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# A positive approach to parents with concerns about vaccination for the family physician

## Background

Vaccine hesitancy is becoming increasingly recognised as an issue in Australia and globally, as concerns about vaccines and their safety predominate over concerns about the risk of vaccine-preventable diseases.

## Objective

This review provides an approach for primary care physicians to enable effective communication with parents who have different levels of concerns about vaccinations and awareness of currently available resources that may be used to support discussions.

## Discussion

Clear and flexible communication strategies for healthcare providers to undertake effective discussions with vaccine-hesitant parents or clear referral pathways are the key to addressing concerns about vaccination in both primary and secondary care.

## Keywords

vaccination concerns; parents; communication; herd immunity; immunisation resources



Acceptance of vaccines and the converse, vaccine hesitancy, are becoming recognised as an issue of global importance.<sup>1</sup> According to the World Health Organization (WHO) SAGE Working Group on Vaccine Hesitancy, research in this area has doubled in the past five years.<sup>2,3</sup> Vaccine-hesitant individuals show varying degrees of indecision about specific vaccines or vaccination in general, and their behaviour is influenced by a number of factors, including confidence, complacency and convenience.<sup>2</sup> The determinants of vaccine hesitancy are complex and context-specific, but explanatory theories of decision-making can be useful in understanding why vaccine-hesitant individuals interpret the severity and susceptibility to disease and vaccine risk differently.<sup>4</sup> In Australia, the United States and United Kingdom, it is estimated that up to one-third of parents have concerns about recommended vaccination schedules and express distrust and reluctance to have their children vaccinated.<sup>5</sup> At present we have high vaccine coverage against the primary series of vaccines in Australia and only 1.61% of parents register as vaccine refusers,<sup>6</sup> but there is concern that if healthcare providers do not adequately address parents' concerns, vaccine confidence and trust will be further eroded.

Parental reluctance to have their children vaccinated has been linked to outbreaks of certain vaccine-preventable diseases and postulated to have a role in outbreaks of these diseases, particularly measles.<sup>7</sup> Despite evidence of sustained measles elimination in Australia,<sup>8</sup> there have been isolated measles outbreaks since 2011–12.<sup>9</sup> In the USA, parents refusing vaccination for their children on religious or other grounds featured prominently in the three largest measles outbreaks of 2013, which occurred in New York City, North Carolina and Texas,



where the virus spread among members of a church taught to distrust vaccination.<sup>10</sup> The hypothetical association between the measles, mumps, rubella (MMR) vaccine and autism remains one of the most frequently stated concerns by vaccine-hesitant parents despite a causal association being consistently refuted.<sup>11</sup>

Australian national immunisation rates are relatively stable and currently fall between 89.7 and 92.3% across all age groups.<sup>12</sup> There has been a small downward trend in the 12 to less than 15-months age group across all states and coverage recorded on 31 March 2014 was <90% for the first time in 14 years. Although this is likely to be multifactorial, vaccine hesitancy could be a contributing factor. There are clusters of communities who refuse vaccines in each state in Australia; the refusal rate is up to 7% in towns such as Lismore in NSW. According to the most recent National Health Priority Area (NHPA) report (NHPA 2013), almost 80 000 Australian children under 7 years had not been fully immunised in 2011–2012.

### **Vaccine hesitancy, herd immunity and the safety of selective vaccination schedules**

It is clear that the pockets of vaccine refusers, including those who delay vaccination or adopt selective vaccination schedules, pose a risk to the whole community by threatening the circles of protection created by herd immunity. To provide optimal herd immunity, vaccine coverage above 90% is generally required for most vaccines but is higher for some vaccines, such as measles for which 95% coverage is optimal.<sup>13</sup> Some parents are choosing to adopt selective vaccination schedules for their children, but these schedules have not been tested for safety.<sup>14</sup> Vaccine recommendations are made to offer protection when a child is most at risk of disease acquisition, to stimulate an optimal immune response and to minimise adverse events. Delaying a vaccine, such as the MMR vaccine, may be done with minimal awareness of the consequences.<sup>15</sup> The long-term impact of selective schedules on herd immunity and control of now uncommon vaccine-preventable diseases in developed countries, such as hepatitis B, *Haemophilus influenzae* type B (Hib) and polio, is unknown.<sup>16</sup>

### **What are the most common concerns that parents have about vaccination?**

Vaccine safety and serious adverse events are repeatedly shown to be a top concern for parents.<sup>17</sup> In addition, in an American study, fear of autism, inadequate research or testing, and presence of toxic ingredients were cited as the top three concerns for parents who chose to deviate from the recommended vaccine schedule.<sup>18</sup> In another American study, up to 1 in 4 parents believed that their child's immune system could become weakened as a result of too many immunisations and that children receive more immunisations than are good for them.<sup>19</sup> In the Australian context, parents of incompletely immunised children similarly cited vaccine side effects, immunisation not being effective against disease, preferring 'natural' approaches, and vaccines containing harmful and toxic substances as their top concerns.<sup>20</sup> Tools

have been developed to accurately identify vaccine hesitancy through assessment of immunisation behaviour, attitudes, beliefs and trust,<sup>21</sup> and have been shown to predict childhood immunisation status.<sup>22</sup> However, such a tool has not been developed or used in the Australian context and more research about the vaccine concerns of Australian parents is needed. Qualitative Australian studies from the 1990s suggest that differing health beliefs, approaches to decision-making and risk perception all interact in leading to parent variability in judging severity and susceptibility to diseases and vaccine risk.<sup>4,23</sup>

