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Executive Summary

Childhood immunisations are important in the prevention and control of infectious diseases. Currently children are immunised against ten infectious diseases and the national target for immunisation uptake is 95%, the level at which will prevent outbreaks of disease. The most recent immunisation uptake statistics in the Western Health Board fall below this target, especially the MMR vaccination.

It is necessary to understand the factors contributing to poor immunisation uptake and only then can this low uptake be addressed, this study used both quantitative and qualitative methodologies. A questionnaire was designed to examine parent's beliefs, attitudes, knowledge, past and intended behaviour in relation to childhood immunisation. 84 parents's agreed to complete the questionnaire. Semi structured interviews were carried out with nine purposefully selected parents. There was representation of parents who have had their child immunised, those who have chosen not to have their child immunised and those who are ambivalent to immunisation. The interview topic guide focused on the immunisation process as experienced by parents and the identification of barriers to immunisation. Semi structured interviews were also carried out with ten immunisation service providers. The interview topic guide focused on the immunisation process as experienced by the provider, identification of perceived barriers to immunisation and identification of potential improvements to the current process.

Overall the study has identified that parents have a fear of vaccines and have expressed mistrust in the health services. Health professionals have recognised this mistrust and the need to improve community confidence in childhood immunisations. Parents are receiving conflicting messages from a number of sources such as the media and within the health services. However parents have expressed satisfaction with some factors within the healthcare system such as the clinic staff and clinic hours.

In order to achieve and maintain the 95% national target uptake level for childhood immunisations confidence of parents in childhood immunisations and trust of the service must be achieved and maintained. This involves education of both parents and health professional. Parents require more accurate, evidence based information in order for them to make an informed choice on whether or not to immunise their child. Health

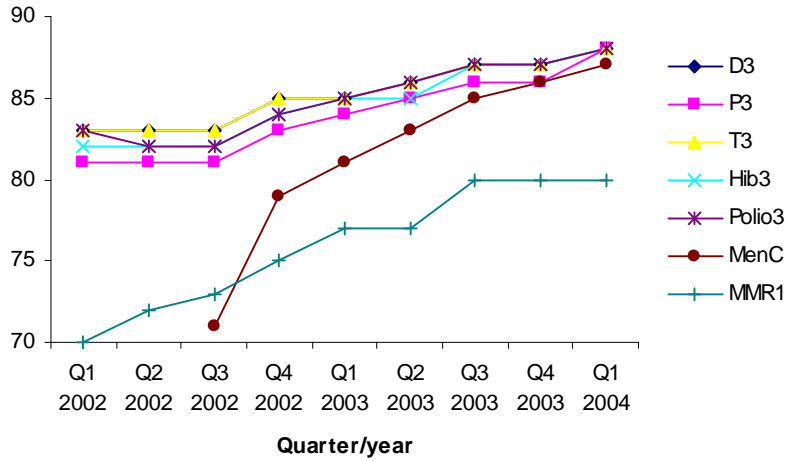
professionals must receive consistent education, be aware of parental concerns and the factors that can adversely affect uptake levels.

1.0 Introduction

The World Health Organisation identified that in the 21st century it is the right of every child to live free from vaccine preventable diseases. Immunisation is one of the major public health interventions that has had a huge impact on the world's health and prevents illness or death for millions of individuals every year. However immunisation, the most cost effective public health intervention, continues to be under used (Plotkin & Mortimer 1994).

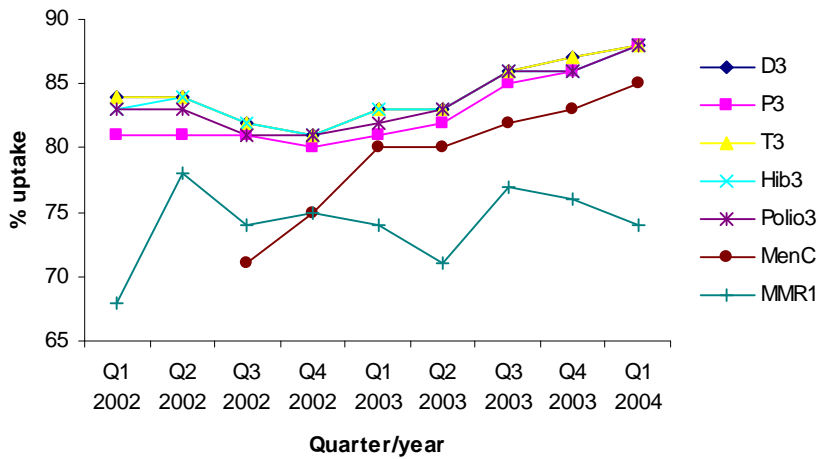
The most recent statistics from the National Disease Surveillance Centre for quarter 1 2004 show the uptake rate for children aged 12 months for diphtheria (D₃), tetanus (T₃) and haemophilus influenzae Type B (Hib₃) at 82% and 81% for pertusis (P₃), meningitis C (MenC₃) and polio₃, with the lowest rates reported in the Western Health Board of 74% and 76% respectively. National immunisation uptake for MMR₁ was 80% whilst in the Western Health Board area it was 74% (National Disease Surveillance Centre, 2003). Immunisation uptake rates at 24 months both nationally and in the Western Health Board are unsatisfactory (figure 1.1, 1.2 and 1.3) considering the aim of childhood immunisation is to achieve and maintain an uptake rate of 95% of the population. Immunisations provide individual protection from certain diseases and also provide herd immunity which prevents circulation of infectious diseases, therefore high immunisation uptake rates must be achieved in order to ensure diseases remain under control. Low immunisation rates pose a serious threat to non-immune children and adults with outbreaks of vaccine preventable diseases indicating incomplete immunisation coverage. A measles outbreak in Ireland occurred in 2000, with 1603 reported cases and three deaths (Cronin & O'Connel 2000). There was a similar situation in the Western Health Board area where 25 cases of measles were identified over a month which had huge implications for patients, families and health services. In 2003 there were 576 reported cases of measles nationally as opposed to 147 in 1999. To facilitate the promotion and uptake of immunisations in the Western Health Board region identification of barriers to immunisations is necessary in order to improve uptake rates.

Figure 1.1: National Immunisation uptake rates at 24 months per quarter.



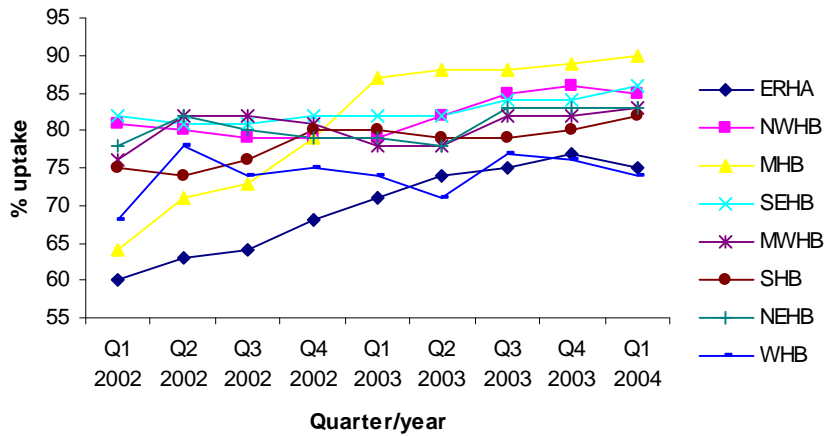
(NDSC 2004)

Figure 1.2: Quarterly immunisation uptake rates at 24 months for the Western Health Board region.



