in the best interest of their child. Marshall and Swerisson (1999) found that some parents sought formal and informal information and the process was complex and burdensome while for others the process was cursory and associated with little anxiety. Participants in this pilot study differed in timing, amount, complexity and methods of seeking information. "Doing the research" involved parental action and interactions with various sources of information and includes four sub concepts 'Being Motivated'; 'Reading'; 'Talking' and 'Watching'

***Being motivated***

Although participants in this pilot study indicated that they were confident that they would vaccinate their child they all wanted to make sure that they were making the right decision. Participants described how they became motivated to learn more about the issue of immunisation.

*My husband and I thought about it when we were first thinking of trying to have a baby and right through the pregnancy. We just really looked into good reasons why we wouldn't do it.... It would have had to be something pretty major I just looked into it a little bit to be 100% sure*

Sam: 2. p.1 : Sam: 1. p.6

Despite Sam's intention to comply with the family and social norms the intention to vaccinate was not unconditional. She and her husband decided that they needed to be 100% certain that there were no reasons not to vaccinate. Sam describes how the need to be certain motivated her to investigate the polio vaccine when a lady at an antenatal class told her that polio vaccine had been linked to childhood cancer.

*"I grabbed some information about it and stayed up late that night reading about it. It was quite scary really. What if they'd had the immunisation and got cancer? I found more information, which said that the results of the study were inconclusive and that other studies had not found any evidence that the vaccine had caused cancer. Why did this woman mention it? It wasn't true but she had me quite worried and that's why I studied it.*

Sam: 1. p.5

Neuworth, Dunwoody and Griffin (2000) discuss motivation for seeking information. They suggest that people first of all decide whether potential threat is relevant and then decide what actions they might take in relation to the threat. Sam was motivated in this instance to seek information about the potential threat of polio vaccine because she was concerned for the safety of her child. This new information enabled Sam to refute the information that she was given about the polio vaccine and reaffirm her original intention to vaccinate her baby.



Tessa describes how, although she always intended that her baby would be vaccinated, she began to think about the issue of vaccinating her baby after her baby was born although she was initially concerned with the routine childhood vaccines

*“At the beginning you felt concerned about getting him here safely. After we got him home, I seriously thought about getting him vaccinated. Although with the meningitis one I guess we hadn’t thought about that one until he was about six weeks old, because that was when they brought it forward to six weeks.”*

Tessa: 1. p.4

Tessa felt that she did not need to consider the issue of vaccination until after her baby was born. She already knew that she intended to vaccinate the baby and did not have any concerns about the routine schedule vaccines. Prior to her son’s birth the MeNZB vaccine had not been available for children under six months old and MeNZB vaccination had not become an issue for Tessa and her husband during that time. In contrast, although Ange always thought that she would vaccinate, she began to investigate the issue of immunisation early in pregnancy. However she describes how she became motivated to learn more about vaccination for her child, as the need to make a decision grew closer.

*“I actually started when I first got pregnant., but when he was a couple of weeks old I got to thinking “its not that far from when he has them, do I really feel that I’m ready to make an informed choice?”.... Then I did some really hard out reading and doing research for about three weeks to four weeks”*

Ange: 1. p.3 : Ange: 2. p.2

Ange felt that she was responsible for ensuring that the decision she made on behalf of her son was based upon on an informed choice and realized that she needed to have more information on which to base her decision. Marshall and Swerissen (1999) found that for some first time mothers, immunisation became the focal life demand at a given point in time, particularly when the initial decision had to be made. Following the birth of her son, Ange was motivated to do some intensive research, mainly in the form of reading, during the weeks leading up to the first vaccination event.

### ***Reading***

All participants in this study identified reading as a major part of the process of making their decisions relating to immunisation and described several avenues by which they were able to access different types of written information about immunization. Participants accessed information from libraries and health care services. They found that brochures, leaflets pamphlets and other printed information, provided during pregnancy and after delivery, were useful although some participants felt that there were some areas which could be improved, particularly in relation to the amount of information given. Sam describes of her experience of reading the brochures and pamphlets.

*“Well, for people who aren’t into reading, the brochures keep it quite brief and that gets information to those people as well. They don’t say that you should do it so they are not biased. They don’t miss out the bad bits and they tell you about side effects and how to deal with symptoms but I don’t think they provided as much information as they could have. I guess when it comes to brochures they don’t want to put you off. They could give us more information on the diseases and what they can do to your kids. Then maybe more parents who don’t vaccinate their kids might get might get them done.”*

Sam: 2. p.6

St, Amour et al. (2006) examined the usefulness of vaccine information leaflets and found, as participants in this study have indicated, that parents felt that it was important that they received the pamphlets as they were considered useful sources of information. Fitzgerald and Glotzer (1995) discovered that many parents recognize the importance of knowing about the diseases that are currently prevented by immunisation as well as any contraindications to vaccination or potential adverse effects. .

