Concerns of health providers and parents affect immunisation coverage

Nikki Turner

New Zealand has a disappointing record with immunisation coverage as we continue to languish with low immunisation rates, well below the targets set in earlier national strategies. While there are currently no available national coverage data, the high background rates of pertussis disease alone suggest that coverage rates are unlikely to have improved much over the 1992 national coverage survey. This survey showed that less than 60% of children, and more alarmingly only 42% of Maori and 45% of Pacific children, were fully immunised by two years of age.2

Despite the disappointing national picture, local initiatives have shown it is possible to achieve and maintain higher coverage rates, such as those seen in Rotorua. These all take local flavour, but show the key characteristics of committed teams and integrated processes at the primary healthcare level.

The international literature reflects several clear themes on how to gain and maintain high immunisation coverage. These cover enhancing access and provider-based interventions and strategies to increase community demand.3 Key aspects of delivery include financing the system effectively, focusing on provider practice, appropriate integrated information systems and community support.3

Possibly of greatest importance in the overall picture in obtaining high immunisation coverage is the role of the primary care providers – both their support and knowledge base appear to be vital ingredients for improving immunisation rates – and this may be a more important aspect than parental knowledge base.4

The excellent paper in this edition by Jelleyman and Ure demonstrates that health professionals in the Rotorua District express strong statements of support for immunisation, but hold significant underlying uncertainties.5 Of note is that 11% of health professionals consider immunisation to have unacceptable dangers and a further 17% are unsure. Furthermore, over one third of health professionals were uncertain about the lack of association between autism and MMR. There is a well-established and vast scientific literature around immunisation risks and dangers and the particular issue of MMR/autism has been broadly discredited, 6 although continues to have a life through the media. The knowledge base and attitudes of health professionals do not appear to match their belief in the importance of science, and how little they consider themselves to be influenced by the media. This highlights the need for us as health professionals to be more discerning and to look more critically at our knowledge gaps and the influences building our attitudes.

Recent research in New Zealand looking at general practitioner knowledge and attitudes nationally has highlighted both significant knowledge gaps and the desire of health professionals for extra resources to support more effective communication with parents.7 In this research, health professionals failed to recognise the
Concerns of health providers and parents affect immunisation coverage

importance of their own knowledge gaps and educational needs. The most significant barrier to raising coverage identified by GPs was parental concerns over vaccine safety and associated misconceptions. The second most significant barrier was the concern over lack of funding to providers. This is strongly backed by the international literature, which shows clear relationships between improved coverage and financial and quality support to health professionals. The inadequacy of the immunisation benefit subsidy, particularly to cover the costs of children who are harder to access, has been frequently highlighted.8

The antenatal period also needs focus as an important ingredient. New Zealand research has shown that the majority of mothers make their decision around immunisation in the antenatal period.9 Furthermore, it has been shown that parents lack information in this period and wish to have more.9 Jelleyman and Ure support this concern by showing the significant knowledge gaps and range of attitudes displayed by some antenatal providers. Will extra focus in this area make a difference? An interesting New Zealand study from 2001 (A Wroe, N Turner, unpublished data) demonstrated that giving increased information in the antenatal period with a decision-making aid does follow through to a significant increase in timely immunisation coverage in the infant.

The paper by Hamilton et al delineates the common themes from parents who chose not to vaccinate.10 While there are no precise data, information to date suggests the anti-immunisation lobby to be in the order of 5–6% of the population.11 This group has always been an active part of the New Zealand scene. The importance of this sector is not so much its existence, as its members remain a small percentage of the community, as its influence on the wider community, particularly as modern communication tools such as the Internet create much more effective and rapid access to wide networks. Local research has already demonstrated that there is a high level of misconception about the issues surrounding immunisation, with one in eight mothers not believing that vaccines are effective and a staggering one in five mothers (one in three of those under 24 years) believing that good hygiene and nutrition will prevent the diseases vaccinated against.12

It is hardly surprising that the most consistent message coming through from parental and health professional research is that one of the biggest barriers to achieving immunisation in New Zealand is parental fear.7,13 This is also reflected in parents in the Maori community.13 The parents of our most vulnerable children frequently have considerable logistic, financial and, at times, cultural barriers to overcome to complete an immunisation event. It does not take much to seed a degree of doubt or fear in a struggling parent to make the likelihood of achieving a full and timely course of immunisation even more remote.

Current strategy in New Zealand is appropriately being directed towards being able to track and offer services to the children who are missing out. However, until we also seriously tackle the considerable gaps in the needs of health professionals—both resource needs and knowledge gaps—we are unlikely to make much headway in addressing community-wide fears and misconceptions around immunisation and attitudes.

As New Zealand children, particularly Maori and Pacific, continue to suffer the terrible burden of meningococcal B disease the new MeNZB® vaccine is in the last phases of trials. Current data are looking positive and, if the trials continue to a successful completion, New Zealand can hope to see this vaccine introduced to all children under 20, progressively around the country from mid-2004 onwards. This is a very ambitious programme, but the needs of our children are urgent. It will need strong support to reach the most vulnerable. Health professional support and education and community communication strategies are core components.

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1. National Health Committee. Review of the wisdom and fairness of the Health
Concerns of health providers and parents affect immunisation coverage

Funding Authority strategy for immunisation of 'hard to reach' children: National Health Committee, 1999:68.


A PRENATAL INTERVENTION STUDY TO IMPROVE TIMELINESS OF IMMUNIZATION INITIATION IN LATINO INFANTS

María Luisa Zúñiga de Nuncio, PhD; Philip R. Nader, MD; Mark H. Sawyer, MD; Michelle De Guire, MSW, MPH; Radmila Prislin, PhD; John P. Elder, PhD, MPH

ABSTRACT: This was a prospective randomized cohort study to assess the effectiveness of an educational immunization intervention with pregnant Latinas on timely initiation of infant immunization. Study participants were recruited from two community clinics in north San Diego County. A total of three hundred and fifty-two Latinas in the third trimester of pregnancy were recruited and randomly assigned to intervention or control groups. Participants received either a culturally and linguistically appropriate session on infant immunization (intervention) or a session on prevention of Sudden Infant Death Syndrome (control). The main outcome measures were pre-post immunization knowledge change and infant immunization status at 92 days. Immunization knowledge increased significantly in the intervention group \([p < .0001, 95\% CI (1.76, 2.47)]\). No difference was found between groups in immunization series initiation: 95 percent of the children in the intervention group were up-to-date by 92 days from birth, and 93 percent of the control group was up-to-date at 92 days. The lack of significant association between receiving immunization education and infant immunization series initiation suggests that parent education may be necessary but not sufficient for timely immunization, particularly in clinics with effective well-child programs. Given the significant increase in immunization knowledge, the broader and perhaps more important implication is that language and culturally specific infant health education messages in the prenatal period may have a positive long-term impact on the child’s health and promote well-child care overall. Future studies should assess...
Abstract

Background
Vaccine safety concerns and lack of knowledge regarding vaccines contribute to delays in infant immunization. Prenatal vaccine education could improve risk communication and timely vaccination. This study sought to determine the proportion of obstetric practices and hospital-based prenatal education classes that provide pregnant women with infant immunization information, the willingness of obstetric practices to provide infant immunization information, and the proportion of first-time mothers who received a pediatric prenatal visit.

Methods
A telephone survey was conducted of 100 pediatric practices and 100 obstetric practices randomly selected from the American Medical Association Physician Masterfile between January and March 2005, with analysis performed April 2005.

Results
Seventy-one of 100 (71%) selected obstetric practices and 85 of 100 (85%) selected pediatric practices participated. Sixteen obstetric practices (23%) reported providing pregnant women with information on routine childhood immunizations. Thirty-four of the 52 practices (65%) that did not provide such information reported willingness to do so. Ten of 51 hospitals (20%) did not provide information about routine childhood immunizations to prenatal class participants. Sixty-six of the 85 pediatric practices (78%) provided a pediatric prenatal visit. Among these, the median percentage of first-time mothers who received a visit was 30%.

Conclusions
Prenatal visits are a missed opportunity for providing education about infant immunizations. Incorporating immunization education into routine obstetric prenatal care may increase maternal knowledge of infant vaccines and reduce delayed immunization.

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Immunization Education Often Overlooked During Prenatal Visits

By Amy Sutton, Contributing Writer

Health Behavior News Service

Most obstetric and pediatric health care providers miss opportunities to counsel pregnant women about routine childhood immunizations, a new survey suggests.

Researchers developed the survey in response to increasing rates of childhood vaccination exemptions, which research data suggest is due to growing parental concerns about vaccine safety, said Ann Marie Navar, the study's lead author.

"Studies have shown that parents would like more information about vaccines and we thought the prenatal period offered a unique opportunity to give women [this information]," said Navar, a researcher at the Johns Hopkins Bloomberg School of Public Health.

The study appears in the September issue of the American Journal of Preventive Medicine.

In a 2005 telephone survey, 71 obstetric practices, 85 pediatric practices and 51 hospitals agreed to report their current efforts to educate pregnant women about routine childhood immunizations.

The authors discovered that 32 percent of obstetric practices provided hepatitis B vaccine information and 23 percent provided information on other routine childhood vaccines.

However, 54 percent of obstetric practices that did not discuss immunizations did counsel patients about other child health and safety topics, such as car seats, pets and circumcision.

"I think pregnant women are generally eager to learn about child health and are a receptive audience for education and information," Navar said. "Our study suggests that the prenatal period may be a currently underutilized but opportune time to increase parent information."

Although 78 percent of the 85 pediatric practices that participated in the survey reported offering prenatal office visits that could include immunization education, only 30 percent of first-time mothers made such a visit, on average.

The hospitals surveyed had a higher rate (80 percent) of offering immunization education, while 20 percent still failed to provide immunization information in their prenatal classes.

"I believe this study should be a wake-up call to obstetrical practices, hospitals and pediatricians to use every prenatal visit as a point for education about the importance of infant and childhood immunizations in keeping children healthy," said Carol Baker, M.D., a professor of pediatrics, molecular virology and microbiology at Baylor College of Medicine in Houston.

Because diseases that immunizations can prevent rarely occur, many parents do not realize how important vaccines are in their prevention, Baker said.

FOR MORE INFORMATION:
Health Behavior News Service: Lisa Esposito at (202) 387-2829 or hbns-editor@cfah.org.
American Journal of Preventive Medicine: Contact the editorial office at (858) 457-7292 or eAJPM@ucsd.edu

Supporting Documents

Prenatal immunization education: The pediatric prenatal visit and routine obstetric care.

Article Discussion

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Comments
Immunisation education in the antenatal period

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ABSTRACT

Background
The antenatal period is known to be an important time for parents' decision-making around immunisation. Historically parents have discussed immunisation issues within the general practice environment. However with most antenatal and early postnatal care now occurring outside the general practice, many parents now have little contact with the general practice. Other antenatal avenues for education are now likely to be their only source of information. There is no definitive research on what information is being disseminated to parents on this topic.

Aim
This study aimed to determine what immunisation literature is provided to parents in antenatal education classes in Central Auckland.

Methods
This small study involved 40 parents recruited from visits to a large Auckland maternity hospital. They were asked a range of questions on what sources of immunisation information they were given in antenatal classes and on their decision-making processes.

Results
Thirty-four (85%) recalled receiving immunisation information during antenatal classes. Twenty-one parents (52%) did not feel they had enough information with which to make a decision, and of the identifiable sources of information given out, nearly half (7/15) included known anti-immunisation literature. Overall, two-thirds considered themselves very likely to immunise, but only one-third felt confident about their decision.

Key Message
Immunisation education needs more focus in the antenatal education arena and provision of anti-immunisation material is inappropriate to support decision-making processes for parents, which needs to be based on reliable, quality information.

Key words
Immunisation, parenting education, attitudes

NZFP 2004; 31: 303–306
available through multimedia sources, the antenatal period is a
critical time for parental decision-making processes. NZ data has shown
that nearly 90% of mothers make their decision on immunisation in the
antenatal period.15

In the past, parents are likely to have discussed immunisation issues
within the general practice. Significant changes in the way antenatal ser-
vices are purchased since 1996 has resulted in the majority of pregnant
women now having little, if any, contact with their general practice team
in the antenatal period. Now the majority of parents receive their antena-
tal information via their Lead Maternity Carer (LMC) who is usually a mid-
wife or an obstetrician, and via antenatal education classes. Traditionally,
these groups have not been involved in immunisation service delivery, and
have not been targeted in immunisation education programmes. Very lit-
tle is known about antenatal education classes and the role these may or
may not play in the imparting of appropriate immunisation education.
There is no legislative requirement for antenatal classes to include teaching
around immunisation.

There are widespread anecdotal concerns that, at times, parents have
received misleading and inaccurate information at antenatal classes.
Parents attending antenatal classes are more likely to be first-
time parents. The aim of this small study was to explore both the feas-
ibility of recruiting parents during pregnancy and to ascertain what in-
formation they were given during antenatal education classes in the
central Auckland region.

Methods
Participants were parents, who had attended antenatal classes through
any provider, attending a tour of the maternity unit at National Women's
Hospital in Auckland. Tours are held three times a week and parents ex-
pecting to deliver at this unit are invited to attend a tour and talk about
the facilities. At a convenient point during this session, the nurse educa-
tor leading the tour introduced the researcher and handed the attendants
over to her. The researcher approached the group and invited par-
ents to consent to a short telephone survey about the nature of immuni-
sation information received during

![Figure 1. Participants stated likelihood of immunising their baby.](image)

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Figure 1. Participants stated likelihood of immunising their baby.

Results
Forty-five interviewees were recruited over nine visits by the re-
searcher. Class size varied from approximately six to 20, which included
partners/support persons. Five were unable to complete the interview
process due to: Hospital admission (one) and, for the other four, misun-
derstanding the requirement that participants needed to have attended an-
tenatal classes (this was mainly due to English not being their first lan-
guage). There were one to two refusals per group.

There were variable numbers recruited from each visit and this was
in part correlated with the variable way the researcher and her purpose
was presented to the group by the different educators giving the tour.

Most respondents identified as
being NZ European 31 (77.5%), two
(5%) were NZ Maori, seven (18%)
were Pacific, Asian, Indian or UK Eu-
ropean. No respondents were under
20 years of age, two were 20-25, thir-
ten (33%) were 26-30, twenty-three
(57.5%) were 31-35 and two were 36-
40. None were over 40 years of age.
Eight (20%) had a general practitioner
obstetrician, four (10%) had a hospi-
tal midwife, twenty-one (53%) had an
independent midwife and seven (18%)
were under a specialist obstetrician
for their lead maternity care.

There was a variation in the ante-
natal classes attended and who ran
them. Providers were Birthcare (n=10),
National Women's Hospital (n=13) and four different Parents Centres in the Auckland region (n=13). Four had attended private classes. Parents Centre and other private classes are organised by parent volunteers or by organisations that are independent of the hospitals. These may be recommended to patients by their LMC.

Thirty-four (85%) recalled receiving immunisation information during antenatal classes.

When asked whether this information was written, verbal or both: Twenty-four (60% of whole sample or 71% of sample who had received immunisation information) received both written and verbal information. Ten received written information only.

If written, respondents were asked if they could recall what they were given. There seemed to be many who found this question difficult to answer 'don't recall', 'can't remember' - and in some cases leafing through their folders to see what it was they were actually given. Ten didn't recall what they were given, eight were given Ministry of Health pamphlets only, one was given the Immunisation Awareness Society pamphlet (anti-immunisation literature) only and six were given both Ministry of Health and Immunisation Awareness material. One was given Ministry of Health plus other material, seven were given other material (not Ministry of Health or Immunisation Awareness Society) and for seven, the question was not applicable.

Participants were asked whether they felt the information they had been given was enough for them to make a decision. Nineteen respondents (48%) felt that they had been given adequate information about immunisation to make an informed choice for their baby. Twenty-one respondents (52%) felt they had not enough information with which to make a decision. (16 of these did not think they had received enough and five received nothing).

They were also asked if they felt the information received was (a) positive, (b) negative or (c) neutral towards immunisation. Twelve (30%) felt that the information received was (only) positive towards immunisation. No one felt that the information was (only) negative towards immunisation. Twenty-one (53%) felt that the information received was neutral towards immunisation.

On a Likert scale from 1 (not at all) to 5 (very likely) participants ranked their likelihood of immunising their baby. No participants responded 'not at all', one respondent replied '2', four replied '3', ten replied '4' and twenty-five (63%) replied '5' very likely to immunise (Figure 1).

Confidence in immunisation was measured on a similar scale from '1' not confident at all to '5' very confident. No participants responded 'not at all', three responded '2', ten responded '3', fourteen responded '4' and thirteen (32.5%) responded '5' very confident about immunising their baby (Figure 2).

There was a statistically significant difference in the responses to these two questions. Although 63% of participants were very likely to immunise their baby, only 33% were very confident about it (Yates corrected χ²=6.07, P=0.014).

Discussion

It is difficult for many parents to make fully informed decisions around immunisation. Despite extensive scientific evidence supporting the benefits of the national scheduled immunisation programme, literature is frequently presented in the public domain that is not based around the scientific evidence and includes 'scare stories' and personal opinion. How the literature is presented around immunisation is likely to make a considerable difference to the parent's decision-making processes.

There has been concern for some time in New Zealand regarding the information about immunisation given to expectant parents during the antenatal period. Anecdotal evidence suggested anti-immunisation literature was being distributed either in combination with, or instead of, evidence-based resources. One of the problems in assessing the validity of these claims is the accessibility of parents during the antenatal period when they are attending childbirth education classes. Approaching the classes themselves would severely bias the results. We chose to recruit participants into this study through a tour of the maternity unit of a major ma-
ternity hospital where many of them were likely to be first time parents and to have attended antenatal classes through various providers.

This was a small study and the results may not be generalisable to other NZ regions, and some population groups. The study did not have sufficient numbers to compare ethnic differences or age differences and was limited to English-speaking parents with a telephone. However we recruited parents who attended classes through a range of antenatal education providers in the area under study.

Recruitment was relatively straightforward, although the researcher reported that the attitude of the individual educator giving the tour appeared to make a difference in the number of participants recruited at each visit. There are a number of staff at the hospital who give these tours and it is important to have the support of them all when undertaking this type of survey.

Not all parents had received information. Of the 34 (85%) who did, 15 (44%) had literature that was identifiable such as Ministry of Health pamphlets and of these, seven (20%) had received literature known to be anti-immunisation either as Ministry pamphlets or alone. Over half of those surveyed did not feel they had been given adequate information with which to make a decision.

There was also an important difference between the likelihood of immunising and the level of confidence in immunising baby. This finding is supported by studies that identify parental fear as an important factor in both parent views on immunisation and immunisation uptake, even among parents who fully immunise their baby. 10, 13

While numbers from this study are small the key findings are concerning.