### **New approaches to improving vaccine confidence and trust in vaccines are needed**

Previous approaches and recommendations for healthcare practitioners have focused on the provision of information to parents or on education interventions, but not on communication strategies. Recent Cochrane and systematic reviews concluded that there was limited evidence to guide the implementation of effective strategies to deal with the emerging threat of parental refusal of vaccination for their children and that new intervention studies are needed that incorporate vaccine communication strategies into the healthcare encounter.<sup>24,25</sup> Communication processes that build rapport and trust are needed. Attempts to persuade using graphic images or narratives, or by simply providing more information often fail or backfire.<sup>26</sup> Healthcare providers play a vital part and are often the most trusted sources of vaccine information.<sup>27</sup> However, they themselves may have concerns about vaccine safety and require access to appropriate information to address parental questions.<sup>28,29</sup> Thus, we need to develop and evaluate effective systems or communication strategies to support parental vaccine decision-making and to recognise that parents' trust in the source of information may be more important than the information itself. Vaccine discussions with healthcare providers can and should occur antenatally as studies have shown that the vaccine decision-making process begins prenatally.<sup>30</sup>

### **A framework for communicating with vaccine hesitant parents**

To help healthcare providers, a classification by Leask et al,<sup>31</sup> informed by results from a study by Benin et al,<sup>32</sup> has been proposed that categorises parents into five discernable groups on the basis of their vaccine concerns (*Table 1*). Although not yet formally evaluated, our preliminary investigations show that these categories resonate strongly with healthcare providers and parents alike. Individuals can be broadly categorised into three groups: acceptors, which include those who accept all vaccines (unquestioning acceptors) but still have some concerns (cautious acceptors); hesitant parents, which include those who have significant concerns but give all vaccines (hesitant) or delay vaccines and/or adopt a selective schedule (late or selective vaccinators); and refusers, who refuse all vaccines. By adopting specific goals and communication strategies for each group, clinicians can tailor their discussions appropriately and not have long discussions



that may be unproductive or even confrontational. An approach to hesitant parents and refusing parents is given in *Table 2*. Using the principles of motivational interviewing, where a guiding rather than a directing style is used to develop an empathic relationship with the individual, the individual's responsiveness and motivation for change can be assessed.<sup>33</sup> This method has been used to facilitate behaviour change for other health behaviours, such as smoking and alcohol cessation.<sup>34</sup> For the vaccine hesitant group, building trust is essential through a respectful, non-judgmental approach that aims to

elicit and address specific concerns. For refusers, the aim is to keep the consultation brief, keep the door open for further discussion and provide appropriate resources if wanted.

Where possible, available resources that have been developed to address these concerns, in either paper or video format, can be used to support the discussion and can be downloaded and given to the parent at the time of the consultation. Specific fact sheets that assist the individual to understand disease and vaccine risk, with more pictorial representation of risk such as the MMR decision aid (*Table 3*), have

**Table 1. A proposed classification of parental position on vaccination by Leask et al<sup>31</sup> informed by Benin et al<sup>32</sup>**

Parental position	
Unquestioning acceptor	<ul style="list-style-type: none"> <li>• Want to vaccinate – no specific questions</li> <li>• Good relationship with their healthcare provider</li> <li>• Less detailed knowledge on vaccination</li> </ul>
Cautious acceptor	<ul style="list-style-type: none"> <li>• Vaccinate despite minor concerns</li> <li>• Believe benefits of vaccines outweigh the risks and hope their child won't be affected by a rare or serious adverse event</li> </ul>
Hesitant	<ul style="list-style-type: none"> <li>• Vaccinate but have significant concerns</li> <li>• Focused on vaccine risk</li> <li>• Trust in healthcare provider is key</li> <li>• Higher levels of vaccine knowledge – actively seek more information</li> </ul>
Late or selective vaccinator	<ul style="list-style-type: none"> <li>• Significant concerns regarding vaccination</li> <li>• Prefer to delay vaccines up to 2 years or adopt a selective schedule</li> <li>• Significant doubts about safety, necessity and number of vaccines</li> <li>• Highest knowledge vaccine – actively seek more information</li> </ul>
Refuser	<ul style="list-style-type: none"> <li>• Refuse all vaccines</li> <li>• Specific religious, philosophical or alternative lifestyle beliefs or negative experience with vaccination</li> <li>• Lower levels of vaccine knowledge</li> </ul>