New Zealand pamphlets and leaflets include information that relates to how parents should manage potential minor side effects of vaccination while also emphasizing the rarity of severe adverse reactions (Ministry of Health, 2002). Although Sam did not consider that these pamphlets were biased, she did consider that the brevity of the information in the pamphlets and leaflets was aimed at encouraging people to vaccinate by

not elaborating on the risk of potential side effects. Her commitment to vaccination as well as her lack of knowledge of some vaccine preventable diseases led her to suggest that more information about the diseases, and their potential consequences, might encourage parents to vaccinate and therefore should be included in the pamphlets.

However, Tessa was overwhelmed by the amount of childcare information that had been provided during and after her pregnancy. While she valued the information relating to immunisation she describes how she was selective in what she found useful in the immunisation brochures.

*“They were all very good and clear, particularly with the diagrams - they were helpful. Because at the same time you are given so many pamphlets and brochures about all sorts of thing, and you’re tired and if its too overwhelming to read --- I know you need something but you want something that is easy and quick and you can see at a glance what you are supposed to do. So the diagrams were good in that way.”*

Tessa: 2. p.1

Davis and Bocchini (1996) examined acceptability of vaccine information pamphlets and found that regardless of their reading level, most parents preferred a short, simply written pamphlet with instructional graphics. The New Zealand vaccine information pamphlets and leaflets include diagrams that clearly display the recommended timing of the vaccines included in the New Zealand Immunisation Schedule. Tessa wanted to make sure that her son had his vaccines at the right time and felt that the visual cues provided by the diagrams were adequate for her needs. Therefore, she considered that she did not need to pursue any other type of written information about immunisation.

Ange found that the pamphlets and leaflets provided by the Ministry of Health were useful, especially in regards to management of potential side effects to the vaccines. However, her need to make an informed choice motivated her to read information from other sources, as well as pamphlets and she also accessed information from the Internet. She describes how she found that some of the information that she read was not always easy to understand.

*“What put me off a bit was all of the medical terminology. I often wondered if there was some more down to earth literature for parents apart from the pamphlets. The pamphlets explain everything that you need to look out for in the first 24-48 hours after the vaccination but in terms of the research I did, a lot of it was medical.”*

Ange: 1. p.2

Some parents in this study felt that the knowledge they accumulated, from reading pamphlets and other written information, was sufficient for them to make an informed decision to vaccinate. However participants found there were situations in which they were motivated to talk about some of the issues that arose during the time they were considering and/or implementing their decision. While St.Amour et al. (2006) suggested that vaccine information pamphlets were found to be useful as tools for managing immunisation, parents found that they were less useful for the purpose of making informed decisions and concluded that that verbal communication is a necessary part of the vaccination decision-making process. The concept of “talking” emerged as participants described how they interacted with others to could gather information, which would better inform their decisions.

### ***Talking***

Within this pilot study participants indicated that it was predominantly the mothers who became actively involved with gathering information about immunisation. They describe how they did the reading and then discussed the information with their husbands.

*I would just read up the stuff and read bits out to him. We discussed it a bit but he didn't have much to say. If he had thought strongly the other way he would have said so.*

Sam: 1. p.2

Ange describes how when she found that the information she read included a lot of pro-immunisation material. To make an informed decision, she decided to find information that did not support immunisation and discussed the issues with a friend who is a scientist and had not vaccinated her own children. While her friend helped Ange to access this type of information from websites and books, Ange describes how she was selective about what she used.

*“There’s a lot of pro- vaccination stuff out there but you don’t hear a lot about where you can go for information that is anti-immunisation. Talking about it was more helpful because I was able to look at both sides of things. But I didn’t read nearly as much anti-immunisation stuff as pro immunisation. I don’t know whether that was really because I was more inclined towards immunization”*

Ange: 2. p.2

Ange describes how she was able to talk with several health professionals as she made her decision as to whether or not her son would be vaccinated.

*“I spoke to a lot of people. Friends and colleagues I worked with as a teacher, talking to people who had immunised their kids and some who had not and we consulted the doctor, midwife and Plunket Nurse on absolutely everything. Because we wanted to do everything right for him.”*

Ange: 1. p 2 : Ange: 1. p.8

Ange felt comfortable talking with the health professionals and other people she consulted although some participants were selective about whom they would ask for more information. Tessa describes how she might consult the practice nurses at her GP clinic but was selective as to which nurse she sought advice from.

*One nurse always seems to be having an off day when I go and I don’t think its personal but she is just not as approachable as the other nurse. I would rather see the other nurse because you can ask her anything and she would go out of her way to accommodate you.*

Tessa: 1. p.9

Participants in this current study found that discussions with other mothers, colleagues and health professionals were helpful in relation to making their decisions regarding immunisation. Tessa and Sam describe how they spoke with friends as well other women in their antenatal group.