As it is known that immunisation decision-making occurs, in most instances, in the antenatal arena, and parents have a great deal of fear and concerns around the decision, it is urgent and timely to focus more resources and attention on antenatal education. During the antenatal period, there is information provided to parents on a variety of subjects that are important once the baby is born, such as modes of feeding, vitamin K and immunisation. However, this period and shortly after birth are the only opportunities to present information on immunisation issues before the six-week check.

Patients may perceive that literature received from a health professional containing opposing statements is balanced and has equal scientific validity. Furthermore, as immunisation decision-making needs to be based on rigorous science it is unacceptable that education programmes include information that is both misleading and inaccurate. 14 Education programmes need to conform to high standards of quality material to give parents a fair chance of making genuinely informed decisions.

Based on the findings from this small study we recommend further research in this area.

Acknowledgements

We thank the participants in this study for their time, Glenda Stimpson and her team of childbirth educators for their support and cooperation and Felicity Goodyear-Smith for her editorial input.

References

Tracking mothers attitudes to childhood immunisation 1991–2001

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Abstract

This report presents the findings from a series of 20 surveys carried out between 1991 and 2001. The main objectives of the research were to:

- obtain information on mothers’ knowledge of immunisation;
- obtain information on mothers’ attitudes towards immunisation;
- obtain information on mothers’ experience of immunisation services;
- monitor the recall and interpretation of NHS Immunisation Information (NHS II) advertising and immunisation information materials.

This unique body of more than 15,000 interviews was conducted as part of a routine programme of research supporting the national immunisation programme in England. These surveys show that the public wants clarity, consistency, factual information and openness from those delivering immunisation services.

Keywords: Immunisation; Mothers; Attitudes

Article Outline

1. Introduction
2. Methods
3. Results
   3.1. Spontaneous and prompted awareness of available immunisations
   3.2. Seriousness of diseases
   3.3. Safety of immunisations
   3.4. Immunisations mothers would not allow a future child to have
   3.5. Interactions with health professionals

Related Articles

- Factors underlying suboptimal childhood immunisation
- Tracking mothers’ attitudes to MMR immunisation 1996–2001
- Comparison of immunogenicity and reactogenicity of a meningococcal conjugate vaccine
- COVERAGE OF MMR VACCINE
- An evaluation of measles, mumps and rubella vaccine in...
3.11. Attitudes to advertising

4. Discussion
4.1. Awareness of vaccines
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4.4. Experience of the service offered
4.5. Publicity and access to information

5. Conclusion

Appendix A. Fieldwork dates for the surveys conducted between 1991 and 2001
Appendix B. Appendix
Appendix C. Appendix

References
Missed Opportunities for Immunization Education During the Prenatal Period: the pediatric prenatal visit, routine obstetric care, and hospital-based education classes

Ann Marie Navar¹, Neal Halsey¹, Terrell C. Carter², Daniel A. Salmon², and Martha M. Montgomery¹. (1) Division of Disease Control, International Health, Johns Hopkins School of Public Health, 615 N. Wolfe Street, Suite 5515, Baltimore, MD, USA, (2) College of Medicine, University of Florida, 1329 SW 16th Street, Room 5239, PO BOX 100177, Gainesville, FL, USA

Learning Objectives for this Presentation:
By the end of this presentation, participants will be able to:
1) Understand the proportion of obstetric practices and hospital-based prenatal education classes that offer women immunization information.
2) Understand the frequency of pediatric prenatal visits and proportion of women who receive one.

Background:
Parental vaccine safety concerns, lack of knowledge regarding vaccines, and delays in immunization of children under 2 suggest a need for improved vaccine risk communication. The prenatal period offers an excellent opportunity for immunization education. No national data exist on the frequency of vaccine education during the pediatric prenatal visit, routine obstetric prenatal care, or hospital based education classes.

Objectives:
This study sought to determine the proportion of first time mothers who receive a pediatric prenatal visit, the proportion of obstetric practices and hospital-based prenatal education classes that provide pregnant women with immunization information, and the willingness of obstetric practices to provide such information as part of routine obstetric prenatal care.

Methods:
Telephone survey of 100 pediatric practices and 100 obstetric practices using a nationally representative random sample and all hospitals identified by obstetricians.

Results:
Seventy-one obstetric practices and 85 pediatric practices participated in the survey (response rate=78%). Twenty-three percent of obstetric practices (95% Confidence Interval: 13-34%) reported providing pregnant women information routine childhood.
immunizations. Only 17% (4-23%) of obstetric practices were unwilling to provide information about vaccines to pregnant women as part of prenatal care. Twenty percent of hospitals (10-34%) did not provide information about routine childhood immunizations to prenatal class participants. Seventy-eight percent (67-86%) of pediatric practices provided a pediatric prenatal visit. Among these, the median percentage of first time mothers who received a visit was 30% (25-42%).

Conclusions:
There exists a large unmet need for prenatal immunization education. Incorporating immunization education into routine obstetric prenatal care may increase maternal knowledge of vaccines and reduce delayed immunization.

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Presentation

See more of What Immunization Information Do Parents Want and When Do They Want It? See more of The 40th National Immunization Conference (NIC)
Missed Opportunities for Prenatal Immunization Education:

The pediatric prenatal visit, routine obstetric care, and hospital education classes

Ann Marie Navar, MHS
Institute for Vaccine Safety
Johns Hopkins School of Public Health

Results of a survey we conducted on immunization education practices during the pediatric prenatal visit, routine obstetric care, and hospital education classes
ACIP recommendations- Dec 2005. at birth for infants born to women of unknown/+ HBsAg, medically stable infants over 20000 grams to HBsAg negative"

23% worried parents receive more immunizations than good for them; 25% worried about immune system weakening


13% not have enough info to make “good decisions” about inz.

Gust ajpm 2005 HealthStyles survey indicates an unmet need for immunization education
Idea that the prenatal period may be the time to fill this unmet need, as pregnant women are a more captive audience about child health topics.

Current literature suggested that this wasn't being done.

AAP committee on psychosocial aspects of child and family health - 1996, 2001 - breastfeeding, circumcision, feeding in, car safety, parenting, tobacco and alcohol.

Collaboration: guidelines for prenatal care prior to discharge "importance of maintaining newborn immunization, beginning with an initial dose of hepatitis B virus vaccine " should be reviewed

1981 - Arizona physicians. ½... 1890 CT, new haven 91%

96.5% of women get prenatal care by 2nd trimester (i.e. 3.5% no or 3rd trimester only) NCHS 2003
Objectives

• Determine the frequency of the pediatric prenatal visit

• Determine the percent of obstetricians that provide or are willing to provide information about immunizations to pregnant women

• Determine the frequency immunization education in hospital based education practices
Methods

- **Telephone Survey**: 100 pediatric practices, 100 obstetric practices + hospitals
  - Pediatric: 10 questions
    - Office prenatal visit policy, frequency
  - OB: 9 questions
    - Information given during prenatal care
  - Hospital: 11 questions
    - Information given as part of classes, proportion taking class
Obstetric Study Population

- Office-based, with phone # in AMA Masterfile
- Nationwide, random sample
  - 132 numbers called in order of random #
    - 17 bad numbers
    - 2 no longer practicing
    - 1 ID/neurology/travel medicine clinic
    - 12 GYN only; specialists don’t deliver
Obstetric Study Population

- Final sample=100 obstetric practices
  - 308 MD, DO, NP, Midwives
  - 30 States Represented
  - Response rate: 71% (n=71)
Obstetric Respondents

- Nurse-23
- Office manager-16
- Other Administration-15
- Medical Assistant-12
- Doctor/Nurse Practitioner-5
Hospital Study Population

- 78 Hospitals Identified
  - Some OB's identified more than 1
- 28 States represented
- Response rate=65% (n=55)
Pediatric Study Population

- Office-based, with phone # in AMA Masterfile
- Nationwide, random sample
  - 126 numbers called in order of random #
    - 14 bad #s
    - 3 non-pediatricians
      - Emergency med, Internal Med, Family Med
Pediatric Study Population

- Final sample = 100 pediatric practices
  - 33 States Represented
  - 380 MD, DO, NP
- Response rate: 85% (n=85)
Pediatric Respondents

- Secretary/Receptionist-59
- Office manager-11
- Nurse-10
- Nurse Supervisor-3
- Doctor-2
## Obstetric Practices

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<td>16 (23)</td>
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<td>3 (4)</td>
</tr>
</tbody>
</table>
91% of 52 that do not provide info on other vaccines.

<table>
<thead>
<tr>
<th>Obstetric Practices Not Providing Vaccine Information</th>
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</thead>
<tbody>
<tr>
<td>(no info on routine inz)</td>
</tr>
<tr>
<td>34 (65) 9 (17) 9 (18)</td>
</tr>
<tr>
<td>(no info on routine inz or hep b)</td>
</tr>
<tr>
<td>21 (54) 17 (44) 1 (3%)</td>
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</tbody>
</table>

* Circumcision, Car Safety, Pets, Screening Tests, Cord Blood Banking, Literature from Pharmaceutical Companies, Formula Samples
Of 66 that offer a visit, 3 stopped. 63 continued. 8 don’t know
**Pediatric Practices**

- **27.5 minutes**: Average duration of prenatal visit
  - Range: 15-60 minutes
- **39%**: Average proportion of 1st time mothers that get a visit in practices that offer a visit
  - Range: 0-99%
- **Larger practices more likely to offer a prenatal visit**
  - 1-2, 3-4, 5+ physicians (OR=6.1, p<0.001)
Number of practices reporting vs. percent of 1st time mothers receiving a pediatric prenatal visit

Percent of 1st time mothers receive a prenatal visit

Number of practices
Hospital Classes

36% Number of class attendees/number of births at the hospital

86% Women are first-time mothers

35% Classes charge a fee

80% Hospitals provide information regarding routine immunizations in any class

74% Women take a class that includes information on immunizations
Limitations

- Respondents unsure of physician practices
  - OB: Clinical staff (physicians, nurses) less likely than non-clinical staff (office managers, receptionists) to report providing information about vaccines (OR=0.4, p=0.09)
  - OB: No difference in willingness (OR=1.3, p=0.73)
Limitations

- Respondents unsure of physician practices
  - Many "maybe/don't know" responses
  - OB: Clinical staff (physicians, nurses) less likely than non-clinical staff (office managers, receptionists) to report providing information about vaccines (OR=0.4, p=0.09)
  - OB: No difference in willingness (OR=1.3, p=0.73)
  - Pediatricians: Clinical staff more likely to report vaccines discussed (OR=2.6, p=0.4)

- Small sample size – large CI’s
Recommendations

Multiple opportunities to provide information about immunizations during routine prenatal care

Assess the utility of incorporate immunization information during routine obstetric prenatal care

Encourage a pediatric prenatal visit for mothers desiring more information about vaccines

Incorporate immunization education during prenatal visit hospital based education classes

New Hepatitis B recommendations as impetus for hospital classes/Obstetric practices
Thank you!

Johns Hopkins Bloomberg School of Public Health
Ann Marie Navar, MHS
Neal A. Halsey, MD
Martha M. Montgomery

University of Florida College of Medicine
Daniel A. Salmon, PhD
Terrell C. Carter, MHS
FIONA LAFFERTY

District Immunisation Facilitator
Registered Nurse
Registered Midwife
BSc Health Science, Midwifery
Dispelling the Midwives’ Myths
History of Midwifery in NZ

- Hospital Delivery
- Shared care
- 1990 Independent Midwifery
- 1996 Shared care disestablished
History of Midwifery Training in NZ

- Hospital based training
- Polytechnic based training
- University based training
- Direct entry training
67% of parents make the decision to immunise before childbirth

Source of information given antenatally

Source. Petousis-Harris et al, General Practice and Health Professional Determinants of Immunisation Coverage. 2007. Unpublished Data
Health Professional barriers to discussing immunisation

- Lack of conviction from inadequate information.
- Poor understanding of the immune system.
- Poor understanding of the vaccine preventable diseases.
- Misconception about the cause, transmission and prevention of disease.

NZFP 2002
IMAC steps in

- The role Midwives play in promoting immunisation was acknowledged.
- Gaps in knowledge recognised.
- Education package developed.
- The Midwifery Council of NZ was approached.
- 10 education points allocated to the course.
- Pilot course run in Waikato.
- 6 study days subsidised by MOH for midwifery education.
Sample Programme

- Vaccine Preventable Diseases
- NZ Immunisation Schedule
- The Immune System
- Vaccine composition
- Hepatitis B
- TB Update
- Vaccine Administration
- Current Issues, MeNZB, New Vaccines, Varicella
- Informed Consent
- Cold Chain Management
- Promoting Immunisation to New Parents
- National Immunisation Register
Evaluation

• The facilitators were knowledgeable.
• I feel I have gained valuable knowledge.
• There was adequate time for open questions and discussion.
• The correct amount of information was covered.
• I would recommend this training to other Midwives.
• Overall, the training was well run and organized.
Evaluation

I feel I have gained valuable knowledge
Evaluation

I would recommend this training to other midwives
Difficulties encountered

• DHB MW’s unable to attend due to lack of funding or lack of staff.

• LMC’s unable to arrange cover to attend.

• More MW’s requesting to attend than available places.
The Future

- To ensure that all NZ Midwives promote immunisation with a passion.
- To meet the demand for Midwifery study days nationally.
- To meet the request for ongoing Midwifery updates.
- To help achieve the national goal of 95% of all 2 yr olds to be fully immunised.
Hamish
Despite record-high immunization coverage nationally, there is considerable variation across state and local immunization programs, which are responsible for the implementation of vaccine recommendations in their jurisdictions. The objectives of this study were to describe activities of state and local immunization programs that sustained high coverage levels across several years and to identify common themes and practical examples for sustaining childhood vaccination coverage rates that could be applied elsewhere. We conducted 95 semi-structured key informant interviews with internal staff members and external partners at the 10 immunization programs with the highest sustained childhood immunization coverage from 2000 to 2005, as measured by the National Immunization Survey. Interview transcripts were analyzed qualitatively using a general inductive approach. Common themes across the 10 programs included maintaining a strong program infrastructure, using available data to drive planning and decision making, a commitment to building and sustaining relationships, and a focus on education and communication. Given the challenges of an increasingly complex immunization system, the lessons learned from these programs may help inform others who are working to improve childhood immunization delivery and coverage in their own programs.

KEY WORDS: immunization, immunization programs, qualitative research

Vaccination against infectious disease has contributed to the health of children and communities worldwide and has been credited as one of the greatest public health achievements of the 20th century. The first years of the 21st century, however, have offered several challenges to the continued success of the childhood immunization program in the United States. For example, the addition of the pneumococcal conjugate vaccine to the recommended childhood immunization schedule in 2000, while preventing substantial morbidity and mortality, added to the cost and complexity of the vaccination schedule. Furthermore, Lee et al found that the addition of expensive new vaccines to the recommended schedule combined with fluctuations in federal and state funding for vaccination programs has led some states to switch to more restrictive policies for funding vaccine purchases in recent years. Finally, several vaccine supply shortages occurred during this time, including shortages of diphtheria and tetanus toxoids and acellular pertussis vaccine; measles, mumps, and rubella vaccine; pneumococcal conjugate vaccine; varicella vaccine; and influenza vaccine. Such
shortages have impeded the ability of public health practitioners and healthcare providers to implement rapidly changing recommendations and deliver timely vaccination and have left unvaccinated children vulnerable to disease.5,6

In spite of these challenges, national coverage for US children with the recommended 4:3:1:3:3 vaccination series increased from 72.8 percent in 2000 to 80.8 percent in 2005.7,8 However, despite record-high national coverage, there remains considerable variation across state and local immunization programs, which are responsible for the implementation of vaccine recommendations in their jurisdiction. For example, in 2005, coverage varied across programs from 63.1 percent to 93.5 percent for the 4:3:1:3:3 series.8 Since 2002, the series used to measure coverage among 19- to 35-month-olds has been expanded to include varicella vaccine (the 4:3:1:3:3:1 series), and vaccines against hepatitis A, rotavirus, pneumococcal disease, and influenza are also recommended for children.9,10 Given the challenges described above, the wide variation in local-level coverage, and the expansion of the immunization series in recent years, the objectives of this study were to describe activities of state and local immunization programs that sustained high coverage levels from 2000 to 2005 and to identify common themes and practical examples for sustaining childhood vaccination coverage rates that could be applied elsewhere.

Methods

Site and participant selection

Sites were selected on the basis of data from the National Immunization Survey (NIS) 2000-2005. NIS is an annual survey that estimates vaccination coverage of children aged 19 to 35 months in the United States using random-digit dial telephone surveys of parents and verification of immunization history through health care provider record checks. Additional information on the NIS methodology is available elsewhere.11 For this study, vaccination coverage was calculated for all 50 states, the District of Columbia, and 21 urban areas with NIS 2000-2005 data. Vaccination coverage was defined as the proportion of eligible children with adequate provider immunization information who received the recommended 4:3:1:3:3 series. Because the 4:3:1:3:3:1 series (which also includes one dose of varicella vaccine) was not reported until 2002, we used the 4:3:1:3:3 series for this analysis.9 A trend analysis was conducted comparing NIS 4:3:1:3:3 series coverage levels in each of the 72 sites with the national coverage level for each year from 2000 to 2005.12 The 10 sites with the highest coverage across years were approached for participation. Although other sites may have achieved higher single-year coverage levels during this period, the 10 sites chosen for participation represented the programs with the highest sustained coverage levels over time.

The immunization program manager at each site was contacted by a member of the research team and invited to take part in the project. All 10 agreed to participate. The program managers were then asked to schedule in-person interviews with their program’s internal staff members and representatives from key external partner agencies that regularly worked with the state immunization program on childhood immunization during the time being studied. Program managers decided on the staff members and partners who would be interviewed at each site. Examples of these key informants’ roles included immunization information system (IIS) coordinators; Vaccines for Children (VFC); and/or Assessment, Feedback, Incentives, and eXchange (AFIX) program coordinators, health educators, epidemiologists, community coalition members, physician immunization champions, and medical directors. Program managers were also interviewed.

Interview questions and data collection

Semi-structured interviewer guides were developed by the research team and consisted of a list of 17 questions for internal staff and 12 questions for external partners (Table 1). Separate lists were developed for internal program personnel and external partners; however, when applicable, questions were the same for both groups. Interview guides were based on similar interview guides developed for an earlier phase of the project which looked at the seven sites with the most improved 4:3:1:3:3 series coverage from 2001 to 2004 (H. Groom, et al, this issue). The questions reflected an ecological approach to the overall research goal of understanding the factors that contributed to the high sustained immunization coverage in each site by exploring individual, interpersonal, organizational, community, and policy-level factors.13,14 Five questions are the focus of this analysis. These included three questions common to both internal

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1 The Vaccines for Children (VFC) program provides recommended vaccines at no cost to eligible children. For more information, visit: www.cdc.gov/vaccines/programs/vfc.