(NDSC 2004)

Figure 1.3: MMR1 uptakes in each health board

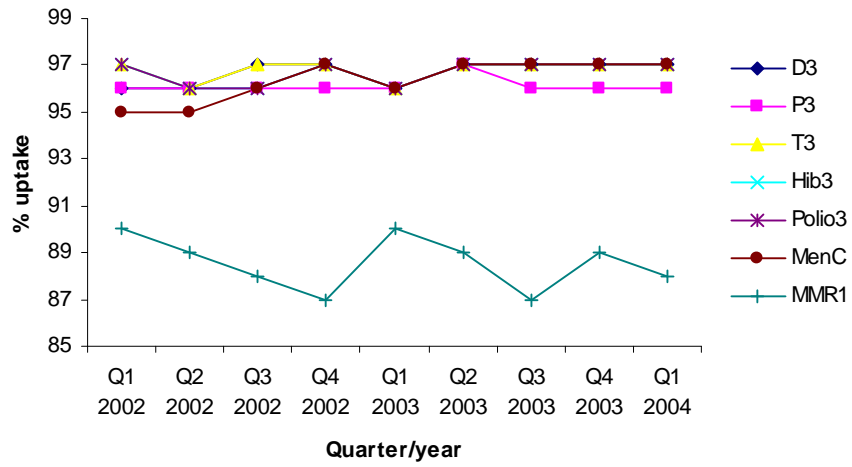


(NDSC 2004)

Internationally

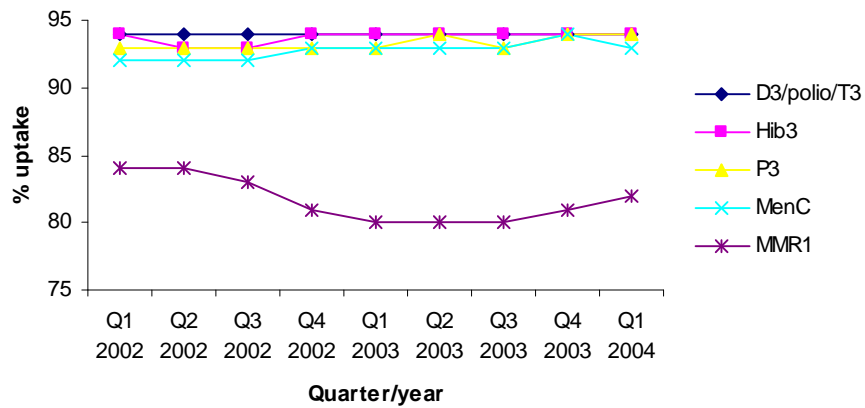
Immunisation uptake rates at 24 months for Northern Ireland (figure 1.4) are satisfactory for D₃, P₃, T₃, Hib₃ and polio₃ and MenC. Regarding MMR uptake a similar situation exists to the one in the Republic with rates below the 95% target. For the United Kingdom (Figure 1.5) as a whole uptake rates at 24 months for D₃, P₃, T₃, Hib₃ and polio₃ and MenC were 93-94% almost on target whilst again MMR uptake was well below the target at 82% (CDR 2004). In poorer developing countries such as Romania the most recent uptake statistics (2003) for D₃, P₃, and T₃ is 97% and 97% for measles vaccination (WHO/UNICEF 2004).

Figure 1.4: Quarterly immunisation uptake rates at 24 months in Northern Ireland.



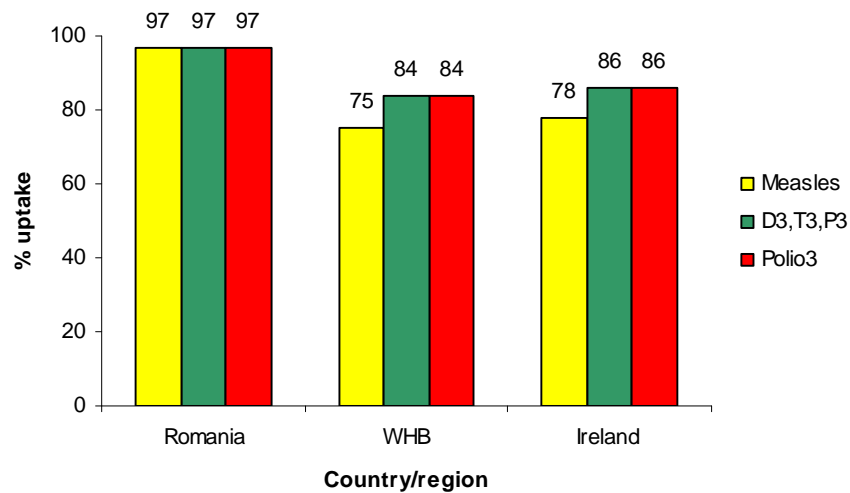
(NDSC 2004)

Figure 1.5: Quarterly immunisation uptake at 24 months in the UK



(NDSC 2004)

Figure 1.6: % immunisation uptake rates in Ireland, Western Health Board region and Romania.



(UNICEF/WHO 2004).

1.1 Barriers to childhood immunisations

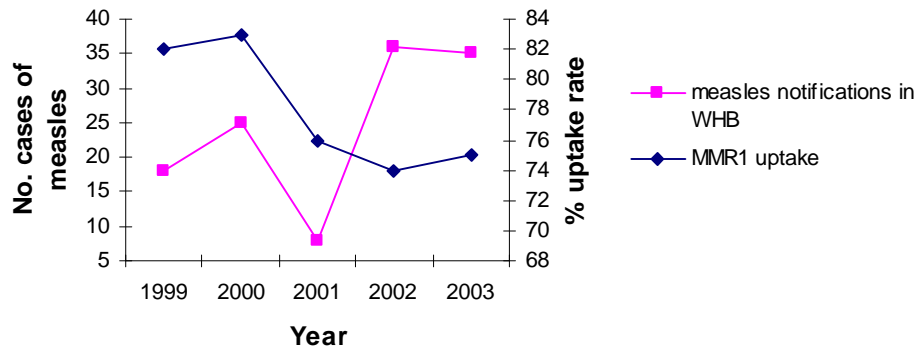
There have been a number of factors identified as barriers to immunisations in the literature. There is a paucity of Irish data in this area and international data has been reviewed. Barriers to childhood immunisation identified in the relevant literature include barriers due to parent's beliefs, attitudes and knowledge, barriers due to the healthcare provider and barriers in the delivery of healthcare or the healthcare system.

1.1.1 The parent's beliefs, attitudes, knowledge

The safety of immunisations not surprisingly appears to be a major concern for most parent's when considering immunising their children. A research paper which first raised the possibility of a link between the measles, mumps, rubella (MMR) vaccine and autism (Wakefield *et al.*, 1998) reported in the popular media resulted in a major drop in the number of children being vaccinated in Ireland. A systematic review has been carried out by a number of experts to assess the evidence of unintended effects associated with the MMR vaccine. Previously published studies which looked at the possibility of an association between MMR and any unintended effects were included in the review. This review concluded that exposure to the MMR vaccine is unlikely to be associated with

autism, crohn’s disease or other previously suggested conditions (Jefferson *et al.*, 2003). More recently a detailed and comprehensive study of the MMR vaccine and autism has been carried out in the UK, it also found no evidence to support a link between MMR and the development of autism (Smeeth *et al.*, 2004). The authors of this research paper have recently retracted their interpretation of their findings and stated that they found no causal link between the MMR vaccine and autism (Wakefield *et al.*, 2004). The reporting of research such as that undertaken by Wakefield has generated a lot of media attention and a subsequent decline in the acceptance of MMR vaccination even though the results have been totally refuted. It is recognised internationally that such information is the greatest barrier to immunisations; parents have a fear of vaccines and what they can do to their child (Petousis-Harris *et al.*, 2004, Tarrant & Gregory, 2003). Similarly in the UK beliefs about perceived risks; such as links to brain damage and the child’s vulnerability to disease are barriers to immunisation. Such factors adversely affect immunisation uptake (Roberts *et al.*, 2002).

Figure 1.7: Number of cases of measles and MMR1 uptake in the Western Health Board.



(NDSC 2004)

Since most of the diseases children are immunised against are no longer seen nor experienced by the community in the developed world there can be a lack of interest or low motivation levels on the parent's part towards immunisation (Petousis-Harris et al 2004).

The child's health on the day of immunisation also affects parent's decision to immunise their child, if the child is unwell on the day parents prefer to wait until they were better for fear that the immunisation would make the child feel worse (Tarrant and Gregory 2003). Therefore the child being ill on the day probably only leads to postponement of the scheduled immunisation but further increases the burden upon some parents. Problems faced during the immunisation process negatively affect the parent's attitudes towards immunisation. The more problems parents encounter during immunisation the more negative attitude they will have toward immunisation (Gore *et al.*, 1999).