*It is something that is quite talked about. I have a lot of friends who talked about taking their kids for vaccinations.*

Sam: 1. p.7

*“It wasn’t discussed in the antenatal classes. It was more talking afterwards with other women in the class and other mums I had met.*

Tessa: 1. p.6

A New Zealand study has revealed that, as indicated by participants in this study, some parents do receive written and/or verbal information from midwives and other health professionals, during the antenatal period (Petoussis-Harris, Boyd & Turner. 2004) The amount, type, accuracy and sources of information made available to parents were variable. Sam found that the information available was not always consistent

*“Some of it, I could read two different things, It would be good if it all said the same stuff.”*

Sam: 1. p.6

Petoussis-Harris et al (2004) found that written information provided at antenatal classes often included information that was pro-immunisation as well as some information that did not support immunisation. While this might be seen as providing information that gave parents a balanced view of the issue of immunisation, the conflicting information could be confusing unless parents were advised about the tenor of each pamphlet/ leaflet they received.

At the time that MeNZB vaccine was approved for administration to infants from six weeks of age the vaccine became a topic of media discussion when prominent politicians questioned the safety and efficacy of the vaccine. Several television current affairs and news programs included items and / or debate about the issues that arose from the comments. Some participants reported that they became concerned about the safety of the vaccine following the initial program although others dismissed the information, mainly because of its source. Sturm al (1995) found that media coverage of vaccine related issues is a major source of information for many parents about vaccines and vaccine preventable diseases and that information from newspapers, television, radio and the internet is undoubtedly a factor in parent’s decision making. Serpel and Green (2006) cite Lawrance (2004) who found that articles about the risks of not vaccinating were rare. Tessa

describes how she and her husband watched each television program so that they could keep up to date and listen to both sides of the issue.

*“I wanted to hear all the things that were being said because this was going on at the same time as he was having his vaccines. We watched all the programs like ‘Sunday’ and all those type of programs...so that we would listen to both sides of what was going on. Because you don’t know who is an expert and who is qualified to comment on whether it’s safe or not or who is just doubting.”*

Tessa: 2. p.13 : Tessa: 1. p.3

While Tessa had no concerns about the normal schedule vaccines she was not yet convinced about the Meningococcal B vaccine. As previously mentioned participants had difficulty in accessing information about the Meningococcal B vaccine and much of the information available about this vaccine was accessed through media reports about progress of the program and of alleged adverse effects of the vaccine. Tessa she felt that by watching the television programs and listening to both sides of the issue she might be able to discover which sources of information were reliable and trustworthy.

Within this study participants indicated that “doing the research” in relation to making their immunisation decisions entailed seeking information from a number of different sources and were often dependent upon other people for information and advice. Casiday (2005) maintains that seeking and assessing information about the vaccine is a crucial part of the decision making process and suggests that the ways that individuals evaluate these reports and make decisions are crucially informed by trust. The concept of ‘trusting’ emerged in this pilot study as participants described how they assessed the source and reliability of the information and advice they had received.

### Trusting

The concept of trusting relates to how participants decided whether the information they were given, as the well as the sources of information, were trustworthy and whether it would be useful as they made their vaccination decision, based on what was the right thing to do for their child. Ange describes why she did *not* watch the television programs

because she did not trust the sources of information and because she had confidence in the safety of the MeNZB vaccine.

*“We didn’t take a lot of notice of it, probably because they were politicians. Because we know our doctors, we’ve met them we trust them with our own lives and have that same trust with M’s. Politicians are a different kettle of fish. They all have their own reason for saying things, I don’t know them and have never met them. So we didn’t take much notice of them.”*

Ange: 2. p4

However there was some variation in parents’ confidence in relation to the newly introduced MeNZB vaccine and this influenced how they made their decisions about this vaccine. Sam describes how she was always confident that the MeNZB vaccine would be safe for her son.

*“I was glad that they were doing it on the older babies first so that if there was a major side effect quite quickly they would have to do something about it. You have to trust the doctor; if something had been terribly wrong with it they would have withdrawn it quickly. I’m sure they wouldn’t give babies a bad vaccine if they knew about it.”*

Sam: 2. p.3

Ange describes how making a decision regarding whether her son should have the MeNZB vaccine was not quite so easy but that in this circumstance they just had to trust the health professionals.

*“It was an entirely different decision to the general vaccines that are tried and true and have been around for years. You can have confidence in them. .... Our doctor was giving us information about the vaccines and we trusted that information. I told my husband that sometimes you have to take a leap of faith and trust that you have made the right links and they (the health professionals) have got it all right. So we went ahead and had him done.”*

Ange: 1. p.9 : Ange. 2. p.4



Tessa found that despite the adverse publicity about the MeNZB vaccine, her husband was keen for M to be vaccinated against this disease as soon as possible.

