MMC CVU
Approaches to vaccine hesitant families

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Outline

• What is vaccine hesitancy?
• Vaccine coverage rates
• Parents concerns and what influences their decision making
• Vaccine communication – the VCF
• Vaccination uptake by vaccine hesitant parents following specialist immunisation clinic
• New strategies to target vaccine confidence: the Victorian Vaccine Education and Communication Program for Paediatricians and other HCPs
Vaccine hesitancy

• Issues around trust, confidence and hesitancy towards vaccines are of global interest
• It is clear that parental concerns increasing
  • VPDs less common
  • Vaccine schedules becoming more complex
  • More access to information through the internet and social media
• Concern about safety and necessity of vaccines
• Need to address both ACCESS and ACCEPTANCE
### National Vaccine Coverage Rates – June 2014

<table>
<thead>
<tr>
<th>Age (Months)</th>
<th>Sep 2011</th>
<th>Sep 2012</th>
<th>Sep 2013</th>
<th>Mar 2014</th>
<th>June 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-15</td>
<td>92.06</td>
<td>91.80</td>
<td>90.90</td>
<td><strong>89.90</strong></td>
<td>90.41</td>
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<tr>
<td>Indigenous</td>
<td>85.92</td>
<td>85.37</td>
<td>86.50</td>
<td>86.20</td>
<td>86.26</td>
</tr>
<tr>
<td>24-&lt;27</td>
<td>92.84</td>
<td>92.78</td>
<td>92.30</td>
<td>92.30</td>
<td>92.35</td>
</tr>
<tr>
<td>Indigenous</td>
<td>92.66</td>
<td>91.91</td>
<td>92.30</td>
<td>92.20</td>
<td>92.27</td>
</tr>
<tr>
<td>60-&lt;63</td>
<td>89.26</td>
<td>90.68</td>
<td>92.10</td>
<td><strong>91.90</strong></td>
<td>91.95</td>
</tr>
<tr>
<td>Indigenous</td>
<td>85.52</td>
<td>89.87</td>
<td>93.00</td>
<td>92.90</td>
<td>92.99</td>
</tr>
</tbody>
</table>

For the first time since 2000, coverage in the 12-15 month age group was < 90% in March, now back just above 90%
- Lower coverage in high SES and inner city areas
- Still < 90% for NSW and TAS

SOURCE: Australian Childhood Immunisation Register
Parents concerns – Jabbed survey

• Top concerns:
  • Distress to child from injection – 31%
  • Increasing number of vaccines – 25%
  • Vaccines not tested enough for safety – 23%
  • Too many vaccines in the first 2 years of life – 22%
  • Child’s immune system weakened by vaccines – 22%
  • Vaccines can cause autism – 21%

• Parents not too concerned with herd immunity
  • Vaccinate to protect their child – 78%
  • Vaccinate to protect the wider community – 40%

NCIRS, SBS, Genepool 2012
Sources of information

• Top sources of vaccine information
  • GP/family doctor – 80%
  • Government or health authorities – 28%
  • Internet – 28%
  • Medical brochures – 25%
  • Immunisation nurses – 20%
  • Friends, family – 20%
Communicating with parents about vaccination

• Previous recommendations for health practitioners have focused on the “What” is said not the “How”
  • Cochrane and systematic review – clear new approaches needed  Sadaf Vaccine 2013; Kaufman Cochrane Review 2013
  • Essential to introduce communication processes into the encounter that build rapport and trust
  • Attempts to persuade or simply provide more information often fail or backfire
    • Nyhan B Pediatriucs:133(4)April 2014
• Role of HCP vital - provider beliefs may contribute to parental decisions to accept, delay or forgo vaccinations
  • Mergler M Vaccine 2013
Parent Orientations

15% refuse, delay or have significant concerns

Decliners
Refuse all vaccines

Late / Selective
Cherry pick Seek out information High knowledge on vaccines

Hesitant
Will vaccinate Have significant concerns Focussed on vaccine risk

Cautious Acceptors
Vaccinate despite minor concerns “Hope and pray” nothing goes wrong

Unquestioning Acceptors
No questions or concerns Less detailed knowledge on vaccination

