
The portrayal of vaccine risk in the media

The MeNZB™ campaign

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For this very reason, make every effort to supplement your faith with virtue, and virtue with knowledge, and knowledge with self-control, and self-control with steadfastness, and steadfastness with godliness, and godliness with brotherly affection, and brotherly affection with love. For if these qualities are yours and are increasing, they keep you from being ineffective or unfruitful in the knowledge of our Lord Jesus Christ. 2 Peter 1: 5-8

Introduction

Vaccinations have come under greater media scrutiny due to the falling rates of vaccine preventable diseases; New Zealand's meningitis vaccination campaign was no exception (Leask, 2002).

New Zealand has an immunisation schedule comparable to other developed countries and has a coverage rate of 77.4% for fully immunised children aged 2 years (MoH, 2006). New Zealand's Ministry of Health (MoH) engaged the assistance of the Norwegian Institute of Public Health to develop a meningitis vaccine against an epidemic strain specific to its shores. Cases of meningitis from the New Zealand strain had risen to epidemic proportions from 1989 to 2004 to a level of 9.2 cases per 100 000 for all ages. Higher rates of meningitis were found in New Zealand's indigenous people, Maori, and people of Pacific Island descent (MoH, 2006). Norway had developed a similar vaccine - MenBvac - intended to curb a meningitis epidemic that eventually waned to such an extent to deter health officials releasing it. The MenZB™ vaccine eventuated and was released in New Zealand nationwide July 2004.

The vaccine had seen steady interest from the media since its release reflecting a keen interest by the New Zealand public. Mid October 2006 saw a change in direction from the media. Up to that point the media focus had been on apparent failures of the MenZB™ vaccine to protect MenZB™ vaccinated children from meningitis. New stories emerged across media genres nationwide about claims by a Norwegian produced documentary that the MenBvac vaccine caused chronic fatigue syndrome (CFS). The alleged link with the vaccine was to carry some weight for the better part of the narrative despite any substantiation by medical science.

For many the media is often the primary source of information about vaccines. Research has shown simple media messages can favourably promote vaccination campaigns whereas the portrayal of high risk, such as the autism/MMR debate that occurred in the UK, can dramatically diminish public confidence (Ackerman et al., 2004; Brodie et al., 2003; Ma et al., 2006; Leask & Chapman, 2002; Speers & Lewis, 2004).

Inaccurate reporting, Nelkin (1996) suggests, in the media can be 'traced to reporters' efforts to present complex material in a readable and appealing way' (pp. 1601). The media's inclination towards stories involving dispute often provides the background for the journalistic convention of 'balance'. Risks associated with vaccines are framed by two or more, competing and often disparate messages thus confusing any estimation of risk the public might make. When dealing with epidemiological explanations of risk the media have reported inaccurately, or failed to convey the underlying complexity (Driedger & Eyles, 2002; Nelkin, 1996). Sandman's model of risk perception has suggested the public make judgements of risk through macro statements including epidemiological messages, however, more weight is given to micro factors with emotional and personal content. When harms associated with vaccines are dreaded or feared, the broader epidemiological messages are distorted, potentially inflating the perception of risk (Driedger & Eyles, 2003; Nelkin, 1996).

Brown et al (1996) make the point that the portrayal of risk is not a 'neutral concept grounded in probabilistic data but is used as a strategy for identifying villain and victims, and to cast blame for unexpected events (pp. 1685). Meanings about risk receive further treatment when framed by other newsworthy discourses of covers ups, government bungling, or manipulation by private enterprise providing (Ackerman et al., 2004; Brown et al., 2003; Leask & Chapman, 2002; Seale, 2003). The portrayal of risk by the media is often subject to multiple explicit and often implicit ideas, frames and discourses, influencing the public's perception of risks surrounding vaccines.

In this article a qualitative analysis of selected New Zealand print and radio media was undertaken to characterise the portrayal of risk as depicted in a discrete news story about the meningitis vaccine campaign that began mid October running to late November 2006. Specifically, an examination was made of: major and unique themes related to risk, the portrayal of key players such as vaccine critics, the New Zealand Ministry of Health, the media and the public; the underlying discourses and frames; the treatment of medical science concepts; journalistic devices employed; identifying the omission or minimisation of important public health messages; as well as tracing the development of emergent elements within the narrative.

Methods

Media Collection

Media data was collected from 11 October through to 25 November 2006 from two major New Zealand newspapers and three radio programs broadcast by New Zealand's national broadcaster National Radio. The New Zealand Herald and the Dominion Post were the selected newspapers giving a reasonable national coverage. The three selected radio programs were Morning Report, Nine to Noon and Check Point. Radio recordings and newspaper articles were transcribed into Microsoft Word.

Data collection began in mid October because the media turned its attention to a Norwegian Documentary that made claims about a link between the Norwegian version of the Mew Zealand vaccine and chronic fatigue syndrome (CFS). Stories later emerged regarding financial payouts by the New Zealand government to children's families' for harms possibly caused by the vaccine. By late November stories about the risks of the MeNZB™ vaccine had become rare.