*“Even though there was doubt you have to have faith in the researchers that they have done it all properly, because it (the vaccine) was new for everybody in New Zealand. You have to trust the medical profession because they have been doing this (vaccinating) for a long time.”*

Tessa: 1. p.3 : Tessa; 2. p.7

All participants in this small pilot study expressed trust in health professionals as well as confidence in the safety of the vaccines that are part of the national vaccination schedule. Gilson (2003, p1454) maintains that trust is “a relational notion, based on expectations of how people will behave in relation to yourself in the future.” This is supported in my pilot study as the participants have described how their decisions in relation to acceptance of the MeNZB vaccine were based on trust, with an expectation that the safety of their children would be of paramount importance to the health professionals and those involved in manufacture and administration of the MeNZB vaccine.

## Protecting

When making decisions on behalf of their children the prime objective of the parents in this study was to protect their children, and themselves as parents. Protecting emerged as a concept as parents described how by vaccinating they were protecting their child by preventing harm and in doing so it gave the family a sense of feeling safe from the consequences of the vaccine preventable diseases.

As previously reported, the participants in this pilot study had acknowledged their responsibility to keep their children safe and well and part of their strategy to do this was to prevent their children from contracting vaccine preventable diseases. Ange felt that she and her husband had protected their son by vaccinating him.

*“We were definitely protecting him, while he was too little to protect himself from the diseases... We wanted to be doing something to protect him and be prepared for whatever we can.”*

Ange: 1. p.6 : Ange: 2. p.4

However, protecting the child was not always related to the decision to vaccinate the child as was demonstrated earlier. In this current pilot study, Tessa felt that she was protecting her son when she deferred the MeNZB vaccination rather than give three injections at the same time. In contrast, Rathaina et al. (2003) Sporton and Francis (2001) and Wroe et al. (2004) found that some parents who do not vaccinate choose this option because they want to protect their children from the potential consequences of adverse reactions to vaccination. It is clear that in making their decisions regarding vaccination of their children the prime objective of the parents, in both situations, is to protect their children from harm.

Some parents in this small pilot study reported that they did not enjoy the experience of seeing their children having the injections although they all found that by vaccinating their children they had provided a degree of protection for themselves. As previously mentioned, Sam indicated that, because there was a strong family norm that children would be vaccinated, she and her husband would face disapproval from both of their families if they had chosen not to vaccinate.

All participants reported having “peace of mind” when their children had been vaccinated and were protected against the diseases. Sam describes her feelings.

*“We definitely enjoyed knowing that he had been immunized and giving him protection against the diseases basically meant peace of mind for us. I mean I know that it is not 100% effective but he wouldn’t have any protection if he had not been immunised.*

Sam: 2. p.1

The first time parents who participated in this pilot study had different needs and reasons for deciding whether or not they would accept vaccination for their children. However they all expressed satisfaction with their eventual decisions and have indicated that they would use the same processes again if they have more children.

Within this small pilot study, four main concepts have emerged from the data. These included 'Doing the right thing' 'Doing the research' 'Trusting' and 'Protecting'. As first time parents, the process of deciding whether or not to vaccinate their baby is arguably the one of first childcare decisions they must make on behalf of child. Findings from this small pilot study suggests that this process involves negotiation of various pathways as parents interact with a variety of health professionals and other sources of information or misinformation that might help or hinder the decision making process towards making an informed decision. However, ultimately, whatever the decision making process or the decision made, the families in this study all expressed satisfaction that they had made the right decision in regard to protecting their child.

## Chapter 5

### Discussion

All first time parents who participated in this small pilot study declared an initial intention to vaccinate their children. However this study has revealed that their intentions were not unconditional nor did these parents make their vaccination decisions lightly. This pilot study also highlights the influence that health professionals can have upon the decisions that parents make in relation to vaccination for their children. The four key concepts that emerged from the data ‘doing the right thing’ ‘doing the research’ ‘trusting’ and ‘protecting’ have implications for clinical practice within the areas of childhood immunisation in general practice.

#### **Implications for clinical practice**

This has been a small, qualitative descriptive, pilot study and while findings cannot be generalized to other populations the findings support that of other studies and as such some recommendations for practice can be suggested. These recommendations relate to:

- Facilitation of informed decisions.
- Education and support of vaccinators
- Information for parents.
- Introduction of new vaccines