1.1.2 The Healthcare system

Not knowing when the next immunisation was due, long waiting times and inconvenient clinic hours have been cited as major barriers to immunisation, although long waiting times and inconvenient clinic hours were not associated with under-immunisation of children, therefore parents were willing to accept this in order to get their child immunised. Lack of transport and delays caused by the child being sick were also identified as barriers which effect immunisation uptake (Yawn *et al.*, 2000). Williams and Wilkins (2004) also identify transportation as a barrier even if public transport is located close to the immunisation clinic.

Lack of funding or resources to educate parents in response to the misinformation they receive is considered a barrier for healthcare providers in addition to an absence of opportunity to immunise children due to a mobile population base (Pertousis –Harris *et al.*, 2004). Arranging childcare for other children or attempting to occupy young children without toys or games can also contribute to under immunisation behaviour (Harrington

et al., 2000). These issues of childcare arrangements and long waiting times have also been reported by Tarrant and Gregory (2003) as barriers to immunisation.

1.1.3 The provider

Results of an immunisation uptake study in Canada identify that there is a misconception among parents and providers about contraindications to immunisation which leads to missed opportunities to immunise eligible children. The support parents receive from providers is an important issue regarding uptake of timely immunisations and this support positively effects immunisation related beliefs (Gore *et al.*, 1999). Whether immunisation is highly valued by health care providers will influence the number of missed opportunities a provider has in their area; if immunisation is considered very important to a provider they will ensure all children are properly immunised at every visit (Prislin *et al.*, 2002).

Most parents believed the immunisation procedure as inflicting pain on their child and found it to be an emotionally upsetting experience. An empathic nature of providers who spoke to and touched the child was highly valued by parents (Harrington *et al.*, 2000). Health care providers lacking empathy or compassion may be an important factor in the postponing of immunisations. This may become significant in small communities where there are only a small number of health care providers. Tarrant and Gregory (2003) reported in their study that parents often did not return to their health care provider for a long period of time following negative interactions with that provider.

Other factors not mentioned that can influence immunisation uptake include socioeconomic status (Hisnanick & Coddington 2000, Klevens & Luman 2001). Low birth order and maternal employment were positive predictors of continued immunisation (Brenner *et a.*, 2001).

1.2 National Policy on Immunisation

The Primary Childhood Immunisation Programme (PCIP) provides for the immunization of children against certain infectious diseases. Under this programme parents can have their child immunised free of charge from a G.P. of their choice. Immunisation is not mandatory in Ireland but is strongly recommended. The following table details the recommended immunisation schedule agreed upon by the Royal College of Physicians of Ireland (RCPI).

Table 1.1 Immunisation schedule.

Age	Vaccination
At birth	BCG (usually in maternity hospital)
At 2 months	Diphtheria, tetanus, whooping cough (pertussis), polio and Hib (haemophilus influenzae Type B) are provided in one injection (the "5 in 1"). Vaccination against meningitis C is administered at the same time in a separate injection.
At 4 months	Diphtheria, tetanus, whooping cough (pertussis), polio and Hib (haemophilus influenzae Type B) are provided in one injection (the "5 in 1"). Vaccination against meningitis C is administered at the same time in a separate injection.
At 6 months	Diphtheria, tetanus, whooping cough (pertussis), polio and Hib (haemophilus influenzae Type B) are provided in one injection (the "5 in 1"). Vaccination against meningitis C is administered at the same time in a separate injection.
At 12-15 months	MMR. A single dose of Hib vaccine is also administered if the child has had no previous Hib vaccine.
At 4-5 years	Diphtheria, tetanus, whooping cough and polio (a "4 in 1" vaccine) and a MMR booster are administered.
At 11-12 years	The MMR vaccine is given (Only if previous doses have not been given).
At 10-14 years	A BCG booster is given to those who are known to be tuberculin negative and have not received the BCG vaccine previously.
At 11-14 years	The Td (tetanus and low-dose diphtheria) vaccine is administered in schools.

All vaccinations recommended up to age 15 months are available free of charge from a G.P. All other vaccinations and are administered in schools by the local health board

and are also free of charge. The Western Health Board do not administer a BCG vaccine at birth.

2.0 Methodology

2.1 Aims and Objectives

The aim of this study is:

To identify factors contributing to poor infant immunisation uptake in the Western Health Board, and to identify interventions to address these factors.

Objectives:

1. To describe immunisation uptake in the Western Health Board and in particular to identify areas or population subgroups with low uptake.
2. To describe current childhood immunisation practices by all providers in the West of Ireland.
3. To identify positive and negative factors contributing to immunisation uptake in the Western Health Board.

Both quantitative and qualitative methods were used to address different aspects of this complex issue. The study is made up of three phases which will be described below.

2.2 Explicit Documentation of Immunisation Processes

Discussion with relevant service providers was carried out to confirm and clarify the immunisation process. The processes of immunisation was tracked from distribution of vaccines to providers, the protocol of child registration, invitation and administration of immunisation as well as the recording of immunisations given within the Western Health Board Region. This was documented through personal communication with a specialist in Public Health within the Western Health Board.

2.3 Quantitative component

2.3.1 Survey of Parent's Attitudes, Belief and Knowledge

A previously piloted questionnaire was administered to people accompanying their children to the nine month developmental check to ascertain their attitudes, beliefs, knowledge, past and intended behaviour in relation to immunisation (See appendix).

2.3.1.1 Sample

As sample size calculations are based on power calculations, from a sampling frame of 5000 children, presuming that 30% do not immunise their children against measles, at 80% power 80 parents will be required to complete the questionnaire to enable the description of differences at 95% confidence level. Parents were approached by a researcher before or after their clinic appointment depending on which was most convenient and practicable; they were given a clear explanation of the study and asked if they would complete the immunisation questionnaire. The questionnaire was interview administered by the researcher in a private room with the answers written in the spaces provided in clear view of the participant.

2.3.1.2 Data analysis

The data was coded and entered into SPSS version 11.0 for analysis. Descriptive analyses were performed on each variable. Chi square analyses, t-tests and analyses of variances (ANOVA) were used to test for differences between socio-demographic variables.

2.4 Qualitative component

2.4.1 Semi-structured Interviews with Immunisation Providers

Face-to-face semi-structured interviews with a purposefully selected sample of ten health service providers; General Practitioners (GP), Area Medical Officers (AMO) and Paediatricians as well as Public Health Nurses (PHNs) were carried out.

2.4.1.1 Sample

These participants were selected from urban and rural settings in each of the three counties of the Western Health Board area. (See table 1). Service providers were identified at the 9 month developmental clinics attended for the quantitative component of the study. Those identified were asked if they would participate in the interview.

Table 2.1: Participant Profile of Provider Interviews

County	Urban	Rural
Galway	Paediatrician GP PHN AMO	
Roscommon	PHN	GP
Mayo	GP	PHN AMO GP

2.4.1.2 Data collection

The interview focused on the immunisation process as experienced by the provider, as well as identification of perceived barriers to immunisation and identification of potential improvements in the immunisation process. For the majority of questions a likert scale of 1-5 (strongly agree to strongly disagree) was used. Other responses included multi-choice options, yes/no answers and demographic data. Each interview lasted approximately 20 minutes. The basic principle of qualitative interviewing is to provide a framework within which respondents can express their own understandings in their own terms (Patton, 2002). A pilot of the interview schedule was carried out and slight amendments made to the questions as a result. All interviews were tape recorded and transcribed verbatim. The interview transcriptions were entered into *NVIVO*.

2.4.1.3 Data analysis

The basis of the process of data analysis for this study draws predominantly but not exclusively on work by Miles and Huberman (1994) and Huberman and Miles (1998). The aim of analysis in qualitative research is according to Burnard (1991) to establish a detailed and systematic recording of themes and link them together in a category system. Initially the data was fractured or split into discrete parts (Straus & Corbin, 1990, Miles & Huberman, 1994), these parts were then labeled a process known as coding. The data gathered under the code is referred to as a category. In this instance a priori codes were developed prior to data collection through the conceptual framework for question development in the semi-structured interview schedule and were used as a so-called '*start list*' (Miles & Huberman, 1994) rather than strict differentiations. A further level of analysis is referred to as pattern coding (Miles & Huberman, 1994). At this stage the categories are brought together or clustered into groups. Patterns of relationships between groups of categories develop providing a coherent, conceptual, structured order (Miles & Huberman, 1994).

2.4.2 Semi-structured Interviews with Parents

Face-to-face semi-structured interviews with a purposefully selected sample of nine parents were carried out.