Never did, or no longer vaccinate 2-3%

Vaccinate Partially 6%

May adopt a selective schedule 6%

Vaccinate Fully

Leask et al, BMC Pediatrics 2012
Strategies

- **Determine Parent Position**
  - **Accepting**
    - Valid consent
      - Fully vaccinated
  - **Hesitant**
    - Some/all vaccines
      - Parent is satisfied
  - **Declining**
    - Re/consider decision
      - Aware of risks
      - Door open

Identify parental position and tailor communication style accordingly

Goals vary according to position

Establish rapport and build trust

Leask et al, BMC Pediatrics 2012
Hesitant parents

Suggested strategies:

• Spend adequate time with child and parent
• Ask permission to discuss concerns
• Carefully elicit concerns and try to address each one specifically
• Accept concerns and try not to minimise or dismiss them
• Use a guiding style
• Discuss disease and vaccine risks as well as vaccine benefits
• Communicate risks with words and numbers or even simple graphics

Danchin M, Nolan T, Aust Family Physician 2014
Hesitant parents

Suggested strategies:

• Support discussions with downloadable resources
• Avoid trying to overwhelm with detailed scientific information
• Offer another appointment if needed or attendance at a specialist immunisation clinic

Danchin M, Nolan T, Aust Family Physician 2014
Refusers

Suggested strategies:

• Ask permission to discuss
• Aim to keep discussion brief but leaving the door open
• Check importance of vaccines and confidence
• Don’t dismiss concerns – acknowledge
• Don’t overstate vaccine safety
• Challenging firmly held philosophical, religious or scientific beliefs unhelpful

Danchin M, Nolan T, Aust Family Physician 2014
Refusers

Suggested strategies:

• Avoid overt confrontation and scientific ping pong
• Provide links to resources if wanted
• Explore receptivity to a tailored schedule to get them started – explain the risks
• Offer another appointment when ready or attendance at a specialist immunisation clinic

Danchin M, Nolan T, Aust Family Physician 2014
Resources to support conversations

- Need both general and vaccine specific resources
  - Easy to understand, links for more detail
  - Not yet available in Australia
- Paper and video resources
  - Health literacy ie short 3 minute videos
  - Age specific time points
- Option grids and decision aids
- Provide information on:
  - Risks vs benefits of vaccines and interpreting risk
  - How to manage AEFI’s.seek advice
### Table 3. Suggested useful resources to support vaccine discussions

<table>
<thead>
<tr>
<th>Resources</th>
<th>Suggestions</th>
</tr>
</thead>
</table>
| Fact sheets       | • National Centre for Immunisation Research and Surveillance (NCIRS) [www.ncirs.edu.au](http://www.ncirs.edu.au)  
                   | • Children’s Hospital of Philadelphia, USA (CHOP) [www.chop.edu/service/vaccine-education-center/home.html](http://www.chop.edu/service/vaccine-education-center/home.html)  
| Videos            | • Children’s Hospital of Philadelphia (CHOP), [www.chop.edu](http://www.chop.edu) |
| Websites          | • Melbourne Vaccine Education Centre (MVEC), [www.mvec.vic.edu.au](http://www.mvec.vic.edu.au)  
                   | • National Centre for Immunisation Research and Surveillance, [www.ncirs.edu.au](http://www.ncirs.edu.au)  
                   | • Children’s Hospital of Philadelphia (CHOP), [www.chop.edu/service/vaccine-education-center/home.html](http://www.chop.edu/service/vaccine-education-center/home.html)  
                   | • Oxford Vaccine Group, [www.ovg.ox.ac.uk/vaccine-knowledge-home](http://www.ovg.ox.ac.uk/vaccine-knowledge-home)  
                   | • ImmuniseBC (British Columbia, Canada), [www.immunizebc.ca](http://www.immunizebc.ca) |
**MMR vaccine decision aid**

[www.ncirs.edu.au](http://www.ncirs.edu.au)

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### MMR Decision Aid

**Are you considering MMR vaccination for your child?**

**Would you like more information?**

This decision aid has been designed to help you decide whether the mumps-rubella (MMR) vaccine is right for your child.