#### ***Facilitation of informed parental decisions***

This small pilot study has revealed that the amount and level of information that parents need in order to make their vaccination decisions differs. However the vaccinator has an ethical responsibility to ensure that a parental decision is informed by evidence by providing any information required by the parents prior to the vaccination event. New Zealand research shows that the amount and type of written information that parents are given in the antenatal period varies and that for some parents there is no opportunity to

discuss the issue with their midwife during the antenatal period (Petoussis-Harris, Boyd & Turner, 2004). Yet parents need to make a decision whether not to vaccinate shortly after the birth of the child if vaccines are to be given at the time when they are most effective. If an informed decision is to be made it is important that first time parents are given the opportunity to discuss issues and any concerns about immunisation. Parents need to know who to ask if they need more information. First time parents who participated in this pilot study have reported that immunisation is often discussed among parents who attend antenatal coffee groups, rather than in the antenatal class. If midwives are not able or willing to include the topic of childhood immunisation as part of the routine antenatal classes, parents should be offered the opportunity to hear and discuss the issue with a practitioner who is able and willing to do so. For example: On discharge from hospital, first time parents could be given a written invitation, congratulating them on the birth of their baby and inviting them to take their child for immunisation on the due date and to contact their local immunisation coordinator by phone or in person if they need further information or to discuss any concerns they may have.

#### ***Education and support of vaccinators***

Immunisation standards stipulate that vaccinators should administer all vaccines recommended for each vaccine visit (Ministry of Health, 2006). Prior to the introduction of the MeNZB vaccine for children under six months of age, practice nurses had not needed to administer more than one vaccine to a single limb of small infants. Findings from this small pilot study indicate that some vaccinators were not confident in administering multiple injections into the small thigh of six-week-old babies and that this contributed to the perception of some parents that this was not safe practice. While it might be anticipated that vaccinators would become more confident with the vaccination technique as they become more experienced with the vaccination program it is vital that the timeliness of vaccinations is reinforced and the multiple injection technique encouraged. The administration of multiple injections to one limb is now included in vaccinator training courses and updates. However, some practice nurses would have completed their courses well before the vaccine was approved for use in New Zealand. While most vaccinators attend update sessions every two years, many nurses would not

received practical training regarding the procedure. As more vaccines become available there will be a need for the provision of timely education to practice nurses and other vaccinators regarding the diseases, content of vaccine, and route of administration well before they become available for administration. Immunisation coordinators from Primary Health Organisations and District Health Boards will need to offer support and encouragement to vaccinators as the new vaccines become available, especially to inexperienced vaccinators and those who may need encouragement to adopt the new regimes.

***Information available for parents.***

Some participants in this pilot study identified a need for more detailed information than is currently available in the pamphlets and leaflets available from the Ministry of Health. In particular, some had little knowledge of the vaccine preventable diseases and wanted to know more, while others wanted to know more about immunisation and the vaccines but were not able to understand the medical/scientific language of the information she accessed. Others were interested in knowing about the qualifications and interests of the people who make claims about the vaccines. Research has shown that parents consider the pamphlets useful for management of immunisation event and care of the child afterwards but not so useful for making informed decisions. (St. Amour, et al. 2006). It could be useful if parents were offered a list of useful websites and books etc. that could be easily understood and yet are more comprehensive than pamphlets. This list should include counter immunisation information as well as pro-immunisation literature sources, but could also indicate the tenor and qualifications of the sources so that parents would know which support immunisation and those that are less supportive.

***Introduction and management of new vaccine programs:***

The main focus of this small pilot study has been to discover how first time parents made decisions in relation to vaccination of their six week old child. However the introduction of the MenzB vaccine, at the six-week vaccination event, added another strand to decision-making for these first time parents. This pilot study has revealed that, for these parents, the decision to accept or decline simultaneous administration of this 'new'

vaccine, was difficult in comparison with the normal schedule vaccines, about which they had few or no concerns. Reid (2006) discusses the New Zealand immunisation schedule and suggests that several more vaccines, such as Pnuemococcal, Rotovirus and Meningococcal C may be introduced for infants when the national immunisation schedule is reviewed in 2008. He suggests that it is very likely that the addition of these vaccines will entail administration of more than three injections at the same visit. A survey of physicians and parents (Woodin et al.1995) revealed that parents appear to have less concerns than health providers in relation to administration of multiple injections at the same visit and that parents' main concerns were centered around pain for the infant or the potential for more side effects. This small pilot study has revealed that some health professionals, because of their own lack of confidence in the procedure, have misled parents and created doubt as to the safety of multiple injections in one limb. The first time parents in this pilot study have expressed concern about lack of information about the Meningococcal B vaccine during the antenatal period and they have also stated that they did not like watching their children having their injections. Raithana et al. (2003) suggest that, when parents are weighing up the risks of vaccines against the risks of disease they also consider the immunisation process. The authors warn that it should not be assumed that parents who currently immunise would continue to do so. There is no guarantee that other groups of first time parents will accept even more injections for their six week old children without being given timely information and explanations as to the need for simultaneous injections and the safety of the procedure. A method of relaying information regarding the administration of multiple injections will need to be developed by the Ministry of Health and introduced to parents, as well as health professionals, well before the introduction of any new vaccines so that they can seek further information of desired and make informed decisions prior to the vaccine visit.