The media data was sourced directly from the newspapers themselves as well searching for articles through web based Newztext index. Radio media was collected by digitally recording shows available through the National Radio website. Additional recordings were obtained through Replay Radio, National Radio's archive service.

Media articles that made any reference to the MeNZB™ vaccine, or vaccines in general, in any way, were included for analysis. Articles that were related to public health campaigns generally were not included.

Media Analysis

Media articles were analysed for the portrayal of risk associated with the MeNZB™ vaccine. After reading and re-reading the media data was coded into thematic categories. A second categorising ordered the data into three time phases demonstrating the use of emergent elements within the story.

From initial coding and phasing an analysis was made of the journalistic devices, metaphors, predominant and unique themes, discourses and story frames. The frame analysis technique asks questions about how the problem is being described, who is said to be responsible and what kind of devices in the media text are being utilised (Leask et al. 02; Ryan, 1991).

Specific questions were asked about: how were associations between potential harms and the MeNZB™ vaccine conveyed? How were the potential harms presented? How were the principal characters of the story portrayed? And, how did the portrayal of the principal characters influence the portrayal of harm or risk? How well were scientific concepts and findings presented? What influence did journalistic devices have on conveying information about risk associated with the MeNZB™ vaccine? What discourses evolved to define the concept of risk? How was the wider public health context integrated into the story? What changes in themes and discourses occurred over the phases of the story?

Results

Table 1. Chronology of events

Date	Main events and issues in media
22, 23 October	Reports emerge that Norway's and New Zealand's meningitis vaccine may be linked to chronic fatigue syndrome based on the claims by a documentary recently screened in Norway. Dr Jane O'Hallahan from the MoH refutes any link citing that rates of the disease have not increased since the vaccine introduction in New Zealand. The media suggest that the vaccine was inadequately trialled by the MoH.
24 October	Professor Saugstad from the documentary is interviewed citing anecdotal evidence for a link to CFS.
25 October	ACC claims for harms caused, including idiopathic thrombocytopenia purpura, by the Opposition Health Spokesperson Tony Ryall.
26, 27 October	Focus stories on Chelsea Ferris and Petra McDiarmid ill health allegedly caused by the vaccine. Tony Ryall is rebuffed and labelled 'scaremongering' by the MoH and other opposition MPs. MoH and other NGOs, including Dr Michael Tatley from CARM, adopt new strategy attempting to persuade the public that harms from the vaccine are minor and temporary, and that the vaccine is safe. MoH is criticised for not holding an inquiry into the vaccine, by Tony Ryall, Green MP Sue Kedgley and others.
3 November	MoH and Dr Nikki Turner from IMAC criticise the Norwegian documentary as 'unbalanced' and 'drama' saying it will needlessly alarm and worry parents.
5 November	The documentary is screened.
7, 10 November	Letters published by Dominion Post condemning the MoH for putting children at risk of CFS and other harms.
11 November	Norway is reported to be conducting an inquiry into their meningitis vaccines trial and possible link to CFS.
15 November	Reports focus on the effect of the documentary with Jane O'Hallahan saying more calls to immunisation hotline from parents and 'priority groups' more likely to decline vaccination.
16 November	Further criticism of MoH for not holding an inquiry by Green MP Sue Kedgley. Coverage of Dr Jane O'Hallahan having made comments the vaccination campaign was a 'gamble'.

Chronology of events

Table 1 shows how the main issues and events played out.

Phase 1: Big numbers, a bungling Ministry, whistle blowers, and the MeNZB™ causing ME

Vaccine linked to dreaded harms

From the outset the media associated CFS with the MeNZB vaccine although the reports that sparked the debate suggested that any risk was solely associated with the Norwegian version, MenBvac. Early articles portrayed the Norwegian and New Zealand vaccines as closely related in order to endow the latter with the same proposed harms associated with the former. Statements of association between harm and vaccine were vague in meaning, but ultimately came together to portray

the New Zealand vaccine as risky. Terms like 'link', 'trigger', 'relation', 'correlation' were employed to suggest that CFS was indeed associated with the MeNZB vaccine. Quantification rhetoric (Leask & Chapman, 2002) was intermixed with 'linking' statements in order to establish the newsworthiness of the story. Referring numerous times to the figure of over 1 million vaccinated children suggested the magnitude of the potential controversy, added a spectre of the dramatic, and identified children as the primary group put at risk. Images of children being harmed are powerful as they generate outrage and fear (Brodie et al., 2003).

The meningitis vaccine used on more than a million New Zealand children is being investigated amid concern it may *trigger* chronic fatigue syndrome (New Zealand Herald, 22 October, 2006).

Vaccine investigated for links to chronic fatigue (Headline; New Zealand Herald, 22 October 2006)

Contributing to the unfolding media drama the portrayal of CFS in the was underpinned by a collection of 'dread risks'. CFS, and other diseases appearing in the narrative (notably idiopathic thrombocytopenia purpura), were depicted as: unfamiliar, unfair, acute, sometimes delayed, impervious to human mitigation (Burgess et al., 2006; Driedger & Eyels, 2003). The kind of outrage these depictions would generate, research suggests, would greatly exceed what the public would consider tolerable, having the dual effect of inflating any risk and arousing a keen interest in the story (Driedger & Eyels, 2003).