2 The Assessment, Feedback, Incentive, and eXchange (AFIX) process is a framework for improving immunization delivery at the practice level. For more information, visit www.cdc.gov/vaccines/programs/afix.
A Qualitative Analysis of Immunization Programs

TABLE 1 Interview guide questions for internal staff and external partners


table | Interview guide questions for internal staff and external partners |
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<tbody>
<tr>
<td>Questions for both internal staff and external partners:</td>
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<tr>
<td>What has been your role in the immunization program since 2000?</td>
</tr>
<tr>
<td>Thinking back to 2000 what are the main initiatives that have contributed to increasing and sustaining high coverage rates?</td>
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<tr>
<td>Do you have plans for additional initiatives or plans to change current initiatives as you move forward?</td>
</tr>
<tr>
<td>Do you believe there are regional differences in immunization coverage within the state/city?</td>
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<tr>
<td>What are the challenges to sustaining high coverage levels for childhood immunization? (i.e., Who is hardest to reach?)</td>
</tr>
<tr>
<td>Have there been any local or state situations or events since 2000 that have had an effect on childhood immunization coverage levels (outbreaks, vaccine shortage, etc.)?</td>
</tr>
<tr>
<td>How does the political environment affect immunization efforts? Has this fluctuated since 2000?</td>
</tr>
<tr>
<td>If another grantee wanted to know how best to improve and sustain high coverage levels in the state/city, what would you tell the grantee?</td>
</tr>
<tr>
<td>Additional questions for internal staff only:</td>
</tr>
<tr>
<td>Who are the key people within your immunization program who have helped to increase and sustain rates from 2000 to the present?</td>
</tr>
<tr>
<td>What role has Assessment, Feedback, Incentives, eXchange (AFIX) played in reaching and sustaining high coverage levels since 2000?</td>
</tr>
<tr>
<td>What role has the VFC program played in reaching and sustaining high coverage levels?</td>
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<tr>
<td>What has been the role of the Immunization Information System (IIS or &quot;registry&quot;) in reaching and sustaining high coverage levels?</td>
</tr>
<tr>
<td>Has the program conducted any evaluations of program initiatives to see if they had a measurable impact on coverage?</td>
</tr>
<tr>
<td>How stable is your staff and has this played a role in your ability to sustain high coverage levels?</td>
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<tr>
<td>Are there any formal trainings for immunization staff—internal or external?</td>
</tr>
<tr>
<td>Do you receive state funding for both vaccine purchase and program operations?</td>
</tr>
<tr>
<td>What people or organizations outside your program help drive the immunization effort?</td>
</tr>
<tr>
<td>Additional questions for external partners only:</td>
</tr>
<tr>
<td>Who are your key partners?</td>
</tr>
<tr>
<td>What kind of policy/advocacy work has been done since 2000 to sustain high coverage levels?</td>
</tr>
<tr>
<td>To what extent has funding played a role in sustaining high coverage levels?</td>
</tr>
<tr>
<td>How can state or city immunization programs foster relationships with external partners (pediatric groups, universities, etc.)?</td>
</tr>
</tbody>
</table>

*Questions in bold type are included in this analysis.

The research team traveled to each of the 10 sites between March and October 2007 to conduct the interviews. A total of 95 interviews were conducted, ranging from 3 to 16 interviews per site. The range of participants reflects the variation in the number of staff members and external partners across sites. Each interview lasted approximately 30 minutes, and all questions from the appropriate question guide (internal staff or external partners) were asked of each participant. One research team member conducted interviews with internal program staff and another conducted interviews with external partners. A third team member recorded the interviews for transcription and took field notes. The project was reviewed by the Centers for Disease Control and Prevention (CDC) Human Subjects coordinator and was classified as nonresearch.

Data analysis

Codebook development and calculation of interrater reliability

Interview recordings were transcribed verbatim and then entered into an Ez-Text database for analysis (CDC Ez-Text, Version 3.06c, Cornwall Inc, Atlanta, Georgia for the CDC). Internal and external interviews were analyzed separately. Two researchers developed preliminary codebooks for internal and external interviews based on the questions in the interview guides, according to the methods described by MacQueen et al. A random sample of four transcripts (two from internal program personnel and two from external partners) was then coded by two researchers to calculate interrater reliability. After meeting to resolve coding differences and refine the codebooks, \( k \) was found to be 0.79 for internal staff transcripts and 0.82 for external partner transcripts, indicating high agreement.

Data coding and identification of themes

We used a general inductive approach, which was designed as a practical framework for analyzing qualitative evaluation data. One researcher read each transcript to become familiar with the data, and interview text was then assigned to the appropriate code based upon the definitions in the codebooks. Next, subthemes were identified within each code and text segments were assigned to each of the subthemes. The most common subthemes were summarized, and then direct quotes were selected to illustrate these subthemes and provide practical examples in the words of participants. The final codebooks included data from all of the internal and external interview questions; however,
immunization project supplies all routine pediatric vaccines to all public and private VFC-eligible children in Alabama.

**Immunization program staff**

What are the challenges to sustaining high coverage levels for childhood immunization?

Respondents were asked about the challenges the program has faced in recent years. Several challenges were related to maintaining high program performance, including changes to the complex childhood immunization schedule and financial pressures. Healthcare provider education and communication was seen as an important tool in addressing these challenges. Respondents also discussed more traditional challenges, such as access to healthcare and immunization services for families and educating parents on the importance of immunizations. Only two sites discussed internal issues related to the immunization program.

What are the main initiatives that have contributed to increasing and sustaining high coverage levels?

Program staff described initiatives that were either started or already underway during the time being...
What would you tell another program about achieving or maintaining high coverage levels?

Program staff also offered advice for other immunization programs that were trying to achieve or maintain high coverage levels. The most common advice was to focus on networking and partnership building efforts, as well as on education and communication, possibly reflecting the successful initiatives that they had already described in these areas. Partnership efforts included reaching out to physicians and professional societies, local public health personnel, and community agencies. One participant explained why partnership with groups outside of the state immunization program is so important in gaining the trust of community members:

You can't walk into a community and say, "Okay. Here I am. I'm from the health department, and I want your kids to be immunized." You have to form a relationship with the community agencies first. (Rhode Island)

Another described the importance of being proactive in developing a reputation as a resource for the healthcare provider community, using the example of proactively "cold calling" healthcare providers.

Program staff also addressed the importance of using IIS data and needs assessments, particularly at the local level. Internal needs assessments of the immunization program and its infrastructure were also discussed as important first steps in improving the impact of the program, for example, by assessing program staff for “hidden” skills such as writing or editing.

External partners

What are the challenges to sustaining high coverage levels for childhood immunization?

External partners discussed challenges that were similar to those raised by internal program staff; however, their most common challenges reflected the fact that many of the external partners we spoke to were direct service providers. These challenges included parent education, financial issues, and changes or increased complexity in the immunization schedule, as illustrated by a practicing physician in discussing changing interactions with parents:

A question I get from a lot of parents, you know, "How much are we going to give? Is this harmful? Are we overloading the immune system?" We've all heard that. And I try to put that easily to rest, but I think as the vaccine schedule gets more complicated, providers, you know, they want to keep up, but I think it's hard. (Iowa)
What are the main initiatives that have contributed to increasing and sustaining high coverage levels?

External partners were also asked to describe initiatives that they believed contributed to the program’s sustained high coverage. They discussed a wide variety of initiatives, with education and communication being the most common. Education of healthcare providers played an important role in communicating with parents; for example, one external partner, a healthcare provider in Minnesota, described how physicians can approach parents who are resistant to vaccinate by “breaking down what their concerns are and then addressing each and every one of those in a unique way.”

External partners also discussed the importance of coalition development and access to direct services, as well as needs assessments to help programs determine where to focus their improvement efforts. One partner in Minnesota discussed the benefits of using IIS data to drive locally relevant program planning in a geographically diverse state:

> Five million people. Two and a half are right here in this like 15-mile metro area, and the rest of us, the other half, is all over the rest of the state, which is actually a pretty big state, you know, miles-wise. And so we try to be geographically oriented. What’s going to work even in this zip code is not going to work in one just across the river. So really being data driven, having evidence, looking at our different communities that are here. (Minnesota)

What kind of policy or advocacy work has been done to sustain high coverage levels?

External partners were also asked to describe initiatives that they believed contributed to the program’s sustained high coverage. They discussed a wide variety of initiatives, with education and communication being the most common. Education of healthcare providers played an important role in communicating with parents; for example, one external partner, a healthcare provider in Minnesota, described how physicians can approach parents who are resistant to vaccinate by “breaking down what their concerns are and then addressing each and every one of those in a unique way.”

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How can immunization programs foster relationships with external partners?

In addition to their advice on how to sustain high coverage levels, external partners were asked how state or local immunization programs could foster relationships with external partners. In general, relationship development was considered most effective when programs approached external partners proactively, for example, by reaching out to external partners before an emergency:

> I think it’s really developing relationships before the outbreaks happen, before the disasters happen, having those as an ongoing thing and making sure that they remain strong. (Rhode Island)

Another important theme was the role of face-to-face communication in developing relationships with external partners. Attending meetings, giving presentations, or building relationships through AFIX visits to provider offices were examples of how immunization programs could meet with external partners in-person.

Once programs reached out to external partners, facilitating coalition development was important as was reinforcing their common goal of healthy children. In one site, coalition development led to greater program buy-in at the local level:

> And then I think that there’s been at least an effort to try to engage the communities and give them responsibility through coalitions or through support of the local health departments to take responsibility for what’s happening in their own communities. (Wisconsin)

Advocacy work included media campaigns and development of educational materials, as well as public and healthcare provider education. External partners at several sites also discussed coalition development and partnership as part of their advocacy work.
partners were being asked to add new activities to already busy schedules.

Discussion

We conducted key informant interviews with staff and partners at 10 state and local immunization programs to describe activities of programs that sustained high coverage levels across several years and to identify common themes and practical examples for sustaining childhood vaccination coverage rates that could be applied elsewhere. While each program’s individual story was unique, several common themes emerged that may be indicative of critical elements for sustaining high immunization rates. These included strong infrastructure, use of data, a commitment to building and sustaining relationships, and a focus on education and communication. Examples of activities that highlight these themes are summarized in Table 3.

Infrastructure included the development of strong public health programs at the local level and was discussed in 9 of the 10 sites we visited. Needs assessments were credited with helping understand the issues that were relevant to local public health practitioners and were also cited as a way to develop local ownership and buy-in for the program. Such input from and involvement of community members (in this case, public health practitioners and external partners) is a well-recognized component of successful program assessment and planning.23

Less frequently, infrastructure development referred to direct service delivery (eg, through immunization clinics), which was an important initiative discussed in the most improved programs studied in an earlier phase of the project (H. Groom, et al, this issue). It is possible that the most improved programs felt that devoting resources to direct service delivery was the most practical way to improve immunization rates, while sustaining those rates required strengthening program capacity in other ways. Alternatively, this finding could be a reflection of the number of local immunization programs included among the most improved programs. Local programs are more likely to be involved with direct immunization delivery than state programs, which made up the majority of the sustained high coverage sites.

Use of data to guide program activities was another important theme across the programs with high sustained coverage and was discussed in all 10 sites. IIS was the most commonly referenced data source among the eight sites with an active IIS during the period being discussed. IIS is “confidential, computerized information systems that collect and consolidate vaccination data from multiple health-care providers, generate

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<tr>
<th>TABLE 3 Summary of selected respondent examples that illustrate the overall themes of infrastructure, data, partnerships, and education/communication</th>
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<tr>
<td><strong>Internal staff members</strong></td>
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<td><strong>External partners</strong></td>
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**Abbreviations:** AFIX, Assessment, Feedback, Incentive, exchange; IIS, Immunization Information System.

reminder and recall notifications, and assess vaccination coverage within a defined geographic area.”24 As of 2006, an estimated 65 percent of US children younger than 6 years participated in an IIS, and the CDC goal for 2010 is 95 percent participation in this age group.24 Eight IISs are also designated as sentinel sites for 2008–2012. Sentinel sites “receive additional grant funds to achieve higher standards of data quality in their IIS and routinely analyze data for programmatic decision-making.”25 It is of note that of the eight state and local immunization programs that currently serve as IIS sentinel sites, three of them were included in our project (Minnesota, North Dakota, and Wisconsin).

Assessment data generated through the AFIX process were also an important data source. This finding is consistent with the Guide to Community Preventive Services, which recommends the process as an
evidence-based method for increasing immunization coverage. Both internal and external partners stressed the importance of not just collecting or reporting data but also using it to educate practitioners and drive decision making at the program level.

The importance of building relationships with physicians or local public health practitioners was also common among programs with high sustained coverage and was a prominent theme in 9 of the 10 sites. These relationships, as well as relationships with other external partners, were seen as another key to the success of these programs. From the perspective of external partners, it was particularly important for immunization programs to initiate partnerships, identify common goals, and demonstrate how partnership would be of value to their organization. Face-to-face communication was also highly valued. Past research on community coalitions and partnerships in public health has highlighted the importance of the health department playing a proactive role as coalition facilitator, as well as the importance of sharing a common goal in building trust among coalition members.

Woven throughout all of these activities was the importance of education and communication, which was identified as an important theme in all 10 sites. For internal staff, this often meant developing a reputation as a resource among healthcare providers, who in turn have direct contact with families. External partners, some of whom were practicing physicians, generally agreed with this assessment of the flow of information from the immunization program to parents via healthcare providers. This is in contrast to the most improved programs, where direct public education and communication efforts were common (H. Groom, et al, this issue). However, this could again be a function of the role of state programs, which were more common among high sustained coverage states, compared with the local programs more common among the most improved sites.

The conclusions of this study should be interpreted with several considerations in mind. Qualitative research is designed to gather complex, in-depth information on a topic and can offer valuable insights that may be missed by more quantitative measures. Even though the lessons learned here may be useful to others in assessing their own immunization programs, they may not be directly transferable outside of the context of the programs we visited, since there were no comparison groups to discuss the initiatives and activities of programs that did not achieve the highest sustained coverage. Similarly, while we asked the program managers at each site to identify key informants with knowledge of the program, there may be perspectives that were not included that could have changed the conclusions of the study. Finally, the conclusions are also subject to the bias of the researcher’s interpretation. We attempted to minimize this bias by establishing a systematic coding scheme and achieving high interrater reliability before conducting the final analysis.

Several elements are common among programs that are able to sustain high childhood immunization coverage in the United States. These elements are not implemented in linear steps but rather are components that work together in an ongoing process to help programs maintain their success. Given the challenges of an increasingly complex immunization system, the lessons learned from these programs may help inform others who are working to improve childhood immunization delivery and coverage in their own programs.

REFERENCES


Immunisation Information Day for Midwives
Thursday 2nd of September 2010
Village Hall, Monaco Resort, 6 Point Road, Nelson
8.30am – 4.30pm.

Topics Include:
- Overview of Vaccine Preventable Diseases.
  - Specific focus on Hepatitis B, Rubella and Varicella for Midwives.
- The Infant Immune System.
- The New Zealand Immunisation Schedule.
- Cold Chain process for storage and handling of vaccines.
- Overview of vaccine administration.
- National Immunisation Register.
- Current immunisation issues.

To register complete a registration form and post with payment enclosed to:
Education & Training office, P.O. Box 1032, New Plymouth.

Contact: Linda Hill, IMAC Regional Immunisation Advisor, 027 242 2451 or
Bobbie Hutton, Nelson Bays PHO, Immunisation Facilitator, 03 5391660 . 021 409501
if you require any further information.

Approved by Midwifery Council of New Zealand
(Allocation of 10 points for attendance as well as completion of the course assessment)
Improving childhood immunisation coverage rates
Evaluation of a divisional program

Background
In contrast to generally high childhood immunisation coverage rates across Australia, general practices in central Sydney (New South Wales) have a below average coverage rate. To address this, Central Sydney GP Network undertook a project that involved visiting practices with less than 90% coverage and provided guidance and support to increase coverage.

Methods
The intervention was evaluated using quantitative and qualitative methods. The quantitative component analysed practice coverage rate data from the Australian Childhood Immunisation Register. The qualitative component involved semi-structured interviews with general practitioners and practice staff.

Results
Quantitative analysis showed that rates for a number of practices with initial coverage between 80-90% increased to more than 90% during the intervention. The qualitative component highlighted patient and practice-related issues around coverage and reporting.

Discussion
Many practice-related coverage and reporting issues were identified; the majority are modifiable and thus practices can be targeted to improve coverage. However, some patient-related issues are complex and not easily addressed.

- Childhood immunisation programs currently save 3 million lives per year throughout the world and are one of the most cost-effective public health interventions. Before implementation of the Immunise Australia Program and the General Practice Immunisation Incentives (GPII) scheme, rates of immunisation in Australia were considered to be too low to prevent transmission of some vaccine-preventable diseases. Since commencement of these initiatives, average practice immunisation coverage rates have increased to more than 90%.

Nonetheless, due to a range of practice and patient-related issues, general practices are frequently unaware of and/or are unable to make use of resources that can assist in reporting immunisations and recalling overdue children. In August 2007, only 85.3% of children under 7 years of age in the former Central Sydney GP Division (now Central Sydney General Practice Network - CSPGN) were reported as being fully immunised. These low immunisation rates highlighted the need for practices in CSPGN to be provided with support and practical help to improve their coverage rates to at least 90%.

In order to achieve this, CSPGN partnered with The University of Sydney (New South Wales) to develop an intervention project, "Go for 90! Partnerships to improve childhood immunisation coverage rates in general practice". The intervention focused on the need for up-to-date, accurate and reported childhood immunisation data in general practices. The funding for this project came from the Australian Government Department of Health and Ageing (DoHA) core funding of the divisional immunisation program.

The intervention
The intervention involved a project officer visiting practices with less than 90% childhood immunisation coverage rates. At the visits, GPs and practice staff were informed about and trained to utilise a systematic approach to immunisation reporting and recalling of overdue children. This approach involved education in the use of the GPII020A report.
to update immunisation records. If the practice was not receiving the GPII020A report, the general practitioners or practice staff were encouraged to request it, and were assisted with the paperwork where necessary (available at www.medicareaustralia.gov.au/provider/pubs/forms/files/gp-immunisation-incentives-practice-report-request-gpii02a.pdf). Practices were regarded as having received the intervention if there had been two or more contacts with the practice (either GP or practice staff) in which at least one contact was through a face-to-face visit to the practice. Evaluation of the project involved examining both the process and impact of the intervention.

Methods

Evaluation of the project was done in collaboration with researchers at the University of New South Wales School of Public Health and Community Medicine. Ethics approval for the evaluation was obtained from the Human Research Ethics Advisory Panel at the University of New South Wales. The process and outcome evaluation consisted of quantitative and qualitative components. The evaluation was funded by General Practice NSW (GP NSW), which covered the salary of the primary evaluator (HA) and the cost of conducting and transcribing interviews.