2.4.2.1 Sample

Parents were identified either from the quantitative component of the study or through G.Ps and PHNs; following completion of the questionnaires parents were given the option to take part in the qualitative component by giving the researcher their contact details. There was representation of parents who have had their child immunised, those who actively have chosen not to have their child immunised and those ambivalent to immunisation for which the barriers have prevented immunisation. The participants represented these groups in urban and rural settings in each of the three counties of the Western Health Board area (See table 2).

Table2.2: Participant Profile of Parent Interviews

	Galway		Mayo		Roscommon	
	City	Rural	Town	Rural	Town	Rural
Immunised	1		1			1
Not immunised	1			1	1	
Ambivalent	1		1			1

2.4.2.2 Data collection

A pilot of the interview schedule was carried out and slight amendments made to the questions as a result. The interview focused on the immunisation process as experienced by parents, as well as identification of perceived and experienced barriers to immunisation and identification of potential improvements to the immunisation process. Interviews lasted 20-30 minutes. All interviews were tape recorded and transcribed verbatim. The interview transcriptions were entered into *NVIVO*.

2.4.2.3 Data analysis

Data analysis was as described above for semi structured interviews with health service providers.

2.5 Ethics

Before the study commenced ethical approval was obtained from the Western Health Board Ethical Committee in order to ensure the rights of the participants would be protected. A letter was sent to all Senior Area Medical officers asking for permission to conduct the study.

Both parents and health professionals were given a clear verbal explanation of the study, assured confidentiality and anonymity and informed that they were free to withdraw from the research at any stage.

3.0 Results

3.1 Quantitative results

3.1.1 Study sample socio-demographic characteristics

There was an overall response rate of 95%. 30% of all participants were residing in the Roscommon board region, 32% in the Mayo region, 21% in County Galway and 17% in Galway City. The mother was the respondent in 91% of all cases. A total of 5 individuals refused to participate in the study due to time constraints such as in a hurry back to work. Table 3.1 below summarises some of the socio-demographic characteristics of the participants.

Table 3.1: socio-demographic characteristics

	% (N)
Age of participants	
Mean	33.69 (SD = 5.9)
Range	19-49
Education	
Primary only	1 (1)
Some secondary	12 (10)
Complete secondary	30 (25)
Some third level	20 (17)
Complete third level	37 (31)
Marital status	
Married	82 (69)
Cohabiting	13 (11)
Single/never married	5 (4)
Medical Card	
Yes	23 (19)
No	77 (65)
Medical insurance	
Yes	65 (54)
No	35 (29)
Social Class	
Professional	26 (20)
Managerial/Technical	22 (17)
Non-manual	18 (14)
Skilled manual	25 (19)
Semi skilled manual	8 (6)
Unclassifiable	11 (8)
Employment status	
Full time	33 (28)
Part time	25 (21)
Car owner	
Yes	93 (78)

No	7 (6)
----	-------

The quantitative component of the study has shown a large proportion of positive results towards childhood immunisation and very little difference was found between respondents. The little variation in answers has resulted in small sample sizes in sub-group analysis. Appendix 1 details some socio demographic breakdown of respondent's levels of agreement with immunisation statements.

3.1.2 Immunisation status

88% of children in the sample had completed the recommended schedule for a child aged 9 months. 9% had been immunised against MMR (as they were in an older age bracket having been recalled to clinic). 13% had received the BCG at birth. 88% of parents surveyed were immunised themselves as a child compared to only 1% who were not immunised. 11% did not know whether they had been immunised or not.

The majority (82%) of respondents reported that they were informed that their child was due for immunisations via a letter from the Western Health Board. 18% said they were informed by their General Practitioner (G.P). 13% said they also knew from prior knowledge, 11% said they were also informed from the child's health record and 11% said they were informed by their Public Health Nurse (PHN).

3.1.3 Source of information on immunisations

Respondents mention a number of sources where for their information on immunisations. Both the GP (64%) and PHN (62%) were cited as the main sources of information followed by the media (26%) (Figure 3.1). Those from social class 4 and 5 were significantly more likely to get information about immunisations from the PHN (Appendix 1). The main type of media as a source of information mentioned was the television (15%). See figure 3.2.

Figure 3.2: Source of information on immunisations

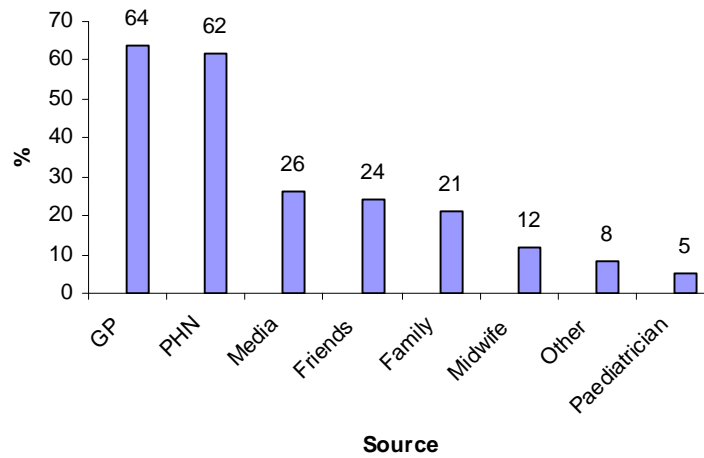
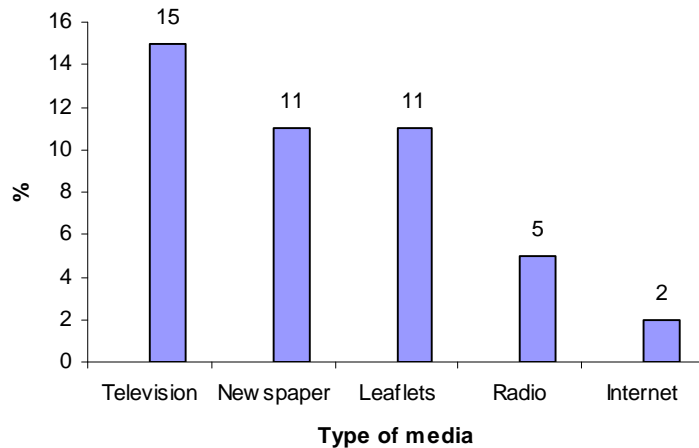


Figure 3.3: Type of Media used to obtain information on immunisations



3.1.4 General problems during immunisation

There were little problems encountered by parents during their experience of the immunisation process. Only 10% of respondents reported that finding enough information about immunisations their child was going to receive was a problem for them. This was significantly more difficult for the respondents over the age of 33 years. No parent said they had difficulty finding out where immunisations were available, only 2% of respondents reported that they had difficulty getting transport to take the child to get their immunisations. 6% believed immunisations were difficult for parents to obtain

for their child; those without third level education were more likely to believe this. Only 4% reported that there were no GP surgeries in their locality providing immunisations.

3.1.5 Clinic related factors

There were few perceived clinic related problems reported. The majority of respondents were happy with staff working at the clinic they visited. Almost all of respondents (98%) reported that the staff where the child got their immunisations was helpful. Similarly a further 98% said they trust the staff with their child's health. 86% said the GP surgery they attended for immunisation purposes had clinic hours convenient to them. 33% of respondents said they had to wait longer than a few minutes when they went to take the child for immunization. 93% of all respondents reported that they were always informed when the next immunisation was due.

3.1.6 Attitudes towards immunisation

89% of respondents were in favour of their child being immunised at the time of immunisation whilst only 1% said they were not in favour and 7% were not sure. Those in Roscommon and Galway County were significantly more likely than those in Mayo to be in favour of their child being immunised. 97% said it was important or very important to them that their child received all recommended immunisations.