### **Limitations of the study.**

This small descriptive pilot study has several limitations. In this study a purposive sampling method was used. While this enables the researcher to find participants who can give a rich description of the phenomenon being studied it also inhibits the ability to

obtain a representative sample and therefore research results cannot be generalized to the wider population nor can a general theory be developed.

All three participants in this study identified as European and were all first time mothers therefore the results cannot be generalized to first time parents who do not identify as European.

While mothers and fathers were invited to participate in this study only mothers did so. Therefore the lack of the fathers' perspective in this study prohibits generalization of the study to all first time parents. All of the mothers who participated in this pilot study indicated that they had always intended to vaccinate their children and this pro-immunisation stance prohibits generalization of the results to parents who choose not to immunize.

Participants in this study were married and from middleclass professional families and the findings cannot therefore be generalized to single parents or those from lower socioeconomic populations.

A potential limitation to a qualitative descriptive study is whether or not the data is **trustworthy**. Strauss and Corbin (1995) maintain that reproducing social phenomena can be difficult as it is almost impossible to replicate the original conditions under which data was collected. However they suggest that another researcher, following the same general rules for data gathering and analysis and in similar conditions, should be able to find a similar explanation of the same phenomenon. Within this report I have provided an outline of my research procedures and this should allow another researcher to follow the process.

Giocomini and Cook (2000) discuss evaluation of rigour in qualitative research and maintain that this requires that qualitative insights about social or personal experiences must correspond well to the social reality experienced by participants and have meaning for those who will read and learn from the report. I have shown and discussed parts of this



report to colleagues who are vaccinators as well as a number of well child providers who work with first time parents and promote vaccination. The feedback from these groups has been positive and they have commented that what they have read and heard

Lincoln and Guba (cited Byrne, 2001) developed criteria for evaluation of the trustworthiness, of qualitative research. These criteria are credibility, dependability, fittingness and confirmability.

**Credibility** refers to the truth of the findings as viewed through the eyes of the participants and is sought through member checking. This is a process whereby the researcher returns data to participants and asks them if this is what they were saying. (Cirgin-Ellett and Beausang, 2002). Interview transcripts were returned to the participants in this small pilot study so that they could verify that the data was truthful. Participants agreed that the transcripts described their experiences accurately. While writing up the research I have used the participants' own words to describe their decision-making experiences in relation to the concepts that emerged from the data. My interpretation of the data has been presented to my research supervisor and several colleagues within my work environment. These people were able to confirm that the concepts that I was identifying were appropriate to my research topic. I have also presented my study to a group of students and faculty staff and Auckland University of Technology and received positive feedback in support of my findings.

**Dependability (Auditability)** refers to the extent to which research would produce similar findings if carried out as described. (Devers et al (1999) cited Cirgin Ellett and Beausang (2002). Koch (1994) suggests that one way to achieve dependability is for the process to be audited. Throughout this study I have developed an audit trail that provides documentation of my research process, including sampling strategy, data collection and analysis as well as an explanation of the concepts that emerged from the data. This should enable readers and other researchers to evaluate my research process for usefulness if they wish to conduct a similar study.

*Fittingness or transferability* relates to the faithfulness of the researcher to the everyday reality of the participants. To meet this criterion, the researcher should provide sufficient contextual information to make similar judgments possible for others (Koch, 1994). The context of the study and characteristics of the first time parents in my study have been documented and this should allow other researchers to assess the usefulness of the study to their area of interest.

*Confirmability* of the findings requires that the researcher shows the way in which interpretations have been made during the study (Koch, 1994). Cirgin-Ellett and Beausang note that this often involves obtaining direct affirmation of what the researcher has heard and seen, while Guacomini & Cook (2000) suggest that research findings should indicate where the findings relate to scholarship in the field. Throughout the data collection and analysis I have referred to the literature to either confirm or refute concepts as they emerged from the data. This adds to the trustworthiness of a study by showing the connections between data and the researchers interpretation of the data. It is suggested that peer review of the data analysis is another useful method of ensuring confirmability (Guba & Lincoln 1985.) and this has occurred within my study. Sandelowski (1986) claims that confirmability is assured if the criteria of credibility, fittingness and auditability are met and I believe that this has been achieved within my study.

### **Areas for future research**

While the findings of this small qualitative descriptive pilot study can not be generalized to other populations, it would be useful to investigate the decision making experiences of other first time parents to identify similarities and differences to the processes that were outlined by the participants in this current study.

This pilot study has focused on the decision-making experiences of three first time parents who identified as European. The vaccination rate of two year old Maori and Pacific Island Nation children is known to be lower than that of European children and therefore it would be useful to investigate the decision making behaviour of first time parents from these cultures. All parents in this pilot study decided that their children would be

vaccinated and therefore it would be of interest to explore the experiences of parents who decided not to accept vaccination for their children. As only mothers took part in this pilot study, a study that involved first time fathers may offer other perspectives on the processes used in mothers' decision making, as would a study that examined the issue from the perspective of single parents.