Quantitative component

The quantitative component involved analysing the practice coverage rate data before and after the intervention project. This data is available from the Australian Childhood Immunisation Register (ACIR) GPII032A quarterly reports.

Qualitative component

This investigated the impact of the pilot project on knowledge, skills and behaviour of GPs and practice staff. It consisted of conducting semistructured interviews with selected GPs and practice staff (practice nurse, practice manager or receptionist). A purposive sample of eight practices in four geographical areas of CSGPN were approached to take part in the interviews (this was to ensure participation from different areas of the division to include variety in the study). Two practices were selected in each area: one with a practice nurse and the other without. In practices with a practice nurse, one GP and one practice staff member, who was responsible for reporting the immunisations, was interviewed. In practices without a practice nurse only the GP was interviewed. The CSGPN immunisation project officer and the immunisation intervention officer were also interviewed as part of this component.

Interviews were audio recorded with verbal consent from participants and professionally transcribed. Thematic analysis of semistructured interviews was undertaken. Interview themes were summarised by the primary evaluator and discussed with the other authors.

Results

There were 42 practices with immunisation rates of less than 90% targeted for intervention. Of these, 24 practices received intervention visits between December 2007 and May 2008.

Findings from the quantitative analysis

Quantitative analysis was conducted for the period August 2007 to May 2008, which covered four GPII032A reports. Figure 1 shows the coverage rates of the 24 practices that received intervention as part of this project. It highlights the proportion of practices with coverage rates above 90%, which increased markedly from 30.4% in August 2007 to 68.2% in May 2008. There was a steep rise in the coverage rates of these practices between February 2008 and May 2008 as the outcomes of intervention became more apparent in this period. The data does not allow for whether the improvement in coverage was due to reporting of previously given immunisations or catch up immunisations. The proportion of practices with coverage rates of 80-85% and 85-90%, decreased from 21.7% in August 2007 to 4.2% in May 2008, and 43.5% in August 2007 to 20.8% in May 2008 respectively. This illustrates that the intervention was associated with an increase in the coverage rates of practices previously 80-90% to more than 90%.

Findings from the qualitative analysis

Issues around coverage rates

Participants were of the opinion that low immunisation coverage rates of the central Sydney area were associated with both patient and practice related issues. Examples of patient issues are: a substantial transient population, 'doctor shopping' where people do not regularly attend only one practice, and communication and language barriers related to the culturally and linguistically diverse population of the area.

'I think probably our biggest difficulty would be the fact that we have quite a lot of transient patients, so patients come and go.' GP

Examples of practice related issues are: limited capacity in the practice to manage the recalls/reminders and immunisation reporting, rapid turnover of staff and related loss of skills, perceived insufficient financial incentive for the work of immunisation reporting and associated lack of motivation.

'We also have a relatively high turnover of administrative staff/receptionists. So each time we get somebody new we have to train them in what to do.' GP

Issues around reporting

Commenting on the ACIR's overdue notification system, GPs and practice staff reported that even after families move, the names of their children continue to appear on the GPII020A report for years and practices can't change this as patients are no longer contactable.

Figure 1. Immunisation coverage rates of practices that received intervention (n=24) in central Sydney area (August 2007 to May 2008)
The intervention was associated with improved immunisation coverage.

**Discussion and recommendations**

The intervention was associated with improved immunisation coverage.
Abstract

The Arizona Partnership for Infant Immunization (TAPII) is a public-private partnership intended to achieve the year 2000 goal of 90% infant immunizations. Created in 1992 as a means to develop a statewide approach to improving infant immunization rates, TAPII is a broad-based partnership that includes public health departments, managed care plans, professional organizations, medical organizations, pharmaceutical companies, businesses, the faith community, the media, and many others. TAPII’s organizational structure includes a steering committee and five subcommittees: advocacy and policy, community awareness, provider awareness, survey and assessment, and strategic planning. A key accomplishment of TAPII has been the development of a statewide infant immunization registry known as the Arizona Statewide Immunization Information System (ASIIS). This registry will facilitate up-to-date immunizations of children and improve statewide immunization assessment capability. Since the advent of TAPII, infant immunization rates within private managed care plans have increased. However, significant improvement in statewide rates will require long-term strategic efforts in provider and community awareness and a fully operational statewide registry, ASIIS, which is set to begin in January 1998. TAPII has been a successful partnership for a number of reasons: private sector participation, a single and measurable goal, vision and leadership, a strong emphasis on assessment, a broad-based membership, community ownership, Governor’s Office participation, health plan involvement, and full-time project staffing. As resources to improve the health of communities diminish, public-private partnerships such as TAPII can effectively consolidate resources and expertise to improve the health of populations.
History of the Program

Information about the evolution and establishment of the Immunise Australia Program.

The Immunise Australia Program developed from the initiatives of the 1993 National Immunisation Strategy and was formally established through the Immunise Australia: Seven Point Plan in 1997.

Immunise Australia: Seven Point Plan

The Seven Point Plan was launched by the then Minister for Health and Aged Care, the Hon Dr Michael Wooldridge, in February 1997. It included the following initiatives:

1. Initiatives for parents:
   Maternity Immunisation Allowance

   The first initiative directed towards parents was the restructuring of the Maternity Allowance to provide a bonus to parents for ensuring that their child's immunisation coverage was up-to-date for age. This initiative was designed to act as a strong incentive and reminder to parents to immunise their children on time.

   The initiative continues and is referred to as the Maternity Immunisation Allowance (Centrelink). Provisions were made for those parents who do not have their children immunised due to medical contraindications or conscientious objection to be able to receive the Maternity Immunisation Allowance. These provisions continue.

   Childcare Assistance Rebate and/or the Childcare Cash Rebate

   The second initiative directed towards parents was related to childcare rebates. On 27 April 1998, new requirements were introduced for recipients of the Childcare Assistance Rebate and/or the Childcare Cash Rebate. From that date, families applying for Childcare Assistance and Childcare Cash Rebate were required to demonstrate that their child's immunisation coverage was up-to-date for age. This approach ensured parents were reminded of the importance of immunising their children at each of the milestones.

   On 1 July 2000, the Childcare Assistance and Childcare Cash Rebate were replaced by a new payment called the Child Care Benefit (Centrelink). Again, provisions were made for parents who did not have their children
immunised due to medical contraindications or conscientious objection to claim exemption from this requirement and continue to receive the Child Care Benefit. These provisions continue.

2. A bigger role for general practitioners

Immunisation services were delivered by a range of providers. Local Councils, health clinics and GPs all played their part in immunising children. However, it was estimated that in the mid-nineties, GPs saw 93 per cent of children an average of seven times a year in their first year of life, which placed them in a prime position to target children who were not targeted by other means and to monitor the immunisation status of all children in their care.

The General Practice Immunisation Incentives (GPII) Scheme (Medicare Australia) was introduced on 1 July 1998 to provide financial incentives to general practitioners who monitor, promote and provide age appropriate immunisation services to children under the age of seven years. This initiative continues, although it has undergone some revisions since its introduction.

Divisions of General Practice also increased their involvement to ensure GPs follow current immunisation protocols and that proper arrangements were in place locally for vaccine storage and for sending data to the Australian Childhood Immunisation Register (ACIR) (Medicare Australia).

3. Monitoring & evaluation of immunisation targets

Data on immunisation rates from the ACIR continue to be published regularly in Communicable Diseases Intelligence (CDI).

4. Immunisation days

The Commonwealth, together with the States and Territories piloted a series of immunisation days to increase immunisation rates in geographical areas of low immunisation coverage on 2 August, 4 October and 6 December 1997. Over 4,600 individuals (including children, adolescents and adults) were vaccinated on the days at a total of 195 sites.

5. Measles eradication

A one-off school based measles control campaign was undertaken from 3 August to 6 November 1998 which offered a MMR (measles-mumps-rubella) vaccination to all primary school aged children. Around 1.7 million or 96% of school aged children 5-12 years were vaccinated during the campaign. A serosurvey conducted after the campaign showed that 94% of children aged 6-12 years were immune to measles, an increase from 84% before the campaign. In the preschool group it was estimated that 97.5% of those aged 12 months to 3.5 years had received their first dose of MMR vaccine and serology showed that 89% of children aged 2-5 years were protected, a rise from 82% before the campaign.

6. Education and research

A major community education campaign was conducted in 1997, including television and magazines and a component targeting people from diverse cultural and linguistic backgrounds. There was also a strategy for service providers including distribution of a new edition of the Australian Immunisation Handbook, a regular column in Australian Doctor, a rural satellite broadcast program and a range of resource materials. Service providers continue to receive program information, resources and copies of the new edition of the Handbook as they are developed. The 9th Edition Australian Immunisation Handbook (2008) is the most recent edition of the Handbook.

The National Centre for Immunisation Research and Surveillance (NCIRS), which was established in August 1997, is based at the Children's Hospital, Westmead, NSW. The Centre's role when it began was to coordinate and conduct research and analysis of epidemiological and sociological aspects of immunisation and vaccine preventable diseases (VPDs) and provide policy information and advice to inform future directions for the national childhood immunisation program. The Centre continues with this role today.

7. School entry requirements
The Commonwealth worked with State and Territory Governments on uniform school entry requirements to ensure that parents submit details of their children’s immunisation history when they enrolled their children for school. Recommendations for model school entry legislation were developed by the Legislation Reform Working Group and endorsed by the National Public Health Partnership. Legislation was passed in New South Wales, Victoria, Tasmania and the Australian Capital Territory.

1993 National Immunisation Strategy

To improve efficiency, quality, coverage and accountability, this national approach to immunisation recommended strategies such as:

- Child-care, pre-school and school entry requirements;
- Improved access to vaccinations;
- Consistent vaccine purchasing arrangements (including a national price for vaccines);
- Standards for vaccine distribution;
- Record keeping and reminders;
- Professional education; and
- Public awareness campaigns.

For more information refer to the rescinded publication National Immunisation Strategy (NHMRC).

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Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century

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SUMMARY
Health literacy is a relatively new concept in health promotion. It is a composite term to describe a range of outcomes to health education and communication activities. From this perspective, health education is directed towards improving health literacy. This paper identifies the failings of past educational programs to address social and economic determinants of health, and traces the subsequent reduction in the role of health education in contemporary health promotion. These perceived failings may have led to significant underestimation of the potential role of health education in addressing the social determinants of health. A 'health outcome model' is presented. This model highlights health literacy as a key outcome from health education. Examination of the concept of health literacy identifies distinctions between functional health literacy, interactive health literacy and critical health literacy. Through this analysis, improving health literacy meant more than transmitting information, and developing skills to be able to read pamphlets and successfully make appointments. By improving people's access to health information and their capacity to use it effectively, it is argued that improved health literacy is critical to empowerment. The implications for the content and method of contemporary health education and communication are then considered. Emphasis is given to more personal forms of communication, and community-based educational outreach, as well as the political content of health education, focussed on better equipping people to overcome structural barriers to health.

Key words: empowerment; health education; health literacy; health outcomes

INTRODUCTION
Health literacy is a relatively new concept in health promotion. In this paper it is used as a composite term to describe a range of outcomes to health education and communication activities. From this perspective, health education is directed towards improving health literacy. This paper explores the place of health education in contemporary health promotion, before examining in greater detail the definition and usefulness of the concept of health literacy. In doing so, this paper attempts to promote renewed attention to the role of health education and communication in health promotion and disease prevention, and advocates improvements in the sophistication of contemporary health education strategies.
and other preventive health services have a long history. In developing countries, health education directed towards these goals remains a fundamental tool in the promotion of health and prevention of disease.

In developed countries, during the 1960s and 1970s this early experience in health campaigning was directed towards the prevention of non-communicable disease by promoting healthy lifestyles. Many of these early campaigns were characterized by their emphasis on the transmission of information, and were based upon a relatively simplistic understanding of the relationship between communication and behaviour change. Over time, it became apparent that campaigns which focussed only on the transmission of information and failed to take account of the social and economic circumstances of individuals were not achieving the results which had been expected in terms of their impact on health behaviour. Many health education programs emerging during the 1970s were found to be effective only among the most educated and economically advantaged in the community. It was assumed that these groups had higher levels of education and literacy, personal skills and economic means to receive and respond to health messages communicated through traditional media.

As a tool for disease prevention, health education was considerably strengthened by the development of a new generation of more sophisticated, theory-informed interventions during the 1980s. These programs focussed on the social context of behavioural decisions, and focussed on helping people to develop personal and social skills required to make positive health behaviour choices. This type of program was pioneered through school-based health education programs directed towards preventing teenage substance misuse, and subsequently has been applied in other settings (Glanz et al., 1997).

Several theories of behaviour change were developed during this period to guide educational programs. Examples include Azjen and Fishbein’s theory of planned behaviour, and Bandura’s social learning theory (Ajzen and Fishbein, 1980; Bandura, 1986). These theories have helped to identify and explain the complex relationships between knowledge, beliefs and perceived social norms, and provide practical guidance on the content of educational programs to promote behavioural change in a given set of circumstances.

During the same period, social marketing evolved as a technique for influencing social norms and behaviours in populations (Andreasen, 1995). Social marketing has encouraged creative approaches to the analysis of issues and the development of programs, especially in relation to the communication of information. As a consequence, health education programs have evolved in their sophistication, reach and relevance to a wider range of groups in populations.

Despite this progress, interventions which have relied primarily on communication and education have mostly failed to achieve substantial and sustainable results in terms of behaviour change, and have made little impact in terms of closing the gap in health status between different social and economic groups in society.

ADDRESSING SOCIAL DETERMINANTS OF HEALTH

In the 19th century public health action resulted from a need to address the devastating effects of the living and working conditions imposed on populations during the industrial revolution. The initial focus of public health action was, therefore, on the social and environmental determinants of the health of the population. By the late 20th century, however, there had been a shift in the emphasis of public health action toward modifying individual risk behaviours.

However, recent epidemiological analysis of health, disease and disability in the populations of most developed countries confirms the role of social, economic and environmental factors in determining increased risk of disease and adverse outcomes from disease (Townsend et al., 1988; Harris et al., 1999). Health status is influenced by individual characteristics and behavioural patterns (lifestyles) but continues to be significantly determined by the different social, economic and environmental circumstances of individuals and populations. The relationships between these social factors and health, although easy to observe, are less well understood and much more difficult to act upon. Consequently they have been given much less attention as a basis for public health intervention than have individual behaviours in the recent past.

As the effects on population health of economic, social and environmental policies adopted in developed nations in the late 20th century begin to emerge and are better understood, there has been renewed interest among public health practitioners in acting to influence these
determinants of health. This renewed interest was reflected through the Ottawa Charter for Health Promotion (World Health Organization, 1986) and more recently confirmed in the Jakarta Declaration (World Health Organization, 1997). Through the Charter, health promotion has come to be understood as public health action which is directed towards improving people’s control over all modifiable determinants of health. This includes not only personal behaviours, but also the public policy, and living and working conditions which influence behaviour indirectly, and have an independent influence on health.

This more sophisticated approach to public health action is reinforced by accumulated evidence concerning the inadequacy of overly simplistic interventions of the past. To take a concrete example, efforts to communicate to people the benefits of not smoking, in the absence of a wider set of measures to reinforce and sustain this healthy lifestyle choice, are doomed to failure. A more comprehensive approach is required which explicitly acknowledges social and environmental influences on lifestyle choices and addresses such influences alongside efforts to communicate with people. Thus, more comprehensive approaches to tobacco control are now adopted around the world. Alongside efforts to communicate the risks to health of tobacco use, these also include strategies to reduce demand through restrictions on promotion and increases in price, to reduce supply by restrictions on access (especially to minors), and to reflect social unacceptability through environmental bans. This more comprehensive approach is not only addressing the individual behaviour, but also some of the underlying social and environmental determinants of that behaviour.

It is now well understood from experiences in addressing specific public health problems of tobacco control, injury prevention and prevention of illicit drug use, and the more general challenge of achieving greater equity in health, that education alone is generally insufficient to achieve major public health goals.

As a result of the failings of educational programs in the past, the role of health education as a tool in the ‘new public health’ promoted by the Ottawa Charter has been somewhat downplayed. Health education has often been considered in a rather limited way as contributing only to improvements in individual knowledge and beliefs about risk factors for disease, and as having only a limited role in promoting behaviour change in relation to those risk factors. This may have had the unintended consequence of underestimating the role of health education, and fails to properly capture the potential of health education as a tool to support a full range of contemporary public health interventions. The failings identified above reflect both an oversimplistic analysis of the determinants of health, and of the use of inappropriate measures of outcome.

HEALTH LITERACY AS AN OUTCOME OF HEALTH PROMOTION

In the recent past, considerable attention has been given to analysing the determinants of health, and to the definition of outcomes associated with health promotion activity. This has led to the development hierarchies of ‘outcomes’ from health interventions, which illustrate and explain the linkages between health promotion actions, the determinants of health, and subsequent health outcomes. Figure 1 provides a summary outcome model for health promotion (Nutbeam, 1996).

These models generally distinguish between different levels of outcome. At the end-stage of interventions are ‘health and social outcomes’, usually expressed in terms of mortality, morbidity, disability, dysfunction, quality of life and functional independence.

Intermediate outcomes represent the determinants of these health and social outcomes. Personal behaviours, e.g. smoking or physical activity may increase or decrease the risk of ill health, and are summarized as ‘healthy lifestyles’. ‘Healthy environments’ consist of the environmental, economic and social conditions that can both impact directly on health, as well as support healthy lifestyles, e.g. by making it more or less easy for an individual to smoke (as described above), or adopt a healthy diet. Access to, appropriate provision and appropriate use of health services are acknowledged as important determinants of health status, and are represented as ‘effective health services’ in this model.

Health promotion outcomes represent those personal, social and structural factors that can be modified in order to change the determinants of health (i.e. intermediate health outcomes). These outcomes also represent the most immediate target of planned health promotion activities. Within this level of the model, ‘health literacy’
Health and social outcomes

Social outcomes
measures include: quality of life, functional independence, equity

Health outcomes
measures include: reduced morbidity, disability, avoidable mortality

Intermediate health outcomes (modifiable determinants of health)

Healthy lifestyles
measures include: tobacco use, food choices, physical activity, alcohol and illicit drug use

Effective health services
measures include: provision of preventive services, access to and appropriateness of health services

Healthy environments
measures include: safe physical environment, supportive economic and social conditions, good food supply, restricted access to tobacco, alcohol

Health promotion outcomes (intervention impact measures)

Health literacy
measures include: health-related, knowledge attitudes, motivation, behavioural intentions, personal skills, self-efficacy

Social action and influence
measures include: community participation, community empowerment, social norms, public opinion

Healthy public policy and organizational practice
measures include: policy statements, legislation, regulation, resource allocation, organizational practices

Health promotion actions

Education
examples include: patient education, school education, broadcast media and print media communication

Social mobilization
examples include: community development, group facilitation, targeted mass communication

Advocacy
examples include: lobbying, political organization and activism, overcoming bureaucratic inertia

Fig. 1: An outcome model for health promotion.
refers to the personal, cognitive and social skills which determine the ability of individuals to gain access to, understand, and use information to promote and maintain good health. These include such outcomes as improved knowledge and understanding of health determinants, and changed attitudes and motivations in relation to health behaviour, as well as improved self-efficacy in relation to defined tasks. Typically these are outcomes related to health education activities.