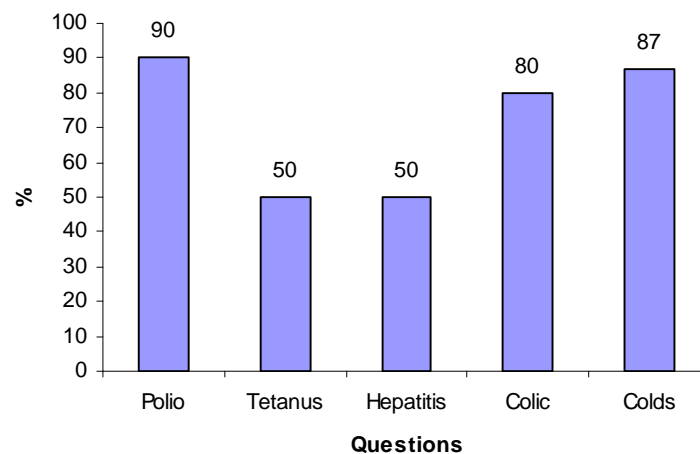
3.1.7 Beliefs

A very high proportion of respondents had positive beliefs towards immunisation. 91% of those surveyed were in agreement that children need to be immunised against infectious diseases before they are 2 years old, a further 91% believed that childhood immunisations provide long term protection against particular diseases. 92% agree that giving immunizations prevents the spread of disease. 96% believed that people close to them believe that it is important to get children immunized. Only 2% of respondents thought immunisations were not safe for children.

3.1.8 Level of knowledge

Figure 3.3 shows the number of respondents who answered the questions correctly regarding what diseases immunisations protect against. A large proportion of respondents knew that childhood immunisations protected against polio and not against colic and colds, only half of the respondents were sure that immunisations protect against tetanus and not hepatitis.

Figure 3.3: Proportion respondents indicating correct answer to each question



Knowledge questions (X indicates incorrect answer)

Childhood immunizations prevents polio

Childhood immunizations prevents Tetanus

Childhood immunizations prevents Hepatitis X

Childhood immunizations prevents colic X

Childhood immunizations prevents colds X

3.1.9 Intention to immunise against MMR

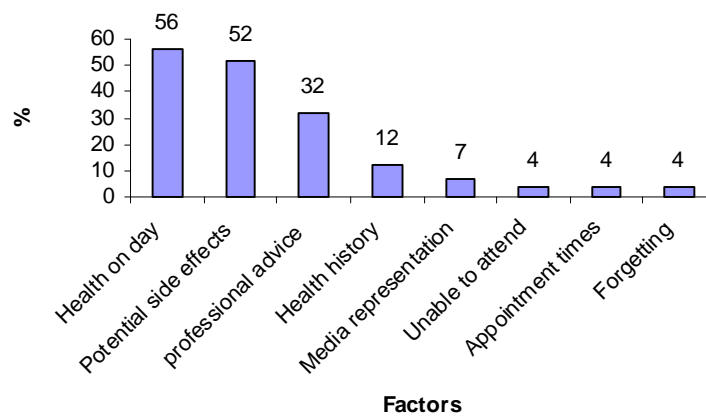
92% said they were intending to give their child the MMR vaccination. Of the remaining 8% who were not intending to give MMR or were not sure cited reasons such as;

- Waiting until the child is 2 years of age,
- Fears of autism, the recent controversy (alleged autism and MMR link),
- Friends child is brain damaged following MMR vaccination,
- Information on internet on side effects.

3.1.10 Factors preventing parents immunising children

Figure 3.4 shows the main factors preventing parents immunising their children. Parents with a third level education were significantly more likely to be influenced by advice received from health professionals against immunisations. Those with three or more children were significantly more likely to identify the child's health on the day of immunisation as a factor preventing them from going ahead with the scheduled immunisation (Appendix 1).

Figure 3.4 Factor preventing parent immunising child



3.2 Immunisation process

3.2.1 Regional Immunisation programme

The Department of Health and Children sets national policy on immunisation under the direction and advice of a number of groups:

- The Royal College of Physicians in Ireland (RCPI)
- National Disease Surveillance Centre (NDSC)
- Irish Medicines Board (IMB) – who are responsible for licensing all vaccines and monitoring their quality and safety.

The Health Board Executive (HEBE) which is made up of the Chief Executive Officers (CEO) of the Health Boards also provide advice to the Department of Health and Children on immunisation related issues.

The Programme for Action for Children (PAC) which was established by HEBE to manage child related projects is involved on immunisation issues with the Department of Health and Children and is currently developing a national immunisation data system.

Representatives from HEBE, PAC, Department of Health and Children, IMB, NDSC and RCPI form the National Implementation Committee. The National Implementation Committee's responsibility is to promote immunisation and also have a function in co-ordinating immunisations.

The regional committee for immunisations consists of multidisciplinary representatives from all three counties who are responsible for planning and co-ordinating the implementation of all immunisation programmes in line with the national guidelines.

When a baby is born the birth is registered in the hospital and the public health nurse (PHN) is notified. The PHN visits the mother and fills out the Child Health Registration Form with the mother; the mother nominates a G.P for immunisation on this form. The PHN sends this form to the regional immunisation office within the health board.

The immunisation office registers the birth upon receiving the Child Health Registration Form and sends out the required immunisation forms to the nominated G.P. The immunisation office also sends out a reminder letter and a vaccination record card to the mother near the date that the first immunisation is due. Reminder letters are then sent for the 2nd and 3rd set of immunisations and the MMR.

All primary childhood immunisations are administered by a G.P, when the G.P immunises a child they complete and return the immunisation form to the immunisation office and the child is then entered on the computerised immunisation system as immunised. If the form is not returned by the G.P this is registered on the defaulter list.

Booster immunizations are administered by a G.P or Area Medical Officer (AMO) and recorded on a manual system which provides limited availability of uptake rates. This system is not connected to the primary immunisation system.

Uptake rates which are determined from the records are made available to the National Disease Surveillance centre (NDSC) who publish the final data and distribute it to the Public Health Department in the health boards.

The Public Health Department in each health board is responsible for the provision of training and education to health professionals such as G.P.s and PHNs. In some circumstances the provision of education to target groups at local level is completed by a Senior Area Medical Officer. Research and development is also a remit of the Public Health Department which is frequently carried out by external organisations on behalf of the department. The Surveillance Office in the Public Health Department collects all information on outbreaks of infectious diseases. The issue of cold chain requirements such as the storage and delivery of vaccines can fall under the remit of this department if the correct temperatures were not adhered to.

3.2.1.1 Paediatrician's role in immunisation

Paediatricians have a role at health board level to influence immunisation policy. They are also a resource for information and advice for other health professionals. A paediatrician may vaccinate a child in a hospital under controlled conditions if the parent or G.P feels this is necessary. They also have a role in discussing immunisation with parents following birth within the hospital.

3.2.1.2 Problems encountered

Some G.Ps are not returning forms or not filling forms accurately and completely e.g. not filling in batch number, this affects the reported uptake rate.

The G.P is paid prior to administering the MMR vaccine; therefore there is no incentive to return forms to the immunisation office and can give rise to false data.

If an epidemic occurs during the distribution timeframe of vaccines, there could be a shortage of vaccines as a result of increased demand. Therefore cold chain could be the cause of reduced availability and reduced uptake.

Health boards are not always informed when parents change address and can not contact parents to inform them when immunisation is due.

Figure 3.2.1 summaries the current immunisation process

3.3 Qualitative results

Amongst the service providers interviewed there was universal agreement on the importance of immunisation, both as a public health measure such as the attainment of herd immunity and to the individual child's health.

3.3.1 Interviews with service providers

Semi structured interviews were conducted with ten health service providers about their experience of the immunisation process, what could prevent themselves/General Practitioners from immunising children, perceived parental barriers to immunisation, importance of immunisations and improvements to could be made to the current process. A total of 4 General Practitioners (G.P), 3 Public Health Nurses (PHN) 2 Area Medical Officers (AMOs) and 1 paediatrician (Pd) were interviewed.

3.3.1.1 Barriers to immunisation from service providers perspective

Barriers to immunisations for GPs were mainly the child's health on the day of scheduled immunisation resulting in postponement of immunisation. *'If a child comes for vaccination and they have coughs or respiratory infections or high temperature and if they come back and are still not right vaccination can keep getting deferred'*(AMO 3)

Parental lack of knowledge or opposition was also mentioned as barriers, as was lack of time or facilities.