The hour-long documentary raises concerns over the safety of the Norwegian vaccine on which the New Zealand vaccine is based. It claims there are severe side effects, including chronic fatigue syndrome, which causes pain, muscle weakness and loss of brain function, and myelitis, which causes paralysis of nerves (Article; New Zealand Herald, 3 November 2006).

'ME mostly strikes adults aged 25 to 40, but can also afflict children and teenagers' (Article; New Zealand Herald, 22 October 2006)

It's a sad irony that perfectly healthy people now face a lifetime of medical complications after receiving what was understood to be a safe vaccine (Letter; Dominion Post, 7 November 2006).

Evidence: backing up the 'link' and refuting the 'link'

The role of evidence was not altogether straight forward. Largely, the media drew on the credibility and authority of individuals and certain events to suggest that the MeNZB vaccine was 'linked' to dreaded harms. In effect, the variety of sources made use of by the media gave an impression the claims were trustworthy. Initially the Norwegian documentary itself was treated as a credible source, before its screening. The Norwegian government's injury compensation agency was reported to have paid out for one case of CFS in relation to MenBvac. Norway's problems reinforced the idea that 'where there's smoke, there's a fire'. A Norwegian medical academic was widely quoted and at one point interviewed for the Nine to Noon programme. Although Professor Saugstand admitted he had no scientific evidence, his authority as a medical practitioner and academic, alongside his neutrality as a Norwegian, gave his claims weight and credibility.

Great fan fair surrounded Opposition Health Spokesperson Tony Ryall's release of 33 successful ACC claims, where the financial recognition by ACC, a respected government organisation, suggested a kind of 'evidence' to support an association of risk with MeNZB. In the case of a girl who developed Idiopathic Thrombocytopenia Purpura, most media included statements that the doctors who treated her attributed cause to the vaccine. A New Zealand Herald article reported one vaccine critic as saying that the Norwegian trials 'proved there was a link' (3 November, 2006). One letter misappropriated the idea of statistical significance to suggest the MoH was underplaying the risk posed by the vaccine.

Compare this with your report the next day that, when ACC reveals that it has had 33 claims of harm caused by the meningitis vaccine, officials say this isn't statistically significant (Dominion Post, 27 October, 2006).

The Nine to Noon interview with Professor Saugstad, conducted by Kathryn Ryan, contained the most notable evaluation of whether there was any scientific substance to the claims that the vaccine could be linked to CFS. She asked if there was 'any statistical significance' to the numbers he was basing his claims on, to which he replied in the negative (Radio Interview; Nine to Noon, 24 October 2006). Up to this point in the narrative, both print and radio media, had made no comment on, firstly, the reliability of their sources making claims for a link, secondly, whether the sources cited could actually be interpreted to suggest a link, and thirdly, nor had the media quantified the degree of risk. The scientific concept of levels of evidence was mostly absent from the narrative, absent even from the counter claims refuting any 'link' made by the Ministry of Health. Making sense of the debate was made more challenging by summarising statements made across the media. The exert depicts two equally credible government bodies with opposing views, achieving journalistic 'balance', but in effect casting a shadow of doubt over the more definitive claims of the New Zealand MoH.

The Ministry of Health says vaccines are not linked to the rare condition chronic fatigue syndrome, but it is monitoring developments in Norway, where recipients of a meningococcal B vaccine are being studied for a possible link (Article; New Zealand Herald, 23 October, 2006).

In the early part of the narrative the MoH was portrayed as refuting the proposed 'link' between CFS and the vaccine. Complicating the picture was that various NGOs and the MoH had admitted that the vaccine had caused some of the injuries included in the ACC claims raised by Tony Ryall. Dr Jane O'Hallahan was the primary MoH spokesperson for the vaccine campaign, and she made statements refuting any 'link' through a variety of strategies. She discredited Professor Saugstad's evidence and proposed credible alternative causes for the illnesses allegedly caused by the MenBvac vaccine as portrayed in the Norwegian documentary. Dr Nikki Turner from the Immunisation Advisory Centre supported O'Hallahan by making further statements to the effect that the illnesses and injuries included in the 33 ACC claims did not represent causality.

We do have ACC claims after immunisations and having an ACC claim accepted does not mean cause and effect. I mean, obviously if you've had poor technique and you get an infection then that's definitely caused by the vaccination, but some other ACC claims sometimes we're unsure what caused the problem and so ACC will pay out whether or not it is immunisation related (Radio Article; Morning Report, 26 October 2006).

This method of refuting a 'link' dealt more definitively with cases in the past, the idea of a 'link' was well established and future risk was less definitive.

Although the terms of science served to portray Dr Jane O'Hallahan as authoritative and competent, the actual explanatory power of the statements was limited. The following quote from the New Zealand Herald references scientific terms that would be largely unfamiliar to its audience, and therefore confusing, and the concluding part of the quote highlights a lack of conclusiveness.