**Table 2. Suggested communication approaches for vaccine hesitant and refusing parents**

Vaccine hesitant or delaying parents	Refusing parents
<ul style="list-style-type: none"> <li>• Spend adequate time with child and parent</li> <li>• Ask permission to discuss concerns</li> <li>• Carefully elicit concerns and try to address each one specifically</li> <li>• Accept concerns and try not to minimise or dismiss them</li> <li>• Use a guiding style</li> <li>• Discuss disease and vaccine risks as well as vaccine benefits</li> <li>• Communicate risks with words and numbers or even simple graphics</li> <li>• Support discussions with downloadable resources</li> <li>• Avoid trying to overwhelm with detailed scientific information</li> <li>• Offer another appointment if needed or attendance at a specialist immunisation clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Ask permission to discuss</li> <li>• Aim to keep discussion brief but leaving the door open</li> <li>• Check importance of vaccines and confidence</li> <li>• Don't dismiss concerns – acknowledge</li> <li>• Don't overstate vaccine safety</li> <li>• Challenging firmly held philosophical, religious or scientific beliefs unhelpful</li> <li>• Avoid overt confrontation and scientific ping pong</li> <li>• Provide links to resources if wanted</li> <li>• Explore receptivity to a tailored schedule to get them started – explain the risks</li> <li>• Offer another appointment when ready or attendance at a specialist immunisation clinic</li> </ul>



been shown to reduce decisional conflict.<sup>35</sup> Actual numbers of cases of specific diseases, such as pertussis, by age group and year can be given to parents by accessing the *National Notifiable Disease Surveillance* database so that they can better appreciate the risk to their child. For parents who decline all vaccines, a selective schedule may be offered to get them started, but full uptake of vaccines should be encouraged. For these parents, accepting some vaccines may be a reasonable goal when the alternative is no vaccines. If the parents' needs cannot be met or the practitioner does not have the time or inclination to discuss their concerns further, referral to a specialist immunisation clinic may be considered. However, GPs can and should be strong advocates for immunisation and may wish to adopt an advocacy role in the community to further address parental questions and concerns.

### Other measures that promote vaccination

Government measures that aim to encourage and promote immunisation have been shown to be highly effective contributors to coverage.<sup>36</sup> These measures include the Family Tax Benefit part A (FTB-A), paid to eligible families whose children are fully immunised at 1, 2 and 4 years, and the childcare benefit for eligible families accessing approved or registered childcare. Childcare and school entry certification requirements also serve to promote vaccination where access or timeliness issues are the main reason for under-vaccination. All of the above measures include provisions for medical or personal belief exemptions, conditional upon parents submitting a document signed by them and a provider.

### Summary

In order to effectively address vaccine hesitancy in the Australian context, at a time when concerns about vaccines and their safety predominate over concerns about the risk of the vaccine-preventable diseases, it is clear that effective communication strategies for healthcare providers to undertake discussions with vaccine-hesitant families are the way forward. These discussions can occur in both the primary and secondary care setting along the continuum of parental vaccine decision-making, from the prenatal to the postnatal period and beyond.

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**Table 3. Suggested useful resources to support vaccine discussions**

Resources	Suggestions
Disease surveillance data	National Notifiable Disease Surveillance database (NNDSS), <a href="http://www9.health.gov.au/cda/source/cda-index.cfm">www9.health.gov.au/cda/source/cda-index.cfm</a>
Fact sheets	<ul style="list-style-type: none"> <li>National Centre for Immunisation Research and Surveillance (NCIRS) <a href="http://www.ncirs.edu.au">www.ncirs.edu.au</a></li> <li>Children's Hospital of Philadelphia, USA (CHOP) <a href="http://www.chop.edu/service/vaccine-education-center/home.html">www.chop.edu/service/vaccine-education-center/home.html</a></li> <li>Department of Health <a href="http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/resources-menu">www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/resources-menu</a></li> <li>Better Health Channel <a href="http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/hl_immunisation">www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/hl_immunisation</a></li> <li>Immunisation handbook <a href="http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home">www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home</a></li> </ul>
Decision aids	<ul style="list-style-type: none"> <li>National Centre for Immunisation Research and Surveillance MMR vaccine decision aid, <a href="http://www.ncirs.edu.au/immunisation/education/mmr-decision/index.php">www.ncirs.edu.au/immunisation/education/mmr-decision/index.php</a></li> </ul>
Videos	<ul style="list-style-type: none"> <li>Children's Hospital of Philadelphia (CHOP), <a href="http://www.chop.edu">www.chop.edu</a></li> </ul>
Websites	<ul style="list-style-type: none"> <li>Melbourne Vaccine Education Centre (MVEC), <a href="http://www.mvec.vic.edu.au">www.mvec.vic.edu.au</a></li> <li>National Centre for Immunisation Research and Surveillance, <a href="http://www.ncirs.edu.au">www.ncirs.edu.au</a></li> <li>Children's Hospital of Philadelphia (CHOP), <a href="http://www.chop.edu/service/vaccine-education-center/home.html">www.chop.edu/service/vaccine-education-center/home.html</a></li> <li>Oxford Vaccine Group, <a href="http://www.ovg.ox.ac.uk/vaccine-knowledge-home">www.ovg.ox.ac.uk/vaccine-knowledge-home</a>,</li> <li>ImmuniseBC (British Columbia, Canada), <a href="http://www.immunizebc.ca">www.immunizebc.ca</a></li> </ul>



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