Factors specific to a client group, such as travellers, refugees or families form lower socio-economic groups was also cited:

'The only thing that I have a problem with is itinerants - they are all over the place and they don't bother with vaccinations. Now and again there is a panic and they all want it then. There is a high level of defaulters among the itinerants; the same level is not among the settled. I have a lot of non-nationals in the practice and there is a high take up of vaccination among them, I reckon 100%.' (G.P.1)

3.3.1.2 Barriers to immunisation from parents' perspective (according to service providers)

This was the most discussed topic, and the most commonly mentioned barrier was felt to be what service providers saw as the way the media represented the risks pertaining to immunisation:

'There has been a lot of controversy about vaccines, such as; given when it shouldn't have been given, recalls on vaccines all have been hyped up in the media which have made people wary of what exactly are we giving the child and will we call them back and say it was not the right vaccine that was given. Stories in the media can prevent them vaccinating the child'. (AMO 3)

Hand in hand with this were parental fears about the perceived side effects associated with vaccines:

I think there is a fear of the vaccine, for some people it's a fear of damaging their child

Several service providers were aware that some parents were ideologically opposed to the idea of immunisation for their children such as beliefs that children should experience these diseases naturally and that the diseases are not that serious. Service providers respected such views to a greater or lesser extent.

'There are other people who have very strong beliefs that children should experience these diseases and that the diseases are not really that serious' (AMO 3)

G.Ps believe that there are some parents who no longer trust the medical professional and are placing their trust in alternative health care providers who have very different views on immunisations and healthcare in general:

'Some parents are anti medical and a lot of alternative health care providers such as homeopaths, chiropractors seem to have taken this on as well. I wouldn't say they are lobbying against immunisation they are saying to parents its your choice but its very dangerous and I wouldn't touch it with a barge pole. Their confidence in authority and medical profession, the confidence has been severely undermined. They are prepared to believe things without any scientific backing.' (Pd1)

There was also awareness that parents may have had an adverse experience with immunisation- either the child's or a sibling's adverse short-term reaction or side effect, or knew personally of another such case which concerned parents:

'There was a big problem with the polio vaccine recently and it put people off, we got a bad batch of polio vaccine that was contaminated with CJD. I had a woman here whose child got that particular vaccine and she swore she will never give any vaccine again, that was a terrible thing and I felt awful because I administered the vaccine in good faith and then I found out it was contaminated with CJD.'(G.P. 2)

There was one mention that parents 'forgot' to get their child fully immunised and one GP felt powerlessness on the part of parents might be a mitigating factor.

'The approach to immunisation is big brother type, the parent should be involved more'.(G.P. 2)

3.3.1.3 Factors facilitating immunisation & Suggested improvements

Service providers roundly endorsed the education of parents as the single greatest tool in facilitating or promoting immunisation. Providers differed in their opinions as to how to effectively provide this information, whether via the media or on a more direct basis.

'The more information people have the more informed their decision would be.'(AMO1)

'More can be done in the media to promote immunizations, local papers.'(AMO1)

One AMO felt that

'Promotion campaigns in the media - television or radio would be quite good.' (AMO 2)

However, one GP disagreed and thought that parents already have enough information and that stories in the community was what is contributing to the low uptake rates:

'They have enough information, its hard to give anymore; they get the booklets in the hospital. It has more to do with what the parents are hearing in the community rather than information.'(G.P. 1)

A paediatrician reinforced the notion that education had to be targeted directly at parents and, critically also at service providers. Consistent education and awareness of parental concerns is seen as extremely important in obtaining the trust of parents:

'I think it has to be education and most people are reasonable and a good education package that's consistent because I could say one thing and then the public health nurse could say something else, so there has to be consistency among health care professionals, if they see different hymn sheets they will think we don't know what we are talking about at all. Health care professionals also need to be aware of parents concerns, such as if a parent brings up the link of MMR with autism, they need to give a fairly good summary of the initial study and subsequent studies and the very strong evidence that the two are strongly unrelated. It's really education of providers and parents.' (Pd1)

From a service perspective, improvements could be made at nearly every stage of the vaccination process: identifying children, follow-up of non-attenders, factors relating to the clinic, communicating with clients, actual administering of the vaccines and record keeping.

Providers largely agreed that the initial letters informing that vaccines were due were important. One PHN enthused:

'The letter being sent out is a great thing it is like an appointment.' (PHN 3)

However, one GP strongly disagreed with this tactic and believed it to be a spoon feeding approach and removing responsibility from the parent to the health board:

'This letter from the health board is under diminishing the responsibility. If you make people too dependent it is very bad and they will turn around and blame the health board. Parents should only be informed once about vaccination and it is then their responsibility.' (G.P. 2)

As regards follow-up of non-attenders, a PHN suggested that

'Sometimes when the child is sick and can't get the immunisation, it might be helpful if they got another letter to remind them.' (PHN3)

However, the sender of this follow-up reminder was by no means agreed on, with suggestions including the practice nurse and *'somebody external from general practice.'*(G.P. 2)

In terms of clinic factors and communicating with clients, a PHN stressed that a good relationship between parents and the G.P is essential...

'Access easily to the GP surgery and having it free is a huge thing. Good follow up - knowing that they can phone the GP if there is anything wrong, so a good relationship with the GP.' [is vital](PHN 1)

Another PHN believed that waiting rooms in the G.P. surgery were not satisfactory and could be improved, such as a separate waiting room for those attending the clinic for immunisation purposes which would avoid contact with patients who are ill. Toys to occupy other children in the family at the clinic were also suggested. Neither of these factors was highlighted in the parents' interviews.

Communication between health professionals was another factor that could be improved, with a PHN suggesting *'More liaising with the GPs'*, with another noting *'PHNs should be more involved in the immunisation process. We as PHN have developed a relationship with the parents from the start and we were the ones who told them about immunisations and we are possibly the ones who can reassure them. Parents perceive GPs as extremely busy and might not relay their concerns to them. I think the person who instigates should see the process through.'* (PHN 2)

This PHN felt improved communication could be achieved through a compulsory child held record:

'a better child health record which the parent keeps ... It would co-ordinate the care between GPs and public health nurses. It would be the continuity of care. The present child health record that parents keep is not compulsory and is not very good.' (PHN2)

In relation to actual administration of vaccines, suggestions included the availability of separate vaccines if requested, better needles and more 'baby-friendly' training for GPs. Record keeping was another area where improvements were suggested, both in terms of a computerised central register with easy access by all health professionals and also a parent-held child health record, which would serve as a lifelong record for individuals.

3.3.2 Interview with Parents

Three parents who were pro immunisation (P), three who were against immunisation (A) and three who were ambivalent (AM) towards immunisation were interviewed about their impressions, both positive and negative they felt their children got from immunisation, the diseases immunisation can prevent, what happens when their child is immunised, their impressions of health professionals and family/community views on immunisation.

3.3.2.1 Impressions

Parents who were both pro-immunisations and ambivalent towards immunisation had positive impressions regarding immunisations and acknowledged their role in disease prevention:

'It's a good thing, when I am giving it to them I am protecting them from disease.' (P2)

'If you can prevent something then why not go ahead and prevent diseases from occurring.' (P2)

'They protect against disease and prevent the spread of disease' (AM1)

In contrast those parents who were anti-immunisation were less restrained in their views:

'I shiver straight away to be honest; I can't bear the thought of them.'(A2)

'I had no reason to question immunisation until my first child was born 6 years ago. The mother of this child who was not Irish made me question it and do some research on it, and I ended up not immunising my child as a result.'(A1)

3.3.2.2 Positive things children get from immunisation

Parents who were pro-immunisation referred to protection against disease as a positive thing children get from immunisation as did those who were ambivalent:

'The risk of long term damage from diseases like measles. Being able to mix.' (P3).

'They are protected against polio, measles, diphtheria all those kind of diseases' (AM2)

However, one parent was of the impression that children are protected against colds following immunisations:

'The children don't get as many colds after it.... They can fight colds and sickness better after it.' (P1)

Parents who were anti-immunisation were predictably less unequivocal in endorsing the benefits of vaccination and some mention protection against disease as a good thing about immunisation:

'I suppose they are protected against the diseases that the injections are supposed to be for, but there is one injection the measles I think that can cause damage.'(A2)

'The immunisations that are around for a long time such as polio vaccine do provide protection for children against this disease. There are definitely some good things about vaccines and I do have trust in the old vaccines but I don't believe in giving those two or three times.'(A3)

3.3.2.3 Negative things children get from immunisation

Parents who were ambivalent towards immunisation were very much aware of the negative side of vaccinating their children, even those who were pro-immunisation were also aware of this, but compared to those actively against immunisation they tended to discuss immediate or mild after effects.