She understood from an official at the institute that the cohort which took part in the Norwegian trials, now aged 29-33, had a rate of chronic fatigue syndrome "no higher than before or after that birth cohort. We need to get that confirmed ... which is what we are seeking to do at the moment."
(Article; New Zealand Herald, 23 October 2006).

None-the-less, the scientific concept of the 'back ground rate' gained currency amongst media reports. Dr Michael Tatley from the Centre for Adverse Reaction Monitoring made the statement that higher rates of CFS and ITP had not been noted for the period of the vaccines implementation. By virtue of association to claims the vaccine was not harmful, and its frequency of use, the back ground rate concept came to represent safety itself, and its use strengthened the speaker's claims. However, Kathryn Ryan's interview with Tatley on the subject of the back ground rate served to make the concept understandable to the public.

O'Hallahan: While chronic fatigue is a rare disease, it happens particularly in adolescents and young people every year, and therefore if you are vaccinating during a particular year, there will be cases that occur and a temporal relationship or at least following the vaccination. I mean that's just what happens.

Ryan: By coincidence you're saying? (Radio Interview, Nine to Noon, 24 October 2006)

The point must be made that the MoH's attempts at discrediting the credibility put forward by the Norwegian documentary, Saugstad, and the ACC claims missed their mark. Risk was effectively framed by the portrayal of vaccine as 'linked' to dreaded diseases, and to some extent this portrayal was independent of sources like the Norwegian documentary.

Ministry of Health as blameworthy

Casting the MoH as blameworthy followed on from the case being made by the media that the vaccine had exposed New Zealand children to harm like CFS and ITP. In this way the risk was further inflated as doubt was cast over the trialling of the vaccine and the ignoring of warnings from various figure before its release. Blameworthy portrayals also served to undermine the MoH's claims that the vaccine was safe and that the proper actions were being taken to protect New Zealand children. Various media said the MoH was 'defending' the vaccine implying the Ministry had made some admission of fault.

HEALTH Ministry officials have defended the quality of New Zealand's meningococcal B vaccine amid international concerns its parent vaccine may contribute to chronic fatigue syndrome (Article; Dominion Post, 23 October 2006).

'Whistle blowers' (Ackerman et al., 2004)

Sue Claridge, a vaccine critic from the Immunisation Awareness Society, and Professor Saugstad, were portrayed as whistle blowers who had pre-warned the ministry about the vaccines harms well before its release. This exert emphasised the personal and caring background to Saugstad's motivations counter casting the MoH as seemingly uncaring.

A Norwegian website says Prof Saugstad is related to someone with ME and is involved in the Norwegian ME Association. Prof Saugstad told the Star-Times he wrote to a New Zealand colleague about his concerns before the vaccination programme began here and was told the New Zealand authorities would passively monitor for ME (New Zealand Herald, 22 October, 2006).

Untested vaccine

The portrayal of the development of the vaccine as substandard suggested the MoH had inadequately ensured the vaccine was free of harm, casting it as irresponsible and culpable. Articles used the uniqueness of the MeNZB vaccine, including Norway's MenBvac, in order to portray the vaccine as untested by stressing its isolated use. The point was made most sensationally by the Check Point program when it quoted Sue Kedgley.

Sue Kedgley: Is he confident that the Ministry of Health made the right call to proceed with a massive vaccination of 1 million New Zealand children before it had carried out stage 3 clinical trials of the vaccine? Trials, which, are normally considered essential before any new medicine is approved. And doesn't this mean that the roll out has been basically a gigantic experiment (Radio Article; Check Point, 25 October 2006).

Ministry of Health as incompetent and failing parents

As news of the 'link' between CFS and MeNZB the portrayal the Ministry was to receive was significant as the public's interest was keenly aroused as to the MoH's response to the vaccine debate. The media took great interest in the performance of the Minister of Health, Pete Hodgson, when he was questioned in the House by Tony Ryall, the Health Spokesperson for the Opposition. Ryall raised the 33 ACC claims and on this basis he questioned the minister on the credibility of statements he had made to the effect that there had been no significant adverse effects. Hodgson's unprepared response and honest surprise cast him as seemingly incompetent. The controversy around the vaccine grew to such an extent that Dr Jane O'Hallahan went before a Health Select Committee and endured considerable grilling by members of the committee. Media reporting of the hearing included some considerable coverage of comments made by Dr O'Hallahan about vaccine opponents where she described these groups as a 'menace' which implied some degree of prejudice. Portraying the MoH as incompetent diminished their authority thereby diminishing the effectiveness of any statements aimed at reassuring the public that the vaccine was safe.

The MoH's trustworthiness was challenged by a series of reports questioning their level of honesty. In a Morning Report radio Tony Ryall was quoted suggesting the fact of the ACC claims were evidence the MoH had failed its obligation to parents to provide full information, even implying that the MoH had been withholding information.

Tony Ryal: Well I don't know about you, but I had to make a decision to immunise my children and I made that decision trusting in the Ministry of Health and the advice that they've been giving parents. We've all made those decisions and they're serious decisions. When you find out, as we have, that the ministry of Health has not been telling New Zealanders that there have been severe reactions as a result of the vaccine, just making parents aware of the risks and the benefits, then parents will be worried. The fact is, this is about informed consent. We should have known about these claims. We should have known about these significant adverse events and the ministry should not have been saying there were no significant adverse effects, when there had been (Radio Report; Morning Report, 26 October 2006).