The model also distinguishes two other types of health promotion outcome. 'Social action and influence' describes the results of efforts to enhance the actions and control of social groups over the determinants of health—illustrated by efforts to work effectively with to promote the health of marginalized groups. 'Healthy public policy and organizational practices' are the result of efforts to overcome structural barriers to health—typically the outcome of political advocacy and lobbying which may lead to legislative change. Success in the introduction of tobacco control legislation in many countries represents a contemporary example of an outcome from effective public health advocacy.

The health promotion actions in the model include education for health, efforts to mobilize people's collective energy, resources, skills towards the improvement of health, and advocacy for health. A typical health promotion program might consist of interventions targeted at all three of the factors identified as health promotion outcomes above. For example, a program to promote healthy eating might consist of efforts to educate people about basic food groups, to develop practical skills in food preparation and selection, and different actions to improve access to healthier food choices through supply-side intervention. These could include, e.g. efforts to improve the food choices available in school and worksite canteens, and interventions with food retailers to improve the supply and promotion of healthier food choices.

The different intervention strategies also mean that a wide range of potential measures of health promotion outcomes can be considered as evidence of success in the short term. Some of these are listed in the model in Figure 1.

Figure 1 also provides the bridge between an intervention (described as health promotion actions) and the goal of an intervention (modification of the determinants of health). These health promotion outcomes are the bridge between what we do and what we are trying to achieve in health promotion interventions.

Use of this model places health education and communication into the wider context of health promotion, and highlights health literacy as a key outcome from health education. In this context, how we define and measure health literacy is both dictated by and influential on the content and methods of health education.

WHAT IS HEALTH LITERACY?

The term health literacy has been used in the health literature for at least 30 years (Ad Hoc Committee on Health Literacy, 1999). In the United States in particular the term is used to describe and explain the relationship between patient literacy levels and their ability to comply with prescribed therapeutic regimens (Ad Hoc Committee on Health Literacy, 1999). This approach infers that 'adequate functional health literacy means being able to apply literacy skills to health related materials such as prescriptions, appointment cards, medicine labels, and directions for home health care' (Parker et al., 1995).

Research based on this definition has shown, e.g. that poor functional health literacy poses a major barrier to educating patients with chronic diseases (Williams et al., 1998), and may represent a major cost to the health care industry through inadequate or inappropriate use of medicines (National Academy on an Aging Society/Center for Health Care Strategies, 1998).

However, this fundamental but somewhat narrow definition of health literacy misses much of the deeper meaning and purpose of literacy for people. The field of literacy studies is alive with debate about different 'types' of literacy and their practical application in everyday life. One approach to classification simply identifies types of literacy not as measures of achievement in reading and writing, but more in terms of what it is that literacy enables us to do (Freebody and Luke, 1990).

Basic/functional literacy—sufficient basic skills in reading and writing to be able to function effectively in everyday situations, broadly compatible with the narrow definition of 'health literacy' referred to above.

Communicative/interactive literacy—more advanced cognitive and literacy skills which, together with social skills, can be used to actively
participate in everyday activities, to extract information and derive meaning from different forms of communication, and to apply new information to changing circumstances. **Critical literacy**—more advanced cognitive skills which, together with social skills, can be applied to critically analyse information, and to use this information to exert greater control over life events and situations.

Such a classification indicates that the different levels of literacy progressively allow for greater autonomy and personal empowerment. Progression between levels is not only dependent upon cognitive development, but also exposure to different information/messages (communication content and method). This, in turn, is influenced by variable personal responses to such communication—which is mediated by personal and social skills, and self-efficacy in relation to defined issues.

By contrast to the definition of functional health literacy above, WHO defines health literacy more broadly, as follows (Nutbeam, 1998).

Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.

Health literacy means more than being able to read pamphlets and successfully make appointments. By improving people’s access to health information and their capacity to use it effectively, health literacy is critical to empowerment.

This definition reflects elements of the two other types of literacy described above—interactive and critical literacy. It also significantly broadens the scope of the content of health education and communication, indicates that health literacy may have both personal and social benefits, and has profound implications for education and communication methods.

In terms of ‘content’, efforts to improve people’s knowledge, understanding and capacity to act, should not only be directed at changing personal lifestyle or the way in which people use the health services. Health education could also raise awareness of the social, economic and environmental determinants of health, and be directed towards the promotion of individual and collective actions which may lead to modification of these determinants.

In terms of ‘health benefit’, such a definition implies that health literacy is not only a personal resource which leads to personal benefits, e.g. healthier lifestyle choices and effective use of available health services. It also implies that the achievement of higher levels of health literacy among a greater proportion of the population will have social benefits, contributing, e.g. by enabling effective community action for health, and contributing to the development of social capital.

In terms of ‘method of education’ and communication, such a definition provides a challenge to communicate in ways that invite interaction, participation and critical analysis. This is very similar to the style of education for ‘critical consciousness’ advocated and popularized by the Brazilian educator, Paulo Freire (Freire, 1970).

Health literacy is clearly dependent upon levels of fundamental literacy and associated cognitive development. Individuals with undeveloped skills in reading and writing will not only have less exposure to traditional health education, but also less developed skills to act upon the information received. For these reasons, strategies to promote health literacy will remain inextricably tied to more general strategies to promote literacy. But beyond this fundamental link between literacy and health literacy, much of the richness of health literacy implied by the WHO definition is missed in approaches to the promotion of functional health literacy as described above.

Having emphasized this fundamental relationship, however, it is important to recognize that high literacy levels (assessed in terms of ability to read and write) are no guarantee that a person will respond in a desired way to health education and communication activities. By contrast, Freire, and those that have modelled their education programs on his methods (Wallerstein and Bernstein, 1988), have shown that working to raise the ‘critical consciousness’ of those with little or no skills in reading and writing can undertake activities and achieve outcomes which are closely aligned to the definition of critical literacy described above.

**A MODEL OF HEALTH LITERACY**

Notwithstanding the strong links between literacy and health literacy, it is essential to consider the challenges for health education and
communication programs which are inherent in the definition above. Table 1 summarizes some of the implications for health promotion action. It describes four different dimensions, i.e.: the educational goal; the content of a particular form of activity; the outcome expected; and the actions which could be taken by health workers.

Level 1, 'functional health literacy' reflects the outcome of traditional health education based on the communication of factual information on health risks, and on how to use the health system. Such action has limited goals directed towards improved knowledge of health risks and health services, and compliance with prescribed actions. Generally such activities will result in individual benefit, but may be directed towards population benefit (e.g. by promoting participation in immunization and screening programs). Typically such approaches do not invite interactive communication, nor do they foster skills development and autonomy. Examples of this form of action include the production of information leaflets, and traditional patient education.

Level 2, 'interactive health literacy' reflects the outcomes to the approach to health education which have evolved during the past 20 years. This is focussed on the development of personal skills in a supportive environment. This approach to education is directed towards improving personal capacity to act independently on knowledge, specifically to improving motivation and self-confidence to act on advice received. Again, much of this activity will result in individual benefit, rather than population benefit. Examples of this form of action can be found in many contemporary school health education programs directed towards personal and social skill development and behavioural outcomes.

Level 3, 'critical health literacy' reflects the cognitive and skills development outcomes which are oriented towards supporting effective social and political action, as well as individual action. Within this paradigm, health education may involve the communication of information, and development of skills which investigate the political feasibility and organizational possibilities of various forms of action to address social, economic and environmental determinants of health. This type of health literacy can be more obviously linked to population benefit, alongside benefits to the individual. Health education in this case would be directed towards improving individual and community capacity to act on these social and economic determinants of health.

Relating this interpretation of the term 'health literacy' to the outcome model in Figure 1 illustrates both lateral and vertical relationships between education, health literacy and the other health promotion outcomes. For example, on a vertical plane, improved health literacy may enable healthy lifestyle choices, and support effective use of health services, including compliance with treatment regimes. Laterally, educational programs directed at achieving critical health literacy will improve capacity for social action which may in turn be directed towards changing public policy and organizational practices related to health. Examples of this form of action can be found in many community development programs. Through this route health education can be directed towards achieving change in the social, economic and environmental determinants of health which may benefit the health of whole populations, alongside more typical programs directed at individual lifestyles and health system use.

CONCLUDING REMARKS—NEW OIL INTO OLD LANTERNS

Health literacy is a concept that is both new and old. In essence it involves some repackaging of established ideas concerning the relationship between education and empowerment. Education for health directed towards interactive and critical health literacy is not new, and has formed part of social mobilization programs for many years. There are many contemporary examples of education being used as a powerful tool for social mobilization with disadvantaged groups in both developed and developing countries. Indeed those in developed countries may do well to retrace the roots of contemporary health education in community development programs, and learn from their current application in health development projects in developing countries.

Disappointingly, the potential of education as a tool for social change, and for political action has been somewhat lost in contemporary health promotion. Close attention to the impact of public policy decisions on health, and the need to create supportive environments for health may have had the unintended consequence of leading to structural interventions 'on behalf' of people —health promotion which is done 'on' or 'to' people, rather than 'by' or 'with' people. In turn,
### Table 1: Levels of health literacy

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health education has been limited to interpersonal communication and media campaigns directed towards individual behavioural outcomes and health services use.

If achieving health literacy as defined by WHO is to be a goal, some rediscovery of the importance of health education needs to occur, together with a significant widening of the content and methods used. This poses a real challenge for contemporary health education and the type of information/education/communication programs which are widely supported by development and donor agencies—many of which are directed only towards achieving functional health literacy as described above.

Pursuing the goal of improved health literacy will also require more overt alliances between health and education sectors in pursuing the goal of improved literacy levels in the population. This applies at local, national and international levels—emphasizing, e.g., the need for improved alliances between WHO and UNESCO, at an international level, and clearer understanding between agencies at the most local level (St Leger and Nutbeam, 2000).

Improving health literacy in a population involves more than the transmission of health information, although that remains a fundamental task. Helping people to develop confidence to act on that knowledge and the ability to work with and support others will best be achieved through more personal forms of communication, and through community-based educational outreach.

If we are to achieve the ultimate goal that is reflected in that definition of health literacy—trying to promote greater independence and empowerment among the individuals and communities we work with—we will need to acknowledge and understand the political aspects to education, focused on overcoming structural barriers to health.

**REFERENCES**


National Academy on an Aging Society/Center for Health Care Strategies (1998) Low health literacy skills increase annual health care expenditures by $73 billion. Center for Health Care Strategies Fact Sheet, Washington, DC.


Effectively managing public concerns about immunization safety

The benefits of immunizing against the vaccine-preventable diseases far outweigh the minimal risks of vaccination. In order to maintain or improve the strength of every national immunization program, workers at each level of the public health community—from local health workers to health department officers—should be educated about the issues surrounding vaccination, and they should be prepared to respond to public concerns. The quick response to public anxieties regarding vaccines and the rapid, honest communication of explanations and actions can help ensure the integrity of immunization programs throughout the Americas. That is according to “Guidelines for Managing Immunization Safety Concerns,” a document prepared by the Division of Vaccines and Immunization of the Pan American Health Organization (PAHO).

Although immunization has been an important public health accomplishment over the past 200 years, it is not without controversy. Vaccine safety issues have been undergoing visible public debate, especially over the last 20 years. At times, immunization programs worldwide have been jeopardized by public reactions to the debate. Although vaccines are not completely effective at all times, they are one of the safest interventions in the medical armamentarium.

The world has already witnessed the dangers and effects of stopping vaccination. In the United Kingdom during the 1970s, public concern regarding the safety of pertussis vaccines led to a rapid decline in immunization coverage rates. Prior to that, coverage had been over 80%, with an average of 2,000 to 8,000 cases reported annually. After the coverage rates decreased to 30%, the number of pertussis cases soared to over 100,000. After two large epidemics and some education about the disease and the vaccine, the public slowly regained confidence in the vaccine and the immunization programs. As a result, vaccination coverage reached 95% in the mid-1990s, with the lowest recorded number of pertussis cases in the history of the country.

Every immunization program should ensure the safety of vaccines and should be prepared to deal with any public concerns about vaccination safety. Some of the events may be known effects that were observed during prelicensing clinical trials or during experimental stages of vaccine development. In addition, many medical events that are reported as allegedly vaccine-related are background illnesses that are transmitted through the

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Key words: immunization, consumer product safety, health education.

community regardless of vaccination. The first few years of a child’s life are the most vulnerable years with regard to illness, and it is also the time period when other diseases begin to manifest themselves, such as developmental disorders and hearing difficulties. These early years are also when vaccines are administered. It is not difficult for the “coincidental” vaccination to be misinterpreted as causal. For many of these events, it is nearly impossible to find out the true cause, even with the most detailed investigation. Any medical event perceived by the public, by parents, by the recipient, or by health workers to be allegedly vaccine related should be examined on the local level. If the time period and symptoms support a suspicion of its being vaccine related, a more formal standardized investigation should be initiated.

Upon completion of the investigation, these events should be classified into one of the four following categories: 1) program related, 2) vaccine related, 3) not related, or 4) unknown (an inconclusive investigation). The purpose of detecting, investigating, and analyzing these events is to take action based on the conclusions reached by this process. These actions may include: reassurance of parents, caregivers, and other adults; communication with the public and with other health care workers; treatment; correction of program errors such as in vaccine handling, storage, administration, and syringe issues; discussions with manufacturers regarding vaccine quality and effectiveness; recall of the vaccine; and further research. These kinds of measures reinforce confidence in the immunization program, but only if there is open and honest communication with the public.

Communication with the public and other health workers during critical periods of wavering public confidence is vital to the success of any immunization program. When rumors or allegations are circulating in the community, they should be addressed immediately. Immunization program personnel should be trained to prepare media statements about circulating stories or known ongoing investigations. These explanations for the public can be an effective way to proactively manage the issue. Two-way, open communication should also take place, with community leaders being involved and lines of communication established with the news media.

Another highly effective tool is education. Parents and adults need to be fully informed about what to expect after vaccination such as possible side effects. Adults also need to learn about what may happen if vaccinations are refused, including the effects of diseases.

As technology improves, so does the quality and effectiveness of the vaccines used. Vaccines today are much safer than they were 40 years ago. Nevertheless, with new vaccines arriving on the market every year and with an increase in information dissemination via the Internet and other media, public concerns regarding the safety and benefits of vaccines continue to grow.

VACCINE QUALITY AND SAFETY

All vaccines procured through the World Health Organization (WHO) for national immunization programs must meet WHO requirements. The suppliers for the vaccines must go through the WHO prequalifying process, which involves an examination of the vaccine characteristics, of adherence to “good manufacturing practice” (GMP) standards during vaccine production, and of the activities of the national control authority (NCA) that oversees vaccines. WHO considers a vaccine to be of known good quality provided that the NCA controls the quality of the vaccine according to six critical functions defined by WHO. These six are: 1) a published set of licensing requirements, 2) review of clinical data collected during surveillance of vaccine field performance, 3) a system of lot release, 4) laboratory testing, 5) regular inspections for compliance with GMP standards, and 6) evaluation of clinical performance.

The safety and efficacy of vaccines are demonstrated during the clinical trials conducted before licensing. These trials undergo different phases that evaluate the efficacy and safety of the vaccine and that fulfill conditions required for registration. Follow-up studies of vaccines after licensing occur when the vaccine is applied to the population. Many reported events that have allegedly been related to vaccines indicate a problem with vaccine administration. These problems may include contamination, improper injections, cold-chain problems, and dosage or diluent mistakes. The problems can be easily fixed with proper training, handling, and storage techniques. It is imperative that every local-level health worker be aware of these potential problems and recognize them when they occur, so that rapid corrective measures can be taken.

INVESTIGATING EVENTS ATTRIBUTED TO VACCINATION

Assessing whether or not an alleged reaction truly resulted from vaccine administration and subsequent immunization is difficult, especially in young children. Many alleged side effects of vaccines occur with some frequency in this age group, and separating the time connection of vaccine ad-
ministration from the natural occurrence of the event is nearly impossible. Also, the number of side effects seen is directly related to the number of doses administered. That is, if a vaccination campaign is underway, it is expected that the number of side effects will also increase, but that the rate (the number of side effects in relation to the number of doses) should remain the same. So, it is important to remember that the occurrence of a post-vaccination event does not in any way prove that the vaccine caused any signs or symptoms of the event.

For currently used vaccines, any alleged reaction to a vaccine should be examined on the local level, and if it meets the criteria described below, an investigation into the event should begin.

The investigation has several purposes: 1) to confirm or rule out the reported event, 2) to identify other possible causes, 3) to determine whether the event is isolated, and 4) as needed, to inform the parties involved.

Steps in the investigation

As soon as any event is alleged to be vaccine related, the health care worker should inform the parents or guardians about the safety of immunization, reassure them, and explain that coincidental events can occur.

Any serious event, rumors, or events occurring in clusters require an investigation. Until the investigation is complete, it will be impossible to determine the cause or causes of the event. These causes could be program related, vaccine related, not related to vaccination, or unknown. In some situations, outside evidence will be needed to identify the cause.

Among the possible program-related causes are: dosage level, method of administration, sterilization of needle and syringe, improper handling of used needles, vaccines reconstituted with the wrong diluent, an improper amount of diluent, improper preparation of vaccines, drugs substituted for vaccines or diluents, contaminated vaccine or diluent, improperly stored vaccines, and using vaccines after their expiration date.

If there are several cases, various factors should be checked: 1) Did the same health worker administer the vaccine?, 2) Are immunized persons in the same age group and same geographical area showing the same symptoms?, 3) Are other people immunized with the same lot of vaccine in the same geographical area showing the same symptoms?, and 4) Are there other people immunized with the same vaccine lot at the same facilities on the same day who are not showing the same symptoms?

Vaccine-related causes are highly unusual, so it is very important to investigate each case. However, it is expected that only a low incidence of vaccine-related events will be confirmed.

When clinical events not related to vaccination coincide with vaccination, it means that the event could have occurred even if the person had not been immunized. The best evidence to support the argument that this may have been a coincidental event is for the same event to have occurred in a population that was not immunized.