'She got a bit upset when they were giving her the vaccine but for what the vaccine does (protection against disease) it is worth it. She had a slight high temperature afterwards but that was it really.' (P2)

Another parent was speaking about immediate after effects from her own personal experience:

'When I took one of my children for their first immunisation at 8 weeks he got a very bad reaction afterwards, he had a very high temperature and was dead in himself – he spent three days in hospital, so that worries me and sticks in my mind...My own G.P thinks it was related to the immunisation, but its just a fear that I have or a gut feeling that I have about this immunisation' (AM2)

Two parents believed that maybe children should experience some of these diseases naturally:

'I sometimes think we are taking the easy way out, it saves us two weeks of having to nurse children and they can be quite well afterwards. At times you don't want to see them suffer but maybe its just the easy option.' (A3)

I think it is much better to build up their immune system naturally such as from breast feeding... These vaccines are artificially made so they are not natural (AM3)

Another parent questioned the efficacy of immunisations such as the MMR:

'I only realized that recently, with the MMR there is a percentage of them that don't actually work.' (A3)

For parents who were against immunisation, it was not a decision taken lightly. These parents were well informed and their decision focused on a lack of trust in the medical establishment / pharmaceutical industry regarding the potential risks and long term side effects as well as the 'chemicals' added to vaccines.

'I have grown up to trust the system, the doctors, the government what they are saying is right and its for the good of our health but then you read other information that contradicts what they have been saying. The trust has been broken for me. A lot more information is coming out now, back 10-15 years ago the information and research wasn't there but at the same time the lack of information is crucial to people making the decision.'(A1)

'There must be a reason why they wait until 15 months to give it, maybe if you give MMR to a new born child something could happen, what's to say the same thing won't happen to a 15 month child.'

'I read about the chemicals and the process and I didn't like the chemicals that were in them or the way that they were processed and nobody ever gives information about that....Another thing that is freaky is that the schedule was previously 3 in 1 and now its 5 together, like why'.

Parents who were ambivalent also expressed considerable mistrust of both health professionals and the pharmaceutical industry that produce the vaccines:

I am very suspicious of drug companies, their main aim is to sell drugs and doctors can be involved too I don't know, although I know doctors can have the best interest of the child at heart. I generally distrust doctors.....I would like more information on it; the information is very contradictory like what you read on the internet and what the doctors say the facts and figures are different. So I do not know who to trust I have to go with my instinct.(AM3)

Another parent thought that not enough is known about relatively new vaccines and more will only be known following a number of years of administration to children:

'I would not bother with the MEN C vaccine, its only one strain and it's a new vaccine and we don't know enough about it.' (A3)

3.3.2.4 Knowledge of diseases immunisation protect against

Parents were asked to discuss some of the diseases immunisations can prevent; there was very little discussion among those who were ambivalent and pro-immunisation beyond naming the diseases accurately. In contrast there was quite a lot of discussion among the anti-immunisation group.

Parents who were anti-immunisation doubted the efficacy of the vaccines as given in actually preventing the illnesses they were designed to prevent, as well as their safety.

'TB is returning even though the vaccine has been around for 20 years for that. I don't know is it an illusion that after vaccination children will not get the diseases they were vaccinated against so I don't know if it does protect them.'(A1)

They also questioned the severity of diseases and the health status of those children who contracted them.

'If my youngest child got the measles I would be very worried but I feel she is such a healthy strong baby that she would pull through it. But do I know that, do I know of children who died from measles - how healthy were they.'(A3)

3.3.2.5 Immunisation process experience

There was little difference between the three sets of parents as to the actual experience of administering the immunisations. Experiences were described in positive or negative terms depending on the particular GP and the immediate reaction of the particular child.

Parents who were pro-immunisation and ambivalent mention the child being upset after immunisation

'The nurse gave the injection, they were a little upset after the injection but they were fine after a while. I got some information from them as well, but it was all fine.' (P1)

Another parent mentions her G.P. as being competent and reassuring:

'I phoned my doctor and made an appointment and he usually tells me to come in the morning time that way you can monitor them the whole day and for peace of mind really as I had told him I was a little bit worried, and he reassured me. He gave the vaccine and then she is fine really after that, I gave her Calpol after just in case.' (P2)

One parent described the follow up by health professionals when her child did not attend for immunisation:

For the other child I moved and they couldn't find me so I escaped that way as I didn't have any arguing with me to do it (AM3)

In contrast another parent mentioned her satisfaction and appreciation with the current immunisation system:

We get a letter from the health board to remind us when immunisations are due and then we bring the child to the G.P who gives the immunisations. I can make an appointment beforehand to discuss it with my G.P if I wish. The service is brilliant; the reminder letter, the information we get and the fact that it is free but I do worry about it (AM2)

Parents who were anti-immunisation also mention the child getting upset during immunisation:

'I took this girl for one injection, it wasn't the GP who gave it to her it was a nurse. And she screamed absolutely roared I'd say it was a sore one and they went for another

needle to give her another one straight away. I thought no I couldn't cope with the second one after the way she reacted with the first one and she was only three months at the time.'(A2)

A further parent who was anti-immunisation describes the physical environment and staff at the clinic as being to her satisfaction:

'The experience was perfect, the surgery was perfect. The nurses and doctor were extremely helpful. In fact I regularly get lectures on giving them the meningitis jabs and MMR in particular. The doctor and nurse wouldn't be particularly happy about me not giving them.'(A3)

3.3.2.6 Health Professionals' Views

On the whole, both groups of parents felt that their GP/ PHNs were very much in favour of immunisation. They did call into question the amount of information they had been given (all groups) and the degree of respect that they felt their doctors afforded them in relation to their own opinions.

'I'd say they are for it. They give you a choice if you want to have it done or not.' (P1)

'They are all for it. They gave me leaflets, one in particular I found good... I would have liked more information on when the individual vaccines were given as opposed to the 5 together, so the pros and cons of giving them separately or all together. I didn't realize that there are certain risks giving them together, I just caught a snippet of that so I would like more information on that.' (P3)

One parent seemed to value her doctor's opinion having built up a trusting relationship over a number of years:

'He was very much for them. He told me not to be stupid; he has been my doctor forever. I said I wasn't sure and he said he wouldn't advise me to do anything dangerous and just do it. I trust my doctor, and I would trust his judgment.' (P2)

A further parent mentions not being able to get information they require from some health professionals:

'I got all my information from my GP, the public health nurse will always say ask your GP and not really give out information, I don't know is it an insurance thing or something but they usually say ask your GP.' (P2)

One parent mentioned that she was aware of some doctors who may have some reservations toward immunisations

'I do believe from speaking to others that there are some doctors who query but they will never say it to us, which makes you think' (P3)

'They want it very much, but the health nurse says "it's your decision", she thinks I'm mature enough to make my own decision so she won't push it. I asked my doctor for more information about vaccines; they sent me out a little leaflet about two lines on it.' (A1)

'They didn't force me to go ahead with it but they advised me to go ahead and have them vaccinated so they were all for immunisations.' (A3)

'I don't think I got enough information, I don't know enough about it really. I know there are booklets on it but it just tells you what you are protecting your child from. It doesn't give the information on that the injection can badly affect the child as well. You cure one thing but you could do damage in another way too. I think the doctors need to more research on it really.' (A2).

One parent remembers vividly the graphic image her G.P. portrayed to her when she informed him of her decision that she was not going ahead with immunisation and made her think about her decision:

'My GP would be particularly strong about it and I remember strongly that day he took Emma in his arms after her second 5 in 1 and he looked down at her and said "all I'm saying to you is I don't want you ringing me up in a fret saying that my Emma has measles and I'm on the way to the hospital and that absolutely put my heart cross ways there is no doubt about it....So my GP is strongly for immunizations and he put it to me quite graphically. I know I have such extreme views on it maybe I should just go along with everybody else.' (A3).