However, the MoH was not altogether portrayed so poorly. When the Minister Pete Hodgson was interviewed with Tony Ryall on Morning Report by Sean Plunket, he made great efforts to be seen as transparent. Hodgson backed his transparency claim by quoting a larger number of children affected by ITP as opposed to Ryall's one included in the ACC claims. By defining what it means to be transparent Hodgson portrays the MoH in a more trustworthy light.

Hodgson: The whole point about recording that thrombocytopenia as an example is to see whether or not the level of thrombocytopenia, or any other disease, is rising in our New Zealand children as a result of the vaccination and actually the answer is no it isn't, but it doesn't mean that you shouldn't 'fess up and say we have an association, we don't necessarily have a direct link. That's what openness looks like (Radio Interview; Morning Report 26 October 2006).

Falling short: substandard Ministry of Health response

Calls appeared across the media for fresh investigations or inquiries into the vaccine controversy effectively casting doubt over the MoH's efforts to identify vaccines risks. The 'inquiry' is a frequently employed media and political discourse involving a course of action to be undertaken when some controversy emerges within the government sphere to elucidate the problem, apportion blame and recommend a situation. By performing the 'inquiry' the MoH could be seen as 'taking charge of the situation'. However, by not taking up the call the MoH could be cast as dealing with the problem ineffectively, as was the case. The inquiry discourse gained greater impact when it was reported that the Norwegian government decided to undertake an inquiry. Calls for an 'inquiry' were also used as a contrast to the MoH's current safety programmes. Whereas the 'inquiry' represented an 'active' approach, the existing monitoring appeared inadequate as it had failed to detect the alleged risks.

Tony Ryall: Now that he's become aware for the first time the ACC has accepted that a meningococcal B vaccination caused the severe blood disorder, and surely the fact that 32 of the other claims have been accepted, it would warrant this minister instructing his officials to start investigating the serious cases that the ACC has accepted.

Pete Hodgson: The member may not be aware that apart from 33 ACC claimants this vaccination has been subject to 3 separate ongoing monitoring regimes. They have been of such a high standard that they are regarded by the independent scientific committee that oversees them as being Gold standard (Radio Article; Check Point, 25 October 2006).

Phase 2: threatened youth and the MoH getting on to the front foot

Personal accounts: threatened youth

Two girls received some considerable media attention for a disease and an injury attributed to the MeNZB vaccine. Both portrayals drew attention to their youth and how the vaccine's harms had threatened the qualities of youth. The first involved a sensation story about a girl whose reaction to the vaccine injured her arm leaving an 8 cm lump which the article claimed had jeopardised a budding modelling career. These stories served to identify real victims and to reinforce that the vaccine caused actual harms adding to the outrage generated thus far (Burgess et al., 2006). One girl was alleged to have developed ITP and the portrayal was framed by dread elements: chronic, unfamiliar, negative transforming impact and impervious to medical treatment. Her situation was summed up by her mother as 'devastating' (Article; New Zealand Herald, 26 November 2006).

Kiri Ennis: Louise Blair-Ferris' daughter has a blood disorder which specialists have attributed to her injection of the Meningococcal B vaccine. Ms Ferris says eight year old Chelsea used to be very active but is now tired all the time and suffers from a damaged immune system.

Louise Blair-Ferris: She gets very tired, if she ... she can actually bleed in the mouth, she can look like she bruises from head to toe. To date her platelets are in the seventies. Only once have her platelets gone over 141 by themselves. Normal range for children is over 500...

In the meantime, Louise Ferris hopes her daughter Chelsea will eventually grow out of the blood disorder. Until then it means trips to Hastings Hospital for blood transfusions and sick days off school (Radio Article; Morning Report, 26 October 2006).

Defining acceptable levels of harm

Where the MoH's attempts at refuting the link between CFS, the ACC claims and the vaccine missed the mark, the second strategy emerged in the media began to effectively tackle the framing of risk dominant thus far, dreaded harms. The new strategy emerged from a variety of quotes from various sources, including the MoH and notably Dr Michael Tatley from the Centre for Adverse Reactions (CARM), came together to form a discourse of safety.

Harm as 'modest', 'everyday' and 'rare'

Harms were reframed as 'injuries' rather than diseases, and the descriptors attributed to them were far less malevolent than those attributed to the cases of ITP and CFS, they ranged from: 'not so serious', 'moderate reactions', 'modest', 'minor sorts of situations'. The terms 'significant adverse reactions', 'significant adverse health effects' or even 'events' came into greater usage and formed the primary descriptors that would cover the construction of a discourse of safety based on what would be acceptable risk.

The minor character of the injuries was conveyed by lists outlining the content of the 33 ACC injuries. The more unfamiliar character of CFS and ITP was contrasted to injuries caused by a familiar medical procedure, the injection.

Seven were for allergic reaction, six for bruising at the vaccination site, three for rotator cuff impingement and two each for anaphylactic reaction and contusions at the injection site.