Several studies have considered barriers that inhibit vaccination of children from low socio-economic populations. It would be interesting to compare decision making in these groups with parents from higher socio-economic groups in relation to philosophical reasons that influence their decision relating to childhood immunisations.

A further avenue of study that is suggested by the data in my small pilot study would entail investigation of the experiences of practice nurses and other vaccinators as they began to administer a new regime of three injections to six-week old babies during the Meningococcal B vaccination program. Findings from such a study might inform preparation and support for practice nurses and other vaccinators during future vaccination programs that may require even more injections to be administered at the same time.

## **Conclusion.**

The majority of published studies concerning parental decision-making in relation to childhood immunisation includes mothers with one or more children and relate to factors that create barriers to immunisation. While some have included first time mothers there is a lack of studies that explore the process of vaccine decision making from the perspective of first time parents.

All participants in this small pilot study felt that they had a responsibility to “do the right thing” and to make vaccination decisions that would enable them to keep their children safe and healthy. Through conducting this pilot study, I believe that I have provided some insight into the experiences of these first time parents as they were making their decisions. The findings of this pilot study have implications for clinical practice particularly in relation to education and support for first time parents and vaccinators. As new vaccines

become available for administration to New Zealand children it is important that first time parents are supported by all health care providers to make informed decisions that are based on evidence and safe practice.

## APPENDIX 1

### Participant Information Sheet

**Project Title: Decision making by first time parents regarding childhood vaccination: A pilot study.**

**Researcher :**

Elizabeth Dunn  
20 Chester Avenue  
Onerahi  
Whangarei  
Phone; 09 4361437  
Email: [betty.dunn@xtra.co.nz](mailto:betty.dunn@xtra.co.nz)

Dear

You are invited to join a research study that is looking at how a first time parent decides whether or not their baby will be vaccinated at six weeks of age. Please read this sheet and decide whether or not you might want to take part.

**What is the purpose of the study?**

The purpose of this study is to find out how a first time parent describes the process by which they make decisions as to whether not their baby will be vaccinated at six weeks of age. This study is being undertaken as a dissertation which is part of the requirements for the Master of Health Science Program that I am currently undertaking through the Auckland University of Technology.

**How was a person chosen to be asked to be part of the study?**

Parents who are invited to be part of the study will be a parent whose first child between 5 weeks and 7 months old and are either in the process of deciding or have already made a decision to either accept, defer or decline vaccination for their baby.

**Can I join the study?**

Participation in this study is entirely voluntary. If you are a first time parent with a baby aged between five weeks and seven months, you will be welcome to join the study if you choose to do so

**What happens in the study?**

You will be involved in one or two interviews lasting approximately 30-90minutes. The interview will be conducted either at your home or at a place that is private, convenient and agreed upon by us both. During the interview, I will ask you questions about the process by which you went

about making a decision about vaccination for your baby but you will not be asked to reveal the outcome of your decision.

The interview will be audio taped and then transcribed by a professional typist. The contents of the tape and the transcript will be confidential to the typist and to me. In order that your identity can be protected you will be asked to choose a pseudonym or false name that will be used on all tapes, transcripts used in the study and in reports of the findings. Following the interview you will be given a copy of the transcript and will be invited to add further comment or to delete any part of the interview you do not wish to be included in the study. At the end of the study your audiotape and transcript will be offered back to you or destroyed, whichever you prefer. When the study is completed you can receive a copy of the research report, if you so wish. The study findings will be submitted for publication in national and international journals and may be presented at appropriate forums.

### **What are the discomforts and risks?**

I do not anticipate that there will be any discomfort or risk to you from participating in the study. However, occasionally some issues may arise that could be distressing or stressful for you. You do not have to answer every question and you may stop the interview at any time. Should any issues, arising directly from the research, cause distress, counseling can be provided at no cost to you.

### **What are the benefits?**

There will be no direct benefits to you or your child from participating. However, some people who have participated in this type of research have found it helpful to have an opportunity to tell their story. I also hope that this study will improve our knowledge about things that support and strengthen first time mothers during the time they are making this decision.

### **How is my privacy protected?**

To ensure your privacy and confidentiality, the information you give will be identified using a false name. However, you must be aware that the exception to confidentiality may be breached if the interviewer has significant concerns about the safety of yourself and/or others.

Any identifying information such as location, institutions, or people will be removed from the transcript. The typist will sign a confidentiality agreement so that the taped information will be kept private. All the study data collected will be kept in a secure place, and the audio tapes will be offered back to you, or destroyed when the research is completed. The data will be destroyed after ten years.