And again some parents thought the fact that some doctors were not immunising their own children was a conflicting message:

'But some doctors are not even immunising their own children.' (A3)

One parent mentioned the aggressive nature of a nurse when she told her she was considering not immunising the child which reinforced her negative opinions towards immunisation:

'The nurse is for it and was quite aggressive when I said I might not vaccinate the child. My G.P said it was my decision so I was more likely to do it after my G.P saying that to me but I was more determined not to do it after speaking to the nurse' (AM3)

A further parent mentions health professional attempting to reassure her whilst also respecting her decision:

'They all think it is very important... and are often trying to allay my fears about it but sometimes you just wonder you hear these stories... and you can't just ignore them. They tell me its my own decision and they don't force me into doing anything I don't want to do' (AM1)

3.3.2.7 Family / Friends / Community's Views

All three groups of parents were aware of stories from people they knew that were both supportive of and against immunisation. The 'anti' group of parents tended to give such stories more weight when forming an opinion on the safety of vaccinating their children.

'You hear stories of a friend of a friend who knew someone who died as a result of immunisations but I have never heard anything close to home.' (P2)

Parents also hear that health professional's have mixed feelings toward immunisation:

'All my family would be very pro immunisations I am the only one who has questioned it. I have a friend of a friend who has a child who is autistic and she always puts it down to immunisation, so it makes you think. I have heard from somebody else as well who works

for a consultant paediatrician that he (the paediatrician) would have strong reservations, which makes you think as well.’ (P3)

One parent although very aware of the negative stories about immunisation but doubts their source and accuracy:

‘I don’t pay attention to any stories on the television or radio because you don’t know where it came from and those stories might not be true and could have legs attached. I go along with my doctor; I trust him and what ever he says I will go along with him.’ (P1)

I have friends who have researched it and told me about it like there is mercury in some of the vaccines... I have heard of children getting fits after a vaccine and a fever I have also heard about the MMR autism link (AM3).

Another parent in contrast hears only positive aspects or stories of immunisation in her locality:

I hear that immunisations are good from other people in the area; I never really hear any bad stories (AM2)

Parents who were anti-immunisation tended to speak about long term effects of immunisations:

‘I would have discussed it a lot with a girl at work who had children the same time as me and she hung on for a while but ended up giving the MMR, ... but within where I live and even in Galway you hear of children who died of meningitis. But the percentages of those who die of these diseases is extremely low and those who had died may have been a little immuno-suppressed.....I read up a lot on it, and the fact that I am not a medical person I may interpret things incorrectly. Maybe you shouldn’t read up in the first place, are these genuine sources of information on the internet?...My friend was very concerned about the MMR autism link and she wouldn’t have had the extreme views I would have such as causing cancer.’(A3)

The decision on whether or not to vaccinate their children is influenced by fear; fear if they do and fear if they don't and they spoke about guilt they may feel or experience if their un-immunised child is badly affected by a serious disease:

'I don't know if I am doing right. I get terrified if I hear of anything like measles going around the area that they might get it and be affected by it. Then I would probably feel very guilty that I did not give them the injection. But then on the other hand if I give the injections and my child turns out like my friend's child - you can't turn back the clock.'(A2)

4.0 Discussion

The findings from this research are similar to those found in other studies on immunisation around the World. The decision on whether or not parents immunise their child appears to be an extremely difficult one due to the conflicting information they receive.

4.1 Information and trust

Overall the knowledge and information parents have on immunisations appears to be confused. All parents in this study were very worried of both long term and short term side effects of vaccines regardless of the immunisation status of their children. Parents have expressed both a fear and mistrust of vaccines and those who are promoting them. The media has been identified in this study as well as in other studies (Petousis-Harris *et al.*, 2004, Tarrant & Gregory, 2003) as an important factor in adversely affecting parent's decision to immunise their child. The media can also influence people indirectly through family, friends or other community members. Furthermore parents hold misperceptions about the diseases vaccines prevent and the degree of protection provided by immunisations, this is also supported by Tarrant & Gregory (2003).

Parents not only receive conflicting information from the media but also from within the health services which is complicated by frequent changes in the immunisation schedule and also health professional's immunisation status in their own personal life. In addition to this conflicting information, incidents in the past such as contamination of vaccines, personal experience of side effects to vaccines and negative media around the MMR vaccine and its alleged association with autism have led to mistrust of the health services. This mistrust has also been recognised by health professionals. Trust is essential for an effective immunisation programme; this trust will not only exist from information campaigns but also openness about possible risks and problems (Verweij & Dawson 2004). Since immunisation uptake rates have improved considerably in both Australia and the U.S due to the communication of vaccine safety issues and sufficient health professional knowledge (Petousis-Harris *et al.*, 2004), trust can be built in the Western Health Board and nationally through the dissemination of quality information to health

professionals in a timely manor so they can appropriately answer parent's questions and also through effective communication of vaccine safety issues as safe vaccine administration is paramount to promote trust (WHO 2002).

Some health professionals in this study have acknowledged the fact that they may not have the information to address the concerns parents may have and have expressed the need for consistent up to date education of both health professionals and parents. A similar scenario was found by Gore *et al.*, (1999) where there was misinformation about contraindications to vaccines amongst health professionals and providers.

The majority of parents did not know of anybody who had contracted a vaccine preventable disease. These diseases are no longer seen by people in the community and parents may not fear that their child will contract such a disease and therefore may not consider immunisation against these diseases a priority. This has also been shown by Petousis-Harris *et al.*, (2004). The benefits and importance of parents immunising their child must be communicated clearly as preventing a number of infectious diseases that have the potential for serious consequences.

4.2 Healthcare system barriers

Healthcare system barriers such as waiting times and negative interactions with health professionals have been found to have a negative impact on childhood immunisation uptake (Tarrant & Gregory 2003). Waiting for long periods of time at the clinic did not seem to be an issue raised by parents as it has been in other studies (Yawn *et al.*, 2000), although very little can be done to eliminate waiting times completely health professionals must be aware of the negative effect it can have especially on parents who are ambivalent to immunisation. Previous research has suggested that negative interactions with health professionals frequently leads to postponement of immunisation (Tarrant and Gregory 2003), similarly negative interactions with health professionals such as parent's perception of being forced into going ahead with immunisation or arguing can also reinforce the negative attitude of those who are ambivalent. It is therefore worth noting that any negative experience or negativity towards immunisation

can adversely affect a parent's decision that has mixed feeling on the topic of childhood immunisations and health care providers must be aware of this.

Pain that the child experiences during immunisation is also a concern for parents but does not seem to be a barrier. This has also been reported elsewhere (Harrington *et al.*, 2000). Health professionals must be aware that this is an emotional experience for parents. Other issues regarding the delivery of health care such as inconvenient clinic hours, accessibility and help of staff were not identified as barriers in this piece of research unlike others (Williams & Wilkins 2004, Yawn *at al.*, 2000) but must be maintained at a high standard in order to achieve the target 95% uptake rate.

In summary parents need to have access to up to date, relevant and evidence based information on childhood immunisations, this information must be available in different formats to cater for those with different needs. Achieving and maintaining parent's confidence and trust in childhood immunisations is also vital in improving uptake rates. In order for this to occur health care providers must have access to up to date quality information, be aware of all parental concerns regarding childhood immunisations and also be aware of the effect structural issues such as waiting times and negative interactions can have on immunisation uptake.

5.0 Recommendations

- 1.** There should be an appropriate timely response from the health authorities to negative and possibly inaccurate information presented in the media. Vaccine safety issues must be communicated in order to improve immunisation uptake rates.
- 2.** A National Immunisation database of all patients and immunisation records which can be accessed by all health boards must be set up to ensure transfer of records if there is a change of G.P or board region. (This is currently in process).
- 3.** Trust and confidence must be achieved and maintained in the current and future immunisation programmes. Clear quality information addressing immunisation issues must be easily available for both health professionals and parents which will promote trust.
- 4.** Health professionals need to be made aware of the concerns parents have and receive consistent education to ensure there is no conflict of information between health professionals. In addition to building trust this will also ensure that they are equipped to deal with parental fears and concerns when necessary. Health Professionals must be provided with detailed up to date information so that they can respond to the conflicting messages concerning vaccine safety.
- 5.** Parents must be educated in order for them to make an informed decision and must be directed to an appropriate resource for further reading and information. Special attention needs to be paid to certain groups such as travellers, refugees and families from lower socio-economic groups who may have problems with literacy and language. Detailed information on the benefits of immunisation, side effects, contraindications and response to fears such as links to autism and crohns disease must be made widely available in a number of languages. Furthermore the risks of not vaccinating must also be highlighted. This information should be available in a variety of media. For those parents who regularly use the internet as a source of information appropriate reliable, accurate websites should be identified and promoted.