Single cases included a frozen shoulder, fractured upper teeth, infection, nerve damage and skin puncture (Article; New Zealand Herald, 26 October 2006).

Dr Michael Tatley from CARM responded to a question from Kathryn Ryan about the time period injuries affected the claimants by stating they were 'typically' resolving within 12 to 24 hours post vaccination (Radio Interview; Nine to Noon, 26 October 2006).

Emphasising the 'minor' trauma involved in introducing a needle into a child's arm, deemphasised harm associated with the contents, the MeNZB vaccine.

Presenter: Dr Kevin Morris, the Corporate Medical Advisor to ACC says the threshold for a claim is not very high and nearly half of the injuries could have happened with any injections.

Dr Kevin Morris: The majority of them won't be serious, for example, at least half of them are described as muscular skeletal type injuries, that's bruising or contusions or tendon injuries, those are minor things which could happen with any injection, it's not specifically related, for example, to the meningococcal vaccine, it's related to the fact they had an injection (Radio Report; Morning Report, 26 October 2006).

The Medical Advisor to ACC was repeatedly quoted across the media genres saying ACC payouts to injured people were for \$79, a minor sum that represented, at the most two visits to a General Practitioner. Likening the treatments for MeNZB reactions to other treatments readily treated by a GP disassociated the vaccine from the untreatable harm.

Risk was being reframed; no longer was it being associated with unacceptable dreaded *diseases* like IPT or CFS, but instead with a definition of safety that included familiar and understandable *injuries* that would only rarely occur.

Risk as 'everyday'

The media dealt with risk as a topic itself. Dr Jane O'Hallahan was quoted as saying "vaccines cause reactions as do many other things in life." (Article; New Zealand Herald, 26 October 2006). Referring to the vaccine O'Hallahan was also quoted "...though there was always an element of risk, they had confidence in the vaccine." (Article; Dominion Post 16 November 2006). These statements reinforce previous statements that the vaccine came with risk, but it was risk like that associated with 'other things in life'. This thread of the discourse effectively distanced risk from unacceptable dreaded harms, to risk associated with everyday activity.

She explained that sore arms, fever and feeling generally unwell immediately after the injection were the most common affects, but they are outweighed by the benefits (Article; New Zealand Herald, 3 November 2006).

Harm as 'acceptable'

The Michael Tatley interview defined what would be considered an unacceptable harm from the scientific perspective.

Ryan: What are the most serious adverse reactions to date which could potentially at least be linked to a MeNZB vaccination?

Tatley: Again those events are not specifically peculiar to the MeNZB, there are always going to be severe events that occur and, those that would be of concern to the individual at least in terms of preventing or suggesting that we don't precede with the immunisation, would be events such as anaphylactic reactions, and those sort of things can occur to any, any foreign antigen, that's administered to the body.

Ryan: And that's similar to what happens with a bee bite if your allergic, its like an allergic reaction, yes (Radio Interview; Nine to Noon, 26 October 2006).

The exchange reframes the rare harms described by Pete Hodgson and Jane O'Hallahan. So far dreaded harms were presented as the worst consequence of the vaccine; however, in this case the worst a child could expect was an anaphylactic reaction akin to a bee sting, something natural, familiar, and medically treatable. Risk was now being associated with acceptable harms.

Shifting the blame

The discourse of safety gained considerable ground through the media's attraction to the dispute between the government (including Act MP Health Spokesperson Heather Roy) and the Opposition Health Spokesperson Tony Ryall (Nelkin, 1996). The one sided coverage of the dispute portrayed Tony Ryall, and other vaccine opponents, as irresponsible and 'scaremongering' for they were threatening the health of New Zealand children by needlessly deteriorating public confidence in a vaccine which prevents meningococcal mortality and morbidity. As blame was shifted the MoH was comparatively portrayed as trustworthy bolstering the various statements making up the discourse of safety.

"But the incidence of that immune disease is no greater at all in New Zealand post the MeNZB vaccination programme than it was prior," she said. "For that member Tony Ryall to insinuate anything else is just a disgrace." (Article; New Zealand Herald, 26 October 2006)

"This attempt to discredit the Government serves only to undermine public confidence in a safe and effective vaccine that saves children's lives." (Article; New Zealand Herald, 27 October 2006).

Phase 3: irresponsible media and the MoH for the public good

Phase 3 can be described equally well for what it contains for what it doesn't. The MeNZB campaign gained an advantage buttressed by the absence of statements of 'links' to dreaded harms and depictions of personal accounts of feared harms. Whereas blame for the risk posed to New Zealand children attributed to the MoH was diminishing; blame for compromising the vaccine campaign was attributed to vaccine critics and the media, specifically the Norwegian documentary makers. With the shifting of blame the MoH was increasingly represented as a protector of the health of New Zealand children.

Irresponsible 'media'

Before the Norwegian documentary was screened on November 5 pre-emptive criticism was made in the media by the MoH. A variety of terms and phrases were used to characterise the Norwegian documentary as irresponsible: 'misleading', 'dangerously slanted', 'anti-immunisation views', 'unfair' and 'unbalanced', 'hype', 'risks were inflated', 'pulling our heart strings'. These terms portrayed the documentary as biased but terms like 'unbalanced' criticised the documentaries failure to meet a commonly accepted media convention, balance (Nelkin, 1996).