### **Opportunity to consider invitation**

You may wish to take time to consider whether you would like to take part in the study. If you do choose to be involved in the study you can contact me either by phone, email or in writing to the attached contact details at any time during the next two weeks. If I do not hear from you within two weeks, I will contact you by telephone to see if you are interested in talking with me. If you do consent to take part in this study you have the right to withdraw at any time, and decline to answer any questions. If you do agree to take part you are free to withdraw from the study, including withdrawal of any information provided, until data analysis is complete. After that time it may be impossible to separate data from individuals. If you choose to withdraw you do not

have to give a reason. Your decision will be respected and I will not try to persuade you otherwise

### **Participant Concerns**

Any concerns regarding the nature of this project should be notified in the first instance to Dr. Annette Dickinson Phone: 09 9219999 ext. 7337

If you have any queries and concerns regarding your rights as a participant you may wish to contact a Health and Disability Advocate – telephone 0800555050.

**This study (NZT/ 05/10/138) has ethical approval from the Northern X Ethics Committee**

## APPENDIX 2

### Participant Consent Form

Title of Project: **Decision making by first time parents  
regarding childhood vaccination:**

**A pilot study.**

Researcher: Elizabeth Dunn

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- I have read and understood the information provided about this research project (Information sheet dated 20<sup>th</sup> October 2005)
- I have had an opportunity to ask questions and to have them answered, to use whanau support of a friend or family members to help me ask questions.
- I understand that the interview will be audio-taped and transcribed.
- I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- I understand that my participation in this study is confidential and no material which could identify me will be used in any reports on this study. If I withdraw, I understand that all relevant tapes and transcripts, or parts thereof, will be destroyed.
- I understand that the research findings will be offered for publication in national and international journals.
- I am satisfied that I have sufficient information and time to enable me to make an informed decision to take part in this research.
- I wish to receive a copy of the report from the research: tick one:  
Yes  No

I hereby consent to take part in this study

Participant Signature: .....

Participant Name: .....

Participant Contact Details (if appropriate):

.....  
 .....  
 .....

Date:.....



**APPENDIX 3**

**Typist Confidentiality Agreement**

**Title of Project:**      **Decision making by first time parents regarding childhood vaccination.**

**Researcher(s):**              Elizabeth Dunn



I understand that all the material I will be asked to transcribe is confidential. I understand that the contents of the tapes can only be discussed with the researchers. I will not keep any copies of the transcripts nor allow third parties access to them while the work is in progress.

Typist's signature: .....

Typist's name: .....

Typist's Contact Details: .....  
.....  
.....

Date: .....

**This study (NZT/05/10/138) has ethical approval from the Northern X ethics committee.**

## APPENDIX 4

### Example of Data Analysis

Parent's Narrative	Actions and Intentions.	Concepts
<p>Ange, When I started thinking about it, the more I thought about well, for a little bit of pain now I could save him a lot of pain later because I wanted to - prevent him from going through anything that was unnecessary, keep him safe.</p> <p>I spoke with a lot of people. Friends and colleagues whom I'd worked with as a teacher. A lot of parents I know from around the place and I tried to take the good the bad from those, The more I read about it the more I thought I would do it. I told my husband –sometimes you have to take a leap of faith and trust and pray that have made the right links and they have got it all right.</p>	<p>Preventing harm.</p> <p>Keeping safe</p> <p>Talking</p> <p>Judging</p> <p>Reading .</p> <p>Hoping</p>	<p>Protecting</p> <p>Doing the research</p> <p>Doing the right thing</p> <p>Trusting</p>
<p>Tessa</p> <p>I wanted to be sure that I did things right. I knew that the baby should be vaccinated early on and I guess I wanted to follow the rules of how the vaccinations should be given and make sure that he was vaccinated on time.</p> <p>I remember they had all the leaflets in that with the - with all the times and what the vaccinations were for - so I read them thoroughly to make sure I understood what - what it was for and when to do it and I booked in advance with the doctors so that I would be dead on the six weeks - I don't think that it ever entered my head that we would not vaccinate.</p> <p>It is just one of those things you have to do. I know it is not compulsory - but you know – as parents - you have a responsibility to do the most you can to keep your children safe and healthy</p>	<p>Doing things properly</p> <p>Keeping to the rules.</p> <p>Reading</p> <p>Normal thing to do.</p> <p>Being responsible.</p> <p>Keeping safe.</p>	<p>Doing the right thing</p> <p>Doing the research</p> <p>Conforming with the norm</p> <p>Doing the right thing</p> <p>Protecting</p>
<p>Sam.</p> <p>I read a lot about it, like, got the brochures and books and did a lot of reading and I would talk to him about it - and I also talked to my friends about it. All of us kids were vaccinated and so were my husband's family. In fact I don't think that my parents would have even thought twice about having us immunised—it was just something that needed to be done - so you did it</p>	<p>Reading</p> <p>Talking</p> <p>Family norm</p>	<p>Doing the research</p> <p>Conforming with the norm</p> <p>Doing the right thing</p>

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