Information required in the investigation report

The investigation report should include a number of pieces of information. Among these are: the reasons for the diagnosis and possible causes, the number of persons found to have the same problem, the suspected antigen, symptoms and signs that are common to all patients, the names of the health workers who vaccinated the population in question, and whether health workers who were involved used the same vaccine lot. Also needed in the investigation report are: how many of the immunized persons in the same age group and same community or health center in the area in question presented the same symptoms; the time between vaccination and onset of symptoms; the immunization practices of health workers involved, including handling, storage, transportation, and administration of vaccines; and any laboratory findings.

Conducting the investigation

The investigation should be conducted within the first 24 hours. Basic variables to be collected include: demographic data such as age, sex, and place of residence; recent case history (symptoms and signs, when they appeared, duration, clinical examination, treatment, outcome, and diagnosis); the type, date of appearance, duration, and treatment of the clinical event; the history of pathology and clinical history of the patient (previous reactions to vaccines, drug allergies, preexisting neurological disorders, and current medications); and the type of vaccine used and the date of the last dose.

The vaccination used needs to be identified in terms of: lot number, manufacturing and expiration dates, manufacturing laboratory, shipment and transportation data, the physical appearance of the vaccine, and the results of quality control procedures of the vaccine.

The operational aspects of the program also need to be reviewed. Among the features to be considered are: the storage of the vaccine; the handling
and transportation of the vaccine; use of dilutants, reconstitution of the vaccines, and forms of administration; proper dosage; and the availability of needles and syringes and appropriate practices.

**Actions to be taken**

The event is **definitely not related to vaccination.** If the event is not related to vaccination, the concerned parties should be informed of the results of the investigation. Information may go to the parents; to town, state, and regulatory authorities; to health authorities; to professional associations; or to the entire country. When appropriate, the mass media should also be involved.

Even though the event was not related to vaccination, it may require appropriate medical follow-up, in which case a referral should be made.

The event is related to the program. With a program-related event, just as with an event not related to vaccination, the various concerned parties should be informed of the results of the investigation. In addition, corrective actions should be implemented immediately. These actions could cover logistical, training, or supervisory aspects.

The event is vaccine related. If the event occurred within an expected frequency for a particular vaccine, then the concerned parties should be notified of the results of the investigation.

The concerned parties should also be informed when the event was unexpected or occurred at an unexpected frequency. In addition, responsible authorities should take the following actions: stop vaccinating with the implicated vaccine, coordinate with the national control authority to reassess the quality of the vaccine and to contact the manufacturer as appropriate, recall the vaccine when appropriate, and report the investigation results to the Pan American Health Organization for international information dissemination.

The investigation is inconclusive. Again, concerned parties should be informed of the results of the investigation even when that investigation is inconclusive.

In any of these four situations, the Pan American Health Organization is available for consultation to help the country’s national immunization program to investigate and analyze the results.

**COMMUNICATION ABOUT IMMUNIZATION SAFETY CONCERNS**

Countries should work to improve communications with the community and with health care workers. Messages should be disseminated quickly, and they should address the concerns of the public. Key information about any investigation into a vaccine concern should be relayed to the public and other health care workers with honesty, completeness, and accuracy.

A dedicated spokesperson within the health department should have special training for preparing media releases and developing public statements to aid in rumor control. This person should also be available to assist local health workers in formulating plans regarding any alleged vaccine-related issues that may arise.

**EDUCATION ABOUT IMMUNIZATION SAFETY**

Education materials should be available for health care workers to use during their encounters with children and their parents or guardians. These materials should provide information regarding known side effects and the frequency at which they occur.

In addition, health care workers need to know about events caused by program-related errors. Every health care worker should undergo training to learn how to avoid making program-related errors, which could lead to an increase in side effects attributable to vaccination. During critical time periods, such as vaccination campaigns and ongoing investigations, health care workers should have information readily available to learn the facts about immunization, and they should disseminate accurate and truthful information to parents, guardians, and other adults.

**SINOPSIS**

Cómo abordar eficazmente los temores del público sobre la seguridad de las vacunaciones

Los beneficios de la vacunación frente a las enfermedades prevenibles de este modo son muy superiores a sus mínimos riesgos. Con el fin de mantener o fortalecer los programas nacionales de vacunación, los trabajadores de todos los niveles de la salud pública deberían recibir formación sobre los temas relacionados con la vacunación y estar preparados para responder a las dudas planteadas por el público. Una respuesta rápida y fraterna a los temores del público acerca de las vacunas podría garantizar la integridad de los programas de vacunación en todo el continente americano, según el documento “Directrices para enfrentarse a los temores sobre la seguridad de las vacunaciones” (Guidelines for Managing Immunization Safety Concerns), elaborado por la División de Vacunas e Inmunización de la Organización Panamericana de la Salud (OPS) y resumido aquí.
Todo acontecimiento médico que se considere posiblemente relacionado con una vacuna debe ser investigado en el ámbito local. Si su distribución temporal y los síntomas respaldan la sospecha de que pueda estar relacionado con la vacuna, se debe iniciar una investigación más formal y, una vez finalizada, el acontecimiento debe ser clasificado en una de las cuatro categorías siguientes: 1) relacionado con el programa, 2) relacionado con la vacuna, 3) no relacionado, o 4) desconocido (investigación no concluyente).

Dependiendo de la categoría a la que haya sido asignado el acontecimiento, las acciones posteriores pueden consistir en tranquilizar a los padres, a los cuidadores y a otros adultos; comunicarse con el público y con otros trabajadores de la salud; instaurar tratamiento; corregir los errores del programa, como pueden ser la manipulación de la vacuna, su almacenamiento, su administración o los problemas relacionados con la jeringuilla; comentar con los fabricantes problemas relacionados con la calidad y eficacia de la vacuna; retirar la vacuna del mercado, o iniciar nuevas investigaciones.

Course, "Health Sector Reform and Sustainable Financing"

Dates: 13–31 January 2003
Location: Harvard School of Public Health
Boston, Massachusetts, United States of America

The Harvard School of Public Health and the World Bank Institute will offer a three-week course entitled “Health Sector Reform and Sustainable Financing” in Boston 13–31 January 2003. The course introduces a practical and comprehensive framework for understanding health systems and their performance and a structured approach to developing health system reform policies to improve that performance. Specific course modules examine the theoretical and empirical basis for reform strategies in such diverse areas as health financing, payment systems, organizational change, regulation, and population and provider behavior. The course makes extensive use of case materials from countries in all regions of the world and at all levels of economic development. The principal goal of the course is to provide intensive, state-of-the-art knowledge and training on options for health sector development, including lessons learned and best practices from country experience.

The course is targeted to mid-career senior-level decisionmakers and managers who are actively involved in planning or directing government-initiated health sector reforms, compulsory social health insurance programs, private-voluntary or private-sector initiatives, and developing-country training programs in health sector reform and sustainable financing. The cost of the course is US$ 4,700, which covers tuition and course materials. In addition, participants must pay for their own airfare, hotel stay, and meals.

The course organizers encourage “country teams” of three or four members to apply for the course. For country teams that send four or more participants, the course organizers will provide a tuition waiver for one of the participants.

To be considered for participation in the course, interested persons must send in a completed application form, a recent CV, and a short personal statement describing why the course would be of benefit. The deadline to apply is 15 November 2002. The course organizers will make a decision on each application within two weeks of receiving it.

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MASSEY UNIVERSITY

 Developing Immunisation Communication Tools
A Community-University Liaison Project
National Immunisation Conference 2009
Margie Comrie, Niki Murray, Janice Handley & John Waldon
Overview

- This is a community-based study in the Whanganui region

- A pilot study – funded jointly by the Ministry of Health and the Health Research Council of New Zealand (Grant number: 08/603; Ethics Identifier: LRS 08/09/043)

- It investigates the impact that images have on delivering key immunisation information to those making a decision about immunising their baby.
Approach

- The project grew from longitudinal research into adult literacy in the Whanganui region

- The topic of infant immunisation arose from a community need identified by community leaders and health professionals

- We all wished to develop ways to communicate key messages about immunisation that were easily understood and could sit alongside current, more detailed information.
Literature

• Two in-depth reviews of the use of illustrations in health communication recommended the following (Houts, Doak, Doak, and Loscalzo, 2006, p. 173, 188-9; Katz, Kripalani, & Weiss, 2006, p. 2395):
  • Continual consultation and evaluation between health & education professionals and the target audience throughout development
  • Using simple pictures or photographs to support key points
  • Supporting images with simple text linked to the images
  • Using culturally or locally specific illustrations where possible
  • Supporting images and written material with oral presentation

This slide and the next were derived from Watson, B. (2009). *Immunisation Literature Review*. To be published.
Literature

- Most work on health communication and immunisation has focused on pamphlets or video (for example, Davis et al., 1996, 1998; Evers, 2001; Leiner, Handal & Williams, 2004; Jacobsen et al., 1999; Wilson, Brown, & Stephens-Ferris, 2006)
- These authors and/or the prior reviews showed:
  - Participants of all reading abilities prefer illustrated pamphlets with less reading time
  - Bullet points, bolding, brief key points, variety of pictures, and bright colours are important
  - Generally, use of pictures in health materials improved recall at a later date
  - Written or spoken text plus pictures are better remembered than text alone; however, spoken information alongside written text and illustrations is best remembered
  - Attended-to illustrative material (such as when on a fridge door) may facilitate frequent review & increase the likelihood of immunisation uptake
Objectives Of This Study Were

- To develop communication tools

- To determine if recall and comprehension of information is improved by the tools developed

- To report on the outcomes in relation to immunisation uptake at six weeks and three months

- To evaluate the tools and suggest recommendations for modification.
Method: Phase One

- Building community research relationships
- Focus groups with immunisation decision-makers on the information they get, what they want, and how they want it
- Developing tools to meet these needs
  - A flipchart with an accompanying oral spiel
  - A fridge magnet
Method: Phase Two

- Phase Two: **Pilot testing the tools** with two groups of soon-to-be mums (intervention and control groups)
  - The intervention group is given a scripted oral and visual presentation of a flipchart, and a fridge magnet to take away
  - The control group receives the oral spiel only
  - An antenatal interview where decision-making is discussed
  - Eight weeks post-birth interview to explore decisions made
  - Intervention group will discuss recall and comprehension of the tools
  - Check of NIR database on uptake rates at six weeks and three months and comparison against overall uptake rates for the general population
Focus Group Demographics

- Most of the participants in the focus groups were responsible for one child only, although a large proportion were responsible for two (and some for up to six). One participant was not responsible for any children but had been involved in immunisation decision-making.
Focus Group Key Findings - Knowledge

- A general lack of knowledge on what vaccinations are for, what the process of vaccination is, what the risks are, and where to get more information.

- Our participants generally did not go through a protracted decision-making process.

- People want to be able to access more information if they wish to.
Focus Group Key Findings - Resources

- Sources of information should be balanced to show multiple viewpoints.

- Written pamphlets and booklets are often not read. Interaction with health workers was considered important.

- Photographs of real people are needed to draw interest to written material.
Focus Group Key Findings - Resources

• Bright colours are needed

• People liked and recognised the immunisation chart
  • but thought there were too many long words on it

• Information should not be presented in large chunks
Current Activity: Phase 2

- The tools are being trialled with women in their third trimester of pregnancy

- The process and questions were again developed through consultation.
Flipchart Page Examples

Talking About Immunisation

Forever discovering
Diseases the immunisations help protect against

15 months

hib B  rubella  measles

mumps  pneumococcal disease
What happens during vaccination?

You can hold your baby OR Someone can hold your baby for you
Flipchart Page Examples cont.

What reactions should I be concerned about?

- If your baby has problems **breathing**

- If your baby has a high **temperature** not relieved by using Pamol as directed

- If your baby is **hard to wake**

- If your baby is **not feeding** normally
Key Messages

- Your baby needs ALL the injections to be protected
- It’s FREE!
- The due date is the best date but it’s NEVER TOO LATE to catch up
- Normal responses to vaccination may include a red lump, grumpiness, and/or a change in sleeping patterns
- http://www.immune.org.nz
Fridge Magnet

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Any Questions?
Call 0800 368 156 (for after hours support) or call your Doctor or Practice Nurse during the day.

Your baby needs ALL the injections to be protected.

The due date is the best date but it's NEVER TOO LATE to catch up.

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MASSEY UNIVERSITY

Te Kunenga ki Pārekura

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Forever discovering
Where We Are Now

• 54 first interviews have been completed (27 controls, 27 interventions)

• Follow-up post-birth interviews began in November 2009

• Initial impressions from the process so far:
  • Very few of the third-trimester participants have:
    • been talked to about immunisation
    • read the pamphlets
    • looked for more information

  • Understanding and knowledge of immunisation is patchy
    • There is confusion about the schedule and diseases

  • Few have looked at websites and none have indicated they have used the 0800 IMMUNE number.
This would include a further trial with larger numbers.

Locality needs to take into account different cultural, language, and

If successful in enhancing knowledge and/or uptake, we would like to develop the tools further

Improvement ideas for the flipchart and fridge magnet

Feedback from the follow-up interviews will provide

What happens next...
Why Invest in Communication for Immunization?
Evidence and Lessons Learned

Silvio Waisbord
Heidi J. Larson
Why Invest in Communication for Immunization?

Evidence and Lessons Learned

Silvio Waisbord
Heidi J. Larson
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INTRODUCTION

since the launch of the Expanded Program on Immunization in 1974, vaccination programs have been one of the world's most cost-effective public health strategies. These programs reduce the burden of infectious diseases globally and serve as a key building block for health systems in the developing world.

Initially, immunization programs included vaccines against six diseases: polio, measles, neonatal tetanus, diphtheria, pertussis, and tuberculosis. Recently, many countries have introduced other vaccines (hepatitis B, yellow fever, Haemophilus influenza type B) based on several considerations such as the prevalence of specific diseases, the availability of new vaccines, and additional financial resources.

Immunization is a story of both successes and failures. With the push to universal immunization in the 1980s, the world accelerated immunization coverage in an unprecedented fashion, reaching reportedly over 70 percent of children globally with the basic six vaccines by the end of 1990. Yet coverage has stagnated since then, leading to 2 million unnecessary deaths annually from vaccine-preventable diseases. Global and regional averages also mask lower local coverage, particularly in sub-Saharan Africa, where some 17 countries have immunization coverage levels under 50 percent. In fact, 30 million infants worldwide are still not immunized with even basic vaccines. In many countries, immunization services disproportionately miss the poorest and most excluded populations. Even when services are available, a substantial number of caregivers still fail to complete the immunization schedule.

The stagnation in vaccination coverage is not without cause. Problems range from infrastructural problems of health delivery systems to funding pressures that divert resources away from routine immunization.

Immunization programs are also affected by the interplay of local and national politics. Challenges have ranged from isolated episodes of non-acceptance (due to religious, ethical, and medical considerations) to active political mobilization against immunization programs driven by political and conspiratorial arguments. This is of particular concern considering recent growing evidence of declining confidence in governments in developed and developing countries.
This report identifies four key challenges that immunization programs are currently confronting, documents the success of communication in support of immunization, and proposes ways in which funders can support investments in communication for immunization. It encourages stakeholders responsible for allocating budgets in immunization programs at the global, national and state levels to recognize that communication is crucial to strengthening vaccine demand and supply, and that the success of communication interventions depends on the resources allocated.

Even the best-designed and carefully implemented communication interventions in support of immunization will deliver few results if not properly funded. Because funding requirements vary according to the goals and challenges of immunization programs at regional and national levels, specific needs assessments should be conducted to determine adequate communication budgets.
FOUR KEY CHALLENGES AND THE ROLE OF COMMUNICATION

1. **Children do not get vaccinated if caregivers do not know the value of vaccines, when children need to be immunized, and where vaccines are administered**

Studies show that knowledge gaps underlie low compliance with vaccination schedules (Bond et al. 1998; Bukenya & Freeman 1991; Eng et al. 1991; Harmanci et al. 2003; Khanom & Salahuddin 1983). Caregivers are less likely to complete immunization schedules if they are poorly informed about the need for immunization, logistics (time, date, and place of vaccination), and the appropriate series of vaccines to be followed. Although knowledge per se is insufficient to create demand, poor knowledge about the need for vaccination and when the next vaccination is due is a good predictor of poor compliance.

2. **Children do not get vaccinated when communities are excluded or beyond the reach of immunization services**

A substantial number of children worldwide do not complete immunization schedules because neither health services nor conventional communication mechanisms regularly reach their communities. In some communities, low immunization rates are associated with families living a long distance from health services, having little access or exposure to large-scale or local media, and low doctor- and nurse-patient ratios (e.g., slum-dwellers in the Philippines and South Africa, nomadic populations in Sub-Saharan Africa, and internal migrants in Brazil, Cameroon, and Mozambique). Underserved communities consistently show low immunization coverage. Innovative outreach strategies are needed that are particularly targeted to reach children who are excluded or beyond the reach of immunization services.

3. **Children do not get vaccinated if caregivers do not trust the safety of vaccines**

Neither anti-vaccination information nor refusal to get children immunized is new. Historically, populations have rejected immunization due to concerns about vaccine safety, as well as political, cultural, and religious reasons (Greenough 1995). Today, trust and acceptance of immunization faces two new, formidable challenges.
Research shows that the quality of the interaction between health workers and caregivers is decisive to ensure completion of the vaccination schedule. High dropout rates and caregivers' negative attitudes about immunization services are often due to poor or inadequate information-sharing by health providers.

The failure of health providers to communicate correct information about vaccine effects and schedules, to check whether caregivers know and understand information, and to give them opportunities to ask questions partially

- A study in Burkina Faso in the early 1990s showed that mothers who had been exposed to a variety of interpersonal and media messages were more likely to know the requirements to complete vaccination schedule and know the dates for specific vaccines than mothers in the control group (Bhattacharyya et al. 1994).

- An intervention in Ethiopia found that "reminder/prompt" materials reduced dropout rates compared to the control group (Berhane & Pickering 1993). Community health providers followed 6-week-old to 23-month-old children who visited vaccination centers to determine whether reminder stickers applied to the inside of their home front door would reduce immunization dropout rates. The health workers gave a circular sticker with a picture of a child receiving a vaccination and an appointment date to one group of mothers. The immunization dropout rate of children whose mothers received a reminder sticker was 55 percent lower than that of the control group (7.3 percent vs. 13.3 percent; p .01).

- Another study observed that door-to-door canvassing and strategic “miking” (the use of itinerant megaphones) accounted for increased vaccination coverage in peri-urban and rural areas in Mozambique (BASICS, WHO, and UNICEF 1999).
Health providers need to be trained and adequately supervised to ensure that they give relevant and comprehensible information in a respectful and culturally sensitive manner. Strengthened mechanisms to apply and monitor the use of learned skills are also needed.