Immunisation Advisory Centre director Nikki Turner said she was appalled after reading a transcript. "It's not medical science-based. I would not deign to call it a documentary -- I would put it in the drama category."

The programme reported adverse reactions in vaccinated Norwegian teenagers, but did not mention that an unvaccinated control group had a higher rate of these conditions. Parents' fears were being sparked by emotive anecdotes and "dishonest statistics", she said. (Article; Dominion Post, 3 November 2006)

Open dispute allowed the MoH to be recast as a trustworthy organisation, and take on a warmer caring image and an air of greater effectiveness. In a Check Point radio interview Jane O'Hallahan made an implicit warning to media by addressing the Norwegian documentary suggesting that the overinflation of risk associated with vaccines damages public confidence and endangers the health of New Zealand children.

Mary Wilson: So in terms of damage control now, clearly you're, you're on the media, you're on the radio, what else are you going to be doing?

Jane O'Hallahan: Well, this is not so much about damage control, this is about what could happen in the future. We've seen reports recently coming out of the UK when the coverage for measles vaccination dropped from 90 to 80% due to false claims about measles vaccinations and autism. This has resulted in outbreaks of measles. We've seen this happen around the world, so we are very concerned about this. We are very concerned that this will damage the reputation of immunisations in general (Radio Interview; Check Point, 15 November 2006).

MoH under pressure

Although not taken up by the media to any great extent, the story of the MoH in 'damage control' post documentary helped to reverse its setbacks in phase 1. Reports were made of the negative impact of the documentary: greater numbers of

calls from fearful parents to the immunisation help line, targeting 'risk groups' to prevent their declining the vaccine, and the development of a 'communications strategy' (Article; New Zealand Herald, 15 November 2006; Radio Interview; Check Point, 15 November 2006). The MoH was being portrayed as an embattled hero of sorts, attempting to get the vaccine campaign back on track for the well being of children and the 'risk groups'.

MoH empathising with parents

Caring images of the MoH came through Jane O'Hallahan's

I think parents are concerned, they've been misled by the documentary, they, are obviously have been exposed to a misleading unbalanced program and they're scared (Radio Interview; Check Point, 15 November 2006).

O'Hallahan is portrayed as emphasising with parents emotional responses to the irresponsible revelations of the Norwegian documentary.

Benefits of the vaccine

Very rarely in the narrative did the mention of the rationale and benefits of the vaccine get reported, apart from very small references in a radio report in the Morning Report program (26 October 2006) and a New Zealand Herald article (27 October 2006). The most impassionate call came from the Director-General of Health.

Director-General of Health Stephen McKernan, in his first appearance before the select committee in the job, said the vaccine was vital and people were not getting the other side of the story.

"I tell you some children would die if they weren't immunised." (Article; New Zealand Herald, 15 November 2006)

The rationale for implementing the vaccine was also overlooked by the media. However, in an interview with Dr Jane O'Hallahan by Mary Wilson of the Check Point program she made point of stating that 'we brought in this vaccine on the back of a devastating epidemic...' (Radio Interview; Check Point, 15 November 2006). By excluding any portrayal of the vaccine as a protection for children and rather emphasising its risks to children served to portray the MoH as blameworthy. However, portraying the vaccine as a protection from harm, served to compliment the MoH as a protector and vaccine critics as blameworthy.

Tangents from the MeNZB™ story

However, in two articles one from the Dominion Post and another from the New Zealand Herald unrelated tangents concluded the stories. One vaccine story was followed by Sue Kedgley questioning Dr O'Hallahan on the effects of multiple vaccinations administered to children, and the other was followed by a short piece on the MoH's tendering processes. Both additions added distraction from the core narrative.

Conclusion

Risk was attributed with the MeNZB™ vaccine throughout the narrative by the suggestion it was 'linked' to 2 kinds of harm, dreaded harm and injury harm. Dreaded harm was framed by certain type of disease processes: unfamiliar, feared, chronic, and impervious to medical treatment as well as strange and frightening effects (Driegder & Eyels, 2003). The framing of injury harm revolved around processes that were: familiar, temporary, medically treatable and mostly related to the procedure of injection or related to effects common to all vaccines. Overall, the balance fell the way of dread grossly inflating risks posed by the MeNZB™ vaccine.

Dreaded harm was attributed to the vaccine through linking statements, the use of credible sources, as well as personal accounts of harms said to be caused by the vaccine. The sources served to compliment the framing of risk as a spectre of evidence. None of the sources were based on scientific evidence. 'Link' statements did not convey the level of risk, nor was any discussion made of the level of evidence required to suggest a true link, and also, the sources being used to suggest a 'link' were largely unchallenged from the perspective of scientific standards of evidence. However, the exception was a Nine to Noon interview with a Norwegian medical academic who was questioned about whether his evidence was 'statistically significant' (Moynihan et al., 2000; Nelkin, 1996).