This decision aid is for you if:

- You are the parent or caregiver of a child approaching their due date for vaccination.
- You want more information about MMR vaccination.

Using this decision aid will help you:

- Learn about measles, mumps and rubella diseases.
- Learn about the possible benefits and possible harms of MMR vaccination.
- Clarify what is important to you in making a decision about MMR vaccination.
- Make a decision about whether to vaccinate your child.

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### Potential risks in a group of 100 children under 5 years of age who get measles

Most children will have the common and usually mild **(in green)** symptoms of measles e.g. fever, cough, runny nose, red, painful eyes, rash. Some may have more than one of these symptoms at the same time.

- **26 in 100** may have moderate **(in yellow)** symptoms
  - 12 may have diarrhoea
  - 14 may get an ear infection

### Potential risks in a group of 100 children who have the MMR vaccine

Most will have common and usually mild **(in green)** symptoms of the MMR vaccine e.g. pain or swelling at the injection site, joint pain and stiffness. Some may have more than one of these symptoms at the same time.

- **14 in 100** may have moderate **(in yellow)** symptoms
  - 4 may have high fever
  - 4 may be irritable
  - 1 may have swelling of salivary glands
  - 5 may have a non-infectious faint red rash
How are we doing?

Audit: Vaccination uptake by vaccine hesitant parents following specialist immunisation clinic

Thomas Forbes, Alissa McMinn, Margie Danchin

- Specialist Immunisation Advisory Clinic (SAEFVIC) clinic at RCH Melbourne
- **Aim:** document vaccination outcomes for vaccine hesitant families following clinic consultation
Methods

• Retrospective cohort study of children refereed to Immunisation clinic
  • VH cohort (n=38)
    • No chronic medical illness or AEFI
  • Age matched to AEFI cohort (n=38)

• Vaccine uptake post clinic attendance ascertained by linkage to ACIR records/GP vaccination record
  • mean follow up 14.5 months (VH) vs 16.6 months (AEFI)
# Results

<table>
<thead>
<tr>
<th></th>
<th>VH Cohort n(%)</th>
<th>AEFI Cohort n(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Gender n(%)</td>
<td>20 (52.6)</td>
<td>17 (44.7)</td>
</tr>
<tr>
<td>Referral Source n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP</td>
<td>28 (73.7)</td>
<td>32 (84.2)</td>
</tr>
<tr>
<td>Paediatrician</td>
<td>8 (21.1)</td>
<td>3 (7.9)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (5.3)</td>
<td>1 (2.6)</td>
</tr>
<tr>
<td>First Born n(%)</td>
<td>26 (68.4)</td>
<td>11 (52.4)</td>
</tr>
<tr>
<td>Prior vaccine preventable disease n(%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in child</td>
<td>11 (28.9)</td>
<td>2 (5.3)</td>
</tr>
<tr>
<td>in family member</td>
<td>8 (21.1)</td>
<td>1 (2.6)</td>
</tr>
<tr>
<td>Prior AEFI in family member</td>
<td>12 (31.6)</td>
<td>4 (10.5)</td>
</tr>
</tbody>
</table>
Classification and concerns of VH parents

<table>
<thead>
<tr>
<th>VH Category</th>
<th>N=38 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccine hesitant</td>
<td>13 (34.2%)</td>
</tr>
<tr>
<td>Late/Selective vaccinators</td>
<td>21 (55.3%)</td>
</tr>
<tr>
<td>Refusers</td>
<td>4 (10.5%)</td>
</tr>
</tbody>
</table>

Vaccine concerns:
- side effects of vaccines (57.9%)
- concerns about links with developmental disorders (39.5%)
- overloading the child’s immune system (23.7%)
- a feeling the child was too young (15.8%)
- concern regarding vaccine ingredients (5.3%)
- preference for complimentary therapies (5.3%)
- a feeling that vaccines were not effective (2.6%)
- a preference to rely on community herd immunity (2.6%).
Vaccine Uptake at Follow Up

Vaccine Hesitant Cohort (VH) vs Adverse Event (AEFI) Cohort