A number of studies have documented the impact of mass media — particularly radio and television — on awareness and vaccination rates in several countries where mass media is accessible and widely consumed (Pérez-Cuevas et al. 1999; Quaiyum et al. 1998). Findings generally report an increase in knowledge about the benefits of vaccines, ages for immunization, and places and time of vaccinations; improved perceptions of seriousness of some diseases and positive shifts in attitudes regarding childhood vaccination; and more discussion about immunization in the home.

Building and maintaining confidence in immunization programs is a permanent task. In countries where vaccines have reduced the burden of disease, a paradoxical situation may emerge as immunization programs become victims of their own success. Individuals and communities may feel less threatened by the less visible vaccine-preventable diseases than by the side effects of vaccines. Caregivers may have more information and awareness about adverse events than about the benefits of immunization and the need to sustain immunization. Also, for caregivers in many communities around the world, immunization decisions are part of culturally grounded estimations about dangers and benefits that need to be addressed (Fairhead et al. 2004).

When controversies arise, immunization programs need communication strategies that can be readily put into action (UNICEF 2004b). A mix of media and locally appropriate, community-based strategies is needed to address concerns and refusal. In any situation where the safety of vaccines is questioned, it is critical to first understand the nature and scope of the concerns.

Interpersonal communication activities with influential local leaders (religious, medical, and political) can positively affect the community's trust in and willingness to vaccinate their children. Community leaders can not only be valuable partners in promoting immunization, they can be valuable key informants to understand the nature and reasons for any concerns.

- A study conducted in the early 1980s in Bangladesh demonstrates that personal communication in meetings with influential local leaders showed a statistically significant increase in knowledge of vaccines and immunization schedule among caregivers. Because political, cultural, and religious leaders are influential opinion-makers, their messages strongly affect immunization behavior.

- Communication with religious and political leaders is key to increase acceptance of immunization (UNICEF 2004a). For example, it has been credited with increasing the acceptance of immunization campaigns in India (Das & Das 2003; Verma et al. 2004).

- In another study, communication interventions that included advocacy with leaders, community involvement with service delivery and child tracking, and media partnerships at various levels were responsible for dropout reduction and immunization coverage above the national average in two provinces in Madagascar in 2003 (Shimp 2004).
In Bangladesh in the 1990s, self-help organizations were mobilized to update the list of children, announce the dates of EPI sessions, motivate mothers to attend EPI sessions, and liaise with government workers. Improvements in the EPI coverage were greater in the intervention area than in the comparison area. In the intervention area, the BCG vaccine coverage increased from 55.8 percent to 74.4 percent, the coverage of DPT1, DPT2, and DPT3 improved from 65 percent to 79.7 percent, 52.1 percent to 63.2 percent, and 44.8 percent to 47.9 percent, respectively. The measles vaccine coverage also increased from 43.4 percent to 59.2 percent. For the same period in the comparison area, the coverage of EPI decreased for all vaccines (Hanifi & Rasheed 2000).

In India, UNICEF's social mobilization network contributed to the increase from 30.48 million to 33.96 million children vaccinated in hard-to-reach districts between November 2002 and February 2003. A review of vaccination records in a slum in Mumbai shows that while coverage rates for DPT (diphtheria-pertussis-tetanus) vaccines were 78 percent in communities where primary school students made home visits to encourage mothers to bring their children to mobile vaccination units, rates were 67 percent in communities that lacked substantial participation (UNICEF 2003).
strengthening immunization services requires expanding the use of available vaccines, decreasing vaccine wastage, accelerating the development and introduction of new vaccines, promoting appropriate policies on immunization safety, and increasing the financial sustainability of immunization programs. A complexity of political, epidemiological, economic, and social factors underlie these challenges.

**Information about burden of disease, cost-effectiveness of vaccines, and demand is central to the process in which stakeholders make decisions that affect vaccine supply and financing.** Quantitative and qualitative data on those issues inform the thinking and the priorities of politicians, health officials, donors, and vaccine manufacturers. Because these decision-makers might not be fully aware and/or might hold misperceptions about specific issues, advocacy strategies are needed to make the case for investing in immunization.

**Experience shows that strategic actions need to be based on information that identifies patterns and differences among users, non-users, and “inconsistent” users** ("dropouts") of immunization services, and that analyzes factors (media coverage, risk perception, and information from opinion leaders and social networks) that affect caretakers willingness to have their children — or themselves — vaccinated or not.

**Advocacy activities should build support among in-country institutions and opinion leaders, secure support from multilateral organizations, and generate and maintain discussions among relevant domestic and foreign actors.** These activities should not be one-time actions. To be successful, they need to be guided by research findings, carefully planned, and systematically implemented.

**If communication programs are provided with necessary resources, they will be able to contribute significantly to immunization** through increasing and maintaining demand as well as advocating for continuous support for vaccine programs among partners and decision-makers. Relevant stakeholders should consider the evidence presented as well as suggested actions to increase and maintain support for communication activities, recognizing that they are integral to the success of immunization programs.
RECOMMENDATIONS

- Earmark adequate funding for communication activities, particularly for routine vaccination services
- Make strategic communication plans a requirement within immunization proposals
- Offer incentives and rewards to national plans that assign above-average resources for communication positions and activities
- Identify key gaps in communication capacity and fund training and capacity-building programs as well as communication positions at regional and national levels
- Provide technical guidance to immunization managers to design and budget communication plans
- Support baseline and evaluation studies to guide communication interventions
- Fund and offer technical assistance for advocacy activities support the introduction of under-used and new vaccines
- Fund programs to monitor and document effective use of interpersonal communication, and training of frontline health workers
- With MOH, implement selective reward programs for health staff in districts where caregivers are highly knowledgeable about vaccines and immunization schedules and hold positive attitudes about vaccination and friendly attitudes toward caregivers
- Collaborate with other stakeholders to develop communication strategies that identify potential refusal and resistance to immunization and to implement strategies that build trust and respond to adverse events and rumors
- Contribute to setting up and sustaining immunization coalitions with relevant health organizations, communities, and opinion leaders by meeting regularly, sharing information, and ensuring coherent, collective responses to any adverse events or negative rumors that could undermine the success of immunization programs
TEN LESSONS LEARNED

The following are ten lessons learned from successful communication interventions in support of immunization programs.

1. There are no one-size-fits-all communication strategies. Strategies with tailored messages that use appropriate channels are required to reach specific segments of the population, whether decision-makers or remote, “hard to reach” populations.

2. Proactive communication actions are needed to curtail and prevent negative publicity and resistance to immunization, and to build continuous trust in vaccination programs by working with opinion leaders who influence caregivers’ perceptions and behaviors.

3. Positive attitudes and good interpersonal communication skills of frontline health workers are decisive to promote long-term compliance – well-designed, easy-to-use tools can often bridge the gap if interpersonal communication skill-building programs can not be assured.

4. Strengthening and supervising communication skills of health providers should be integral to immunization planning and training.

5. In-country advocacy coalitions are key to building and maintaining awareness about the value of immunization programs as well as securing sustainable funding from governments and donors. One important way to do this is to make regular public announcements recognizing those districts that have achieved high coverage. Raising public awareness about the impact of vaccination programs on reducing disease incidence and saving lives is also key.

6. Although personal anecdotes and experiences have persuaded government officials to support specific vaccine programs, advocacy programs need to use evidence (i.e., data) to show the benefits and cost effectiveness of vaccination over other health interventions. Without well-planned advocacy, new vaccines are not likely to be not funded by governments nor meet demand from health providers and caregivers.

7. The impact of print materials, or other single information mediums, depends in part on whether they are used with other communication channels.

8. Communication interventions should be tailored based on information distinguishing knowledge and attitudes among users and non-users of immunization services.

9. Grassroots communication strategies are more likely to succeed if they are integrated with the provision of other community health and social needs.

10. Effective communication interventions can increase demand, but if the quality or availability of services is poor, many caregivers are not likely to return to complete schedules.


Harmanci H; Gurbuz Y; Torun SD; Tumerdem N; Erturk T. 2003. Reasons for non-vaccination during national immunization days: a case study in Istanbul, Turkey, Public Health, 117(1): 54-61.


Overview of Nelson Marlborough District Immunisation Contracts and Services

July, 2008. Primary & Community Division

In a combined PHO/DHB meeting in March, 2008 it was identified by the NMDHB Community Paediatrician that there would be value in identifying all current funding streams for immunisation-related services in the district. Primary & Community agreed to collate available information. From subsequent discussions with staff in NMDHB (PHS, P&F, and Provider Division) and Nelson Bays PHO, 17 services relating to immunisation activity in the district were identified; an overview is shown in the following table.

<table>
<thead>
<tr>
<th>What</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee for service payments to GPs – Schedule F2 immunisations</td>
<td>PHO</td>
</tr>
<tr>
<td>PHO performance monitoring</td>
<td>PHO</td>
</tr>
<tr>
<td>Clinical Leadership – Immunisation Working and Steering Groups</td>
<td>DHB</td>
</tr>
<tr>
<td>Audit and Evaluation – PHO monitoring</td>
<td>PHO</td>
</tr>
<tr>
<td>OIS</td>
<td>DHB</td>
</tr>
<tr>
<td>Well Child – personal</td>
<td>DHB</td>
</tr>
<tr>
<td>Well Child – population</td>
<td>DHB</td>
</tr>
<tr>
<td>Infectious disease follow up</td>
<td>DHB</td>
</tr>
<tr>
<td>NIR database</td>
<td>DHB</td>
</tr>
<tr>
<td>Clinical Leadership – PHS</td>
<td>DHB</td>
</tr>
<tr>
<td>District Immunisation Facilitator – Nelson</td>
<td>IMAC contractor P&amp;O</td>
</tr>
<tr>
<td>Local Immunisation Co-ordinator – Marlborough</td>
<td>GP collective P&amp;O</td>
</tr>
<tr>
<td>IMAC national contract</td>
<td>IMAC</td>
</tr>
<tr>
<td>Human Papiloma Virus vaccinations (HPV)</td>
<td>DHB</td>
</tr>
<tr>
<td>National Immunisation Schedule (NIS) training</td>
<td>DHB</td>
</tr>
<tr>
<td>B4 School Checks</td>
<td>DHB</td>
</tr>
<tr>
<td>DHB staff vaccinations</td>
<td>DHB</td>
</tr>
</tbody>
</table>
Contracted services map:

3 Leadership – Immunisation Steering Group / Working Group
10 Clinical Nurse Manager, PHS

Well Child Services immunisations

PHS Health Promotion

PHS Primary Care

PHS OIS

General Practice

HPV PHS

B4 School PHS/PHO

DHBNZ PMP

9 NIR PHS

DHB Occ Health

IMAC Co-ord, training

MoH Co-ord, training

IMAC technical support, resources, training

NIS training PHS
This table provides available detail on each contract.

<table>
<thead>
<tr>
<th>Immunisation Contract – NM District</th>
<th>Service Provider</th>
<th>Services provided</th>
<th>Services provided to</th>
<th>Contract holder</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Fee for service payments for GPs</strong></td>
<td><strong>PHO.</strong></td>
<td><strong>Vaccination</strong></td>
<td><strong>GP patients (enrolled population)</strong></td>
<td><strong>DHB Planning &amp; Funding</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sched. F2 v17, Immunisation Handbook; MeNZB; Hep B contact or carrier; measles, mumps, rubella contact; Tamariki Ora Schedule, and fee-for-service for adolescents and adults (opportunistic). Report to NIR.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. PHO performance monitoring</strong></td>
<td><strong>PHO.</strong></td>
<td><strong>Performance Monitoring</strong></td>
<td><strong>General Practice</strong></td>
<td><strong>DHB Planning &amp; Funding</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monitoring Sched. F2 Immunisation coverage. Supporting training, checking data accuracy, audits, linking to NIR staff, working with PMS vendors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Clinical Leadership</strong></td>
<td><strong>DHB Community Paediatrician</strong></td>
<td><strong>Clinical leadership.</strong></td>
<td><strong>Working Group: DHB and Immunisation co-ordinators.</strong></td>
<td><strong>DHB Provider Division</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chair Immunisation Working Group: Plan for program changes - training, communication needs, support linkage of NIR, OIS, PHO, Immunisation Co-ordinators. Meet ~bi monthly. Immunisation Steering Group: Develop integrated, co-ordinated immunisation service, develop aligned PHO and DHB targets, use NIR data as strategic planning tool to improve coverage, support NIR team communication with the MoH. Meet ~4 times per year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4. Audit and Evaluation</strong></td>
<td><strong>PHO.</strong></td>
<td><strong>Performance Monitoring.</strong></td>
<td><strong>General Practice</strong></td>
<td><strong>DHB Planning &amp; Funding</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Targets set by Ministry of Health, including GP audit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17. Vaccinations</strong></td>
<td><strong>DHB Occ Health</strong></td>
<td><strong>Vaccination.</strong></td>
<td><strong>DHB staff</strong></td>
<td><strong>DHB Provider Division</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Influenza, Hep B. Service plan for Occupational Health staff as ‘Independent Vaccinators’ signed off by Medical Officer of Health.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>10. Clinical Leadership</strong></td>
<td><strong>DHB PHS Primary Care Clinical Nurse Manager.</strong></td>
<td><strong>Clinical leadership.</strong></td>
<td><strong>OIS, B4 School Checks, NIR staff, and PHOs.</strong></td>
<td><strong>DHB Public Health Service</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management of OIS and NIR within PHS, and service delivery. Co-ordinate Immunisation Working Group. Ensures appropriate resourcing of services, responds to sudden events, manages alignment with other databases e.g., B4 School Checks, HPV.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OIS</td>
<td>DHB PHS Primary Care PHN.</td>
<td><strong>Vaccination</strong> Receive referral, locate child, assess needs, vaccinate (40%) or facilitate back to GP for vaccination (60%). Report to NIR.</td>
<td>Children 0-5 years. Rural and urban communities - 'hard to reach' (unenrolled, high deprivation, transient).</td>
<td></td>
</tr>
<tr>
<td>Well Child - personal</td>
<td>DHB PHS Primary Care PHN.</td>
<td><strong>Vaccination, Referral</strong> Review immunisation status at 2 and 3 years, as per Schedule; and opportunistic. Support, advocate, respond, and refer to General Practice. Well Child/Tamariki Ora checks – Tier 2 ‘School and Pre School Health Services’. Vaccinations to Year 7 students.</td>
<td>All children 0-5 years. Children attending school, children attending ECCs. Intensity of service provision inversely related to decile rating. With any changes to immunisation schedule, service delivers ‘catch-up’ programme.</td>
<td></td>
</tr>
<tr>
<td>HPV Immunisation programme</td>
<td>DHB PHS Primary Care PHN.</td>
<td><strong>Vaccination</strong> Initially, a 2-year catch-up programme.</td>
<td>12 year old females, in school setting, from 2009, PHS.</td>
<td></td>
</tr>
<tr>
<td>Well Child - population</td>
<td>DHB PHS Health Protection Officer.</td>
<td><strong>Health Promotion</strong> activity in early childhood centres, ECC newsletter, liaison with District Immunisation Facilitator.</td>
<td>Directly - 0-5 yrs; at ECCs Indirectly - agencies working with all age-group children thru ECC newsletter.</td>
<td></td>
</tr>
<tr>
<td>Infectious disease follow-up</td>
<td>DHB PHS Health Protection Officer.</td>
<td><strong>Communicable disease prevention or control.</strong> Investigate notifications received in cases of vaccine preventable diseases in collaboration with Public Health Nurses; act as resource for PHNs; administer BCG vaccinations. Well Child Tamariki Ora checks – Tier 2 ‘School and Pre School Health Services'; via PHS Service Plan.</td>
<td>Attend all cases identified.</td>
<td></td>
</tr>
<tr>
<td>NIR</td>
<td>DHB PHS Primary Care NIR/OIS Team.</td>
<td><strong>Data collection.</strong> Schedule F2 immunisations, and others. Supports Practice Management Systems accuracy and OIS; work with PHO PMS to smooth interface; feedback NIR issues to Ministry of Health; analyse data to create info to support addressing barriers to target achievement.</td>
<td>Ministry of Health.</td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>Description</td>
<td>Contact Person</td>
<td>Task</td>
<td>Stakeholders</td>
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</tr>
<tr>
<td>16</td>
<td>B4 School Checks</td>
<td>DHB PHS Primary Care PHN</td>
<td>Vaccination Referral: Review immunisation status at 2 and 3 years, as per Schedule F2; and opportunistic. Refer to GP, (or if being checked by GP vaccinates)</td>
<td>Four year olds, Early Childhood Centres, Kohanga Reo,</td>
</tr>
<tr>
<td>13</td>
<td>IMAC</td>
<td>MoH IMAC national contract</td>
<td>Training: Vaccinator training/updates/ information provision. * to be transferred to NMDHB in 2009?</td>
<td>MoH Cody (Hamilton)</td>
</tr>
<tr>
<td>14</td>
<td>District Immunisation Facilitator Nelson</td>
<td>MoH IMAC national contract</td>
<td>Training: Vaccinator training/ensure competency to safely administer vaccines/assist in maintenance of the cold chain/inform on updates. Assist immunisation providers to increase vaccination coverage rates. Provide vaccinators and public with evidence-based information to assist them in decision making regarding immunisation services. Promote and support NIR. Appropriate media activities. Work collaboratively with DHB.</td>
<td>Vaccinators and non-vaccinator health professionals, caregivers. Nelson based.</td>
</tr>
<tr>
<td>12</td>
<td>Local Immunisation Co-ordinator Blen/Marl.</td>
<td>GP Society Holdaway</td>
<td>Training: Vaccinator training/ensure competency to safely administer vaccines/assist in maintenance of the cold chain/inform on updates. Assist immunisation providers to increase vaccination coverage rates. Provide vaccinators and public with evidence-based information to assist them in decision making regarding immunisation services. Promote and support NIR. Appropriate media activities. Work collaboratively with DHB.</td>
<td>Vaccinators and non-vaccinator health professionals, caregivers. Marlborough based.</td>
</tr>
</tbody>
</table>
## Commonalities among contracts

### By service delivered

<table>
<thead>
<tr>
<th>Vaccinators</th>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Promotion/Protection</strong></td>
<td><strong>By contract holder</strong></td>
</tr>
<tr>
<td>7 Well Child Population</td>
<td>11 IMAC - District Facilitator</td>
</tr>
<tr>
<td>8 Health Protection</td>
<td>12 MoH - Local Co-ordinator</td>
</tr>
</tbody>
</table>

### Clinical leadership

<table>
<thead>
<tr>
<th>Referrals</th>
<th>Monitoring / evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Immunisation Steering Group DHB</td>
<td>2 DHBNZ PMP of PHOs</td>
</tr>
<tr>
<td>3 Immunisation Working Group DHB</td>
<td>4 PHO monitoring of GP</td>
</tr>
<tr>
<td>10 Clinical Nurse Manager PHS</td>
<td>9 NIR</td>
</tr>
</tbody>
</table>

### By contract holder

<table>
<thead>
<tr>
<th>DHB Provider</th>
<th>DHB Primary &amp; Community, PHS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DHB Planning &amp; Funding</strong></td>
<td>5 PHN – OIS</td>
</tr>
<tr>
<td>1 PHO – Fee for service to GPs</td>
<td>6 PHN – Well Child, personal</td>
</tr>
<tr>
<td>2 PHO – PHO monitoring</td>
<td>7 Health Prom. – Well Child, population</td>
</tr>
<tr>
<td>4 PHO – Audit and evaluation</td>
<td>8 Health Protect. – Infectious disease follow up</td>
</tr>
<tr>
<td>14 PHS – HPV</td>
<td>9 NIR team – NIR database</td>
</tr>
<tr>
<td>15 PHS – NIS sessions</td>
<td>10 Clinical Nurse Manager – Clinical Leadership</td>
</tr>
<tr>
<td>16 PHS – B4SC</td>
<td></td>
</tr>
<tr>
<td>16 GP – B4SC</td>
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</tbody>
</table>

### By service provider

<table>
<thead>
<tr>
<th>Contractor to Ministry of Health</th>
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</thead>
<tbody>
<tr>
<td><strong>PHO / General Practice</strong></td>
</tr>
<tr>
<td>1 PHO – Fee for service to GPs</td>
</tr>
<tr>
<td>2 PHO – PHO monitoring</td>
</tr>
<tr>
<td>4 PHO – Audit and evaluation</td>
</tr>
<tr>
<td>16 GP – B4SC</td>
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</tbody>
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<td>7 Health Prom. – Well Child, population</td>
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<tr>
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</tr>
<tr>
<td>9 NIR team – NIR database</td>
</tr>
<tr>
<td>10 Clinical Nurse Manager – Clinical Leadership</td>
</tr>
</tbody>
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**Nelson Marlborough Immunisation Contracts**
Maternity Immunisation Allowance

- What is Maternity Immunisation Allowance?
- How much is Maternity Immunisation Allowance?
- Can I get Maternity Immunisation Allowance?
- How do I get Maternity Immunisation Allowance?