Although scientific evidence was generally attributed to the MoH and other supporting organizations, its message of safety was undermined by journalistic 'balance' (Nelkin, 1996). Scientific statements made by the MoH refuting a 'link' were balanced against credible sources supporting a 'link' thus elevating the latter to an undeserved equivalence. Sandman's model of risk perception would suggest risk was further inflated in phase 1 of the narrative because it was communicated through micro or personal accounts, identifiable victims, dreaded harms, catastrophic consequences and uncertainty which generate high outrage. On the other hand, claims the vaccine was safe were established through epidemiological or macro level statements which only partially addressed the perception of risk by the public. The portrayal of personal stories also served to over inflate risk further distorting scientific statements made by the MoH (Burgess et al., 2006; Nelkin, 1996). Together, Sandman's model would suggest that at least for phase 1, risk levels were perceived to be high by the public when in actual fact good evidence suggested otherwise (Burgess et al., 2006).

The portrayal of the MoH as blameworthy served to undermine the message that the vaccine was not linked to dreaded harms but in fact was safe. The MoH was portrayed as unresponsive in phase 1 due to continually restating its position that existing protective programs were adequate (Burgess et al., 2006). The MoH was also portrayed as untrustworthy because it was ultimately blamed for putting so many New Zealand children at risk, at least in phase 1, serving to further inflate the risk associated with the vaccine. In this way, risk was indeed a non-neutral concept which cast vaccinated children as victims and the MoH as villain (Brown et al., 1996).

Dispute grew to become a greater theme of the narrative when Tony Ryall was roundly criticised for 'scaremongering'. In doing so the ACC claims which were portrayed as evidence for dread harms were diminished. Further blame was attributed to the media generally, and more specifically to the Norwegian documentary, on the basis it was 'unbalanced' and therefore irresponsibly alarming parents. As blame shifted favourably from the MoH the discourse of safety was emerging in phase 2 and 3. Safety was being defined by this discourse thus framing the vaccine with notions of everyday risk, acceptable and familiar harms, and infrequently occurring harms. The discourse of safety may have been effective in

persuading public opinion, but from the vantage point of Sandman's model of risk perception, it may have been less effective had personal accounts of dreaded harm reemerged.

Blame functioned to bolster the particular parties' position of the vaccine, suggesting the framing of risk was interdependently related with blame portrayals. Late in phase 3 the MoH was portrayed as a protector of children's health by criticising parties who needlessly alarm parents which reflected the altered framing of the vaccine as preventing disease. Implicitly, meningitis was fleetingly reconfirmed as the primary harm, reflecting the condemnation of Tony Ryall for unnecessarily causing parents to reject vaccination through fear of CFS or ITP. In summary, phase 1 the vaccine was the primary harm with the MoH to blame, phase 3 saw meningitis as the primary harm and the vaccine and MoH as protector, and vaccine critic to blame.

Health statistics relating to death and morbidity resulting from meningitis, as well as personal accounts of the harm caused by meningitis, were given minimal coverage. However, the broad thrust of the narrative rested on high risk being associated with the vaccine, high risk associated with meningitis would have ultimately contradicted and undermined the newsworthy and dramatic content of the narrative's early phase. When core public health vaccine messages enter the media arena they are subject to inclusion or exclusion not on the basis of their relevance to parents or scientific evidence, but on the basis of whether there is a fit with the predominant discourses, framing and dramatic direction of any particular narrative (Ackerman et al., 2004; Driegder & Eyels, 2003; Seale, 2003).

Appendix

Table 2. Key players: portrayal and messages

Player	Portrayal	Message
Sue Claridge	Vaccine opponent, Whistle blower	Trials proved vaccine link with CFS
Ministry of Health	Blameworthy, under pressure, protecting children	Refuting link, discourse of safety, vaccine safe and protects children
Minister Pete Hodgson	Bungling, Competent	Vaccine is safe and not harmful
MP Tony Ryall, Opposition Health Spokesperson	Whistle blower, holding government to account, 'scaremonger'	Vaccine caused ACC Claims , 'right to information', MoH not being honest
Dr Jane O'Hallahan, Director of Meningitis Vaccine campaign	Authoritative, uncaring, prejudiced, caring	Vaccine is safe and not harmful
Dr Michael Tatley, Director of Centre for Adverse Monitoring	Independent, academic, authoritative	Vaccine not associated with CFS, similar harms to other vaccines, explained reporting of adverse effects
Norwegian documentary makers	Whistle blowers, authoritative, misrepresenting evidence, false, unbalanced, drama	Vaccine trials in Norway were inadequate, suggests a link between vaccine and CFS
Dr Nikki Turner, Director of Immunisation Advisory Centre	Independent, authoritative, caring	Vaccine is safe, vaccine not linked to CFS, criticising Documentary for misleading public
2 Girls, plus their mothers	Child victims of vaccine, budding youth harmed	MoH not being honest with public, vaccine has harmed children
Professor Saugstad	Authoritative, academic, caring, advocate	Anecdotal evidence points to vaccine linked to CFS, MoH needs to be proactive looking for CFS
MP Sue Kedgley	Whistle blower, advocate	Call for government to undertake inquiry into vaccine problems

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