What is Maternity Immunisation Allowance?

Maternity Immunisation Allowance (MIA) is a non-income tested payment to encourage parents to fully immunise children in their care. From 1 January 2009, Maternity Immunisation Allowance is generally paid as two separate amounts. The first payment will be made if your child is immunised between 18 and 24 months. The second payment will be made if your child is immunised between four and five years of age.

Please Note: For parents who claim MIA for children adopted from outside Australia, depending on the age of your child when they entered Australia, you may receive MIA as one full amount.

How much is Maternity Immunisation Allowance?

For current rates of payment for Maternity Immunisation Allowance, go to Family Assistance Payment Rates.

Can I get Maternity Immunisation Allowance?

You can get the first amount of Maternity Immunisation Allowance if:

- you meet Australian residency requirements, and
- the child you are claiming for is a dependent child, and
- the child has been fully immunised on schedule, between the ages of 18 and 24 months, or
- the child is on a recognised catch-up schedule, or
- the child has an approved exemption from immunisation, and
- you make a claim before the immunised child turns two years old.

You can get the second amount of Maternity Immunisation Allowance if:

- you meet Australian residency requirements, and
- the child you are claiming for is a dependent child, and
- the child has been fully immunised on schedule, between the ages of four and five, or
- the child is on a recognised catch-up schedule, or
- the child has an approved exemption from immunisation, and
- you make a claim before the immunised child turns five years old.

Please Note: If you did not qualify for MIA for your child before they turned two years of age under the rules that applied prior to 1 January 2009, you can still receive the full amount of MIA if your child is appropriately immunised before the age of five and you lodge your claim on or before your child’s fifth birthday.

Children adopted from overseas

From 1 January 2009, you can claim Maternity Immunisation Allowance for children who are adopted from outside Australia and who enter Australia before they are 16 years of age. If your child was adopted from outside Australia you will need to claim on or before your child’s fifth birthday or within two years of their arrival in Australia (whichever is later). Children who arrive in Australia on or before their third birthday will generally receive MIA in two separate amounts, the first before four years of age and the second between four and five years of age, if your child is immunised at these ages. If your child arrives in Australia after their third birthday, MIA is payable as a single amount if your child is fully immunised between 18 months and two years after arrival.
Please Note: Under transition arrangements for the extension to the age limit for children adopted from outside Australia, you may also be eligible for MIA if you adopted a child from outside Australia and your child entered Australia under the age of 16 years between 1 July 2006 and 31 December 2008. For further information, contact the FAO on 13 6150.

Bereavement

Maternity Immunisation Allowance is not income tested and can also be paid upon the death of a child or for stillborn babies. Claims upon the death of a child may be made within the later of two years from the date of death of the child, or five years after the birth of the child. For a stillborn child a claim must be made within five years from delivery.

Contact us for more information.

How do I get Maternity Immunisation Allowance?

Maternity Immunisation Allowance is a non-income tested payment to encourage parents to immunise their children.

If you received Baby Bonus for your child, the Family Assistance Office will automatically check your eligibility for Maternity Immunisation Allowance.

If you were not paid Baby Bonus, you will need to claim Maternity Immunisation Allowance through the Family Assistance Office on or before the child’s second birthday to receive the first amount and on or before the child’s fifth birthday to receive the second amount.

You can claim Maternity Immunisation Allowance for children who are adopted from outside Australia and who enter Australia before they are 16 years of age.

If your child was adopted from outside Australia, you will need to claim on or before your child’s fifth birthday or within two years of their arrival in Australia (whichever is later).

You can obtain a claim form by contacting us.

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Family Assistance Payment Rates

- Family Tax Benefit Part A
- Family Tax Benefit Part B
- Child Care Benefit
- Child Care Rebate
- Baby Bonus
- Maternity Immunisation Allowance
- Large Family Supplement
- Multiple Birth Allowance
- Rent Assistance
- Historical Rates

Please note: The easiest way to work out how much you could receive is to use the Centrelink/Family Assistance/Child Support/Child Care Estimator.

Family Tax Benefit Part A

- Income Limit for Maximum Rate of Family Tax Benefit Part A
- Maximum rate of Family Tax Benefit Part A
- Income limit beyond which only Family Tax Benefit Part A base rate may be paid
- Base rate of Family Tax Benefit Part A
- Income limit at which base rate of Family Tax Benefit Part A begins to reduce
- Income limit at which fortnightly payments of Family Tax Benefit Part A are no longer paid
- Income limit at which Family Tax Benefit Part A including the supplement is no longer paid
- Family Tax Benefit Part A Supplement

These figures are effective from 1 July 2009 to 30 June 2010.

**Income Limit for Maximum Rate Payment of Family Tax Benefit Part A**

<table>
<thead>
<tr>
<th>Date of effect</th>
<th>Income limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 July 2009</td>
<td>$44,165</td>
</tr>
</tbody>
</table>

Please note: If your family income is above this income limit, your Family Tax Benefit Part A will reduce by 20 cents for each dollar over that amount until you reach the base rate of Family Tax Benefit Part A.

**Maximum Rate of Family Tax Benefit Part A**

<table>
<thead>
<tr>
<th>For each child</th>
<th>Per fortnight</th>
<th>Per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 13 years</td>
<td>$156.94</td>
<td>$4,803.40</td>
</tr>
<tr>
<td>13-15 years</td>
<td>$204.12</td>
<td>$6,033.45</td>
</tr>
<tr>
<td>16-17 years</td>
<td>$50.12</td>
<td>$2,018.45</td>
</tr>
<tr>
<td>18-24 years</td>
<td>$67.34</td>
<td>$2,467.40</td>
</tr>
</tbody>
</table>
In an approved care organisation 0-24 years

$50.12 $1,306.70

Please Note: As the Family Tax Benefit Part A Supplement is paid after the end of the financial year, the amount is not included in the fortnightly figures. Annual figures include the $711.75 per child supplement for 2009/10. Approved care organisations are not entitled to the Family Tax Benefit Part A Supplement.

<table>
<thead>
<tr>
<th>Income limit beyond which only base rate may be paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Children 0-12 years</td>
</tr>
<tr>
<td>Nil</td>
</tr>
<tr>
<td>One</td>
</tr>
<tr>
<td>Two</td>
</tr>
<tr>
<td>Three</td>
</tr>
</tbody>
</table>

Please Note: Depending on your circumstances, the income limit may be different than stated. You should contact us for a more accurate assessment.

<table>
<thead>
<tr>
<th>Base rate of Family Tax Benefit Part A</th>
</tr>
</thead>
<tbody>
<tr>
<td>For each child</td>
</tr>
<tr>
<td>Under 18 years</td>
</tr>
<tr>
<td>18-24 years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income limit at which base rate of Family Tax Benefit Part A begins to reduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of effect</td>
</tr>
<tr>
<td>1 July 2009</td>
</tr>
</tbody>
</table>

(plus $3,796 for each Family Tax Benefit child after the first)

Please note: If your family income is above this income limit, the base rate of Family Tax Benefit Part A will reduce by 30 cents for each dollar over that amount until your payment stops. This income limit will next be indexed on 1 July 2012.

<table>
<thead>
<tr>
<th>Income limit at which fortnightly payments of Family Tax Benefit Part A may no longer be paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Children 0-17 years</td>
</tr>
<tr>
<td>Nil</td>
</tr>
<tr>
<td>One</td>
</tr>
<tr>
<td>Two</td>
</tr>
<tr>
<td>Three</td>
</tr>
</tbody>
</table>

Please Note: Depending on your circumstances, the income limit may be different than stated. You should contact us for a more accurate assessment.

<table>
<thead>
<tr>
<th>Number of Children 0-17 years</th>
<th>Number of Children 18-24 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No children</td>
</tr>
<tr>
<td>Nil</td>
<td>-</td>
</tr>
<tr>
<td>One</td>
<td>$101,045</td>
</tr>
<tr>
<td>Two</td>
<td>$111,569</td>
</tr>
<tr>
<td>Three</td>
<td>$123,030</td>
</tr>
</tbody>
</table>

Please Note:
- Families with income approaching these limits may be entitled to the Family Tax Benefit Part A Supplement which is only available after the end of the financial year.
- The Income limit is higher if you are eligible for Multiple Birth Allowance.
- Income limit is higher than stated if customer has three children aged 13 - 15.

<table>
<thead>
<tr>
<th>Family Tax Benefit Part A Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of effect</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>1 July 2009</td>
</tr>
</tbody>
</table>

Family Tax Benefit Part B

- Maximum rates of Family Tax Benefit Part B
- Family Tax Benefit Part B Supplement
- Single parent income limit for Family Tax Benefit Part B
- Primary earner income limit for Family Tax Benefit Part B
- Income limits for lower income earners in a two parent family

These figures are effective from 1 July 2009 to 30 June 2010.

<table>
<thead>
<tr>
<th>Maximum Rates of Family Tax Benefit Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of youngest child</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Under 5 years</td>
</tr>
<tr>
<td>5-15 years (or 16-18 years if a full-time student)</td>
</tr>
</tbody>
</table>

Please note: Family Tax Benefit Part B is paid per family. As the Family Tax Benefit Part B Supplement is paid after the end of the financial year, the amount is not included in these figures.
Date of effect | Rate of Supplement
---|---
1 July 2009 | $346.75

**Single parent income limit for Family Tax Benefit Part B**

<table>
<thead>
<tr>
<th>Date of effect</th>
<th>Income limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 July 2009</td>
<td>$150,000</td>
</tr>
</tbody>
</table>

**Please note**: Your Family Tax Benefit Part B payments will stop if your income is more than this limit. This income limit will next be indexed on 1 July 2012.

**Primary earner income limit for Family Tax Benefit Part B**

<table>
<thead>
<tr>
<th>Date of effect</th>
<th>Income limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 July 2009</td>
<td>$150,000</td>
</tr>
</tbody>
</table>

**Please note**: Your Family Tax Benefit Part B payments will stop if your partner's income is more than this limit. This income limit will next be indexed on 1 July 2012.

**Income limits for lower income earner in a two parent family**

<table>
<thead>
<tr>
<th>If the youngest child is:</th>
<th>Income limit for fortnightly payments without supplement</th>
<th>Income limit for fortnightly payments with supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years</td>
<td>$22,083</td>
<td>$23,817</td>
</tr>
<tr>
<td>5-15 years (or 16-18 years if a full-time student)</td>
<td>$16,809</td>
<td>$18,542</td>
</tr>
</tbody>
</table>

**Child Care Benefit**

- Approved care - Maximum rate for non-school child
- Approved care - Income limits for Child Care Benefit
- Registered care - Maximum rate for non-school child

These figures are effective from 6 July 2009 to 30 June 2010.

**Approved care - Maximum rate for non-school child**

<table>
<thead>
<tr>
<th>Number of children in care</th>
<th>Maximum rate per week (for 50 hours of approved care)</th>
<th>Maximum rate per hour for each non-school child</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$180.00</td>
<td>$3.60</td>
</tr>
<tr>
<td>2</td>
<td>$376.21</td>
<td>$3.76</td>
</tr>
<tr>
<td>3</td>
<td>$587.13</td>
<td>$3.91</td>
</tr>
<tr>
<td>Each additional child</td>
<td>$195.71</td>
<td>$3.91</td>
</tr>
</tbody>
</table>

Please note: Maximum rate for a school child is 85 per cent of the maximum non-school child rate.

Approved care - Income limits for Child Care Benefit

<table>
<thead>
<tr>
<th>Number of Children in care</th>
<th>Income limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$131,560</td>
</tr>
<tr>
<td>2</td>
<td>$136,375</td>
</tr>
<tr>
<td>3</td>
<td>$153,995</td>
</tr>
<tr>
<td>For each additional child add</td>
<td>$29,077</td>
</tr>
</tbody>
</table>

Please note: If your income is above these limits, you will not receive Child Care Benefit. If your income is too high, you will still need to submit a claim for Child Care Benefit to receive quarterly payments of the Child Care Rebate.

Registered care - Maximum rate for non-school child

<table>
<thead>
<tr>
<th>Rate per hour</th>
<th>Maximum rate per week (for 50 hours of approved care)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.602</td>
<td>$30.10*</td>
</tr>
</tbody>
</table>

Please note: Maximum registered care rate for a school child is 85 per cent of the maximum non-school child rate.

Important: There is no income test for registered care. You cannot get the Child Care Rebate for registered care.

Child Care Rebate

This limit is effective from 1 July 2009 to 30 June 2010.

Approved Care - Maximum payment of Child Care Rebate - per child per year

<table>
<thead>
<tr>
<th>Financial year</th>
<th>Maximum Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>$7,778</td>
</tr>
</tbody>
</table>

Baby Bonus

These figures are effective from 1 July 2009 to 30 June 2010.

<table>
<thead>
<tr>
<th>Date of effect</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 July 2009</td>
<td>$5,185</td>
</tr>
</tbody>
</table>

Please Note: Baby Bonus is paid in 13 equal fortnightly payments for each child.
**Family Income Limit for Baby Bonus**

<table>
<thead>
<tr>
<th>Date of effect</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 July 2009</td>
<td>$75,000</td>
</tr>
</tbody>
</table>

*Please Note: The income limit relates to family income received in the six month period following the child’s birth or entry into care. You are not eligible for Baby Bonus if your family income is more than this amount for the six month period. This income limit will next be indexed on 1 July 2012.*

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**Maternity Immunisation Allowance**

These figures are effective from 1 July 2009 to 30 June 2010.

<table>
<thead>
<tr>
<th>Maternity Immunisation Allowance</th>
<th>Rate of Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of effect</td>
<td>Rate of Payment</td>
</tr>
<tr>
<td>1 July 2009</td>
<td>$122.75</td>
</tr>
</tbody>
</table>

*Please Note: From 1 January 2009 Maternity Immunisation Allowance is generally paid as two separate amounts. The first payment will be made when the child is immunised between 18 and 24 months. The second payment will be made when the child is immunised between four and five years. For 2009-10 each MIA payment is $122.75. You will have to qualify separately for each payment. Only one person can be eligible for an amount of Maternity Immunisation Allowance, unless care of the child is shared between two or more carers (you must have care of the child for 35 per cent of the time or more).*

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**Large Family Supplement**

These figures are effective from 1 July 2009 to 30 June 2010.

<table>
<thead>
<tr>
<th>Large Family Supplement</th>
<th>Extra each fortnight</th>
<th>Extra each year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of children</td>
<td>Extra each fortnight</td>
<td>Extra each year</td>
</tr>
<tr>
<td>3</td>
<td>$10.78</td>
<td>$281.05</td>
</tr>
<tr>
<td>4</td>
<td>$21.56</td>
<td>$562.10</td>
</tr>
<tr>
<td>5</td>
<td>$32.34</td>
<td>$843.15</td>
</tr>
<tr>
<td>6</td>
<td>$43.12</td>
<td>$1,124.20</td>
</tr>
</tbody>
</table>

*Please Note: Large Family Supplement is paid as a component of Family Tax Benefit Part A.*

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**Multiple Birth Allowance**

These figures are effective from 1 July 2009.
**Multiple Birth Allowance**

<table>
<thead>
<tr>
<th>Number of children</th>
<th>Extra each fortnight per family</th>
<th>Extra each year per family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triplets</td>
<td>$130.20</td>
<td>$3,394.50</td>
</tr>
<tr>
<td>Quadruplets or more</td>
<td>$173.60</td>
<td>$4,526.00</td>
</tr>
</tbody>
</table>

**Please Note:** Multiple Birth Allowance is paid as a component of Family Tax Benefit Part A.

---

**Rent Assistance**

These figures are effective from 20 March to 19 September 2010.

<table>
<thead>
<tr>
<th>Family Type</th>
<th>Maximum payment per fortnight</th>
<th>No payment if your fortnightly rent is less than</th>
<th>Maximum payment if your fortnightly rent is more than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single *, 1-2 children</td>
<td>$133.28</td>
<td>$132.86</td>
<td>$310.57</td>
</tr>
<tr>
<td>Single *, 3 or more children</td>
<td>$150.64</td>
<td>$132.86</td>
<td>$333.71</td>
</tr>
<tr>
<td>Couple, 1-2 children</td>
<td>$133.28</td>
<td>$196.56</td>
<td>$374.27</td>
</tr>
<tr>
<td>Couple, 3 or more children</td>
<td>$150.64</td>
<td>$196.56</td>
<td>$397.41</td>
</tr>
</tbody>
</table>

**Please note:** Rent Assistance, a component of Family Tax Benefit Part A, is paid at the rate of 75 cents for each dollar of rent paid above the rent threshold, up to the specified maximum payment.

**Historical Rates**

Historical Family Assistance rates of payment are available in the Family Assistance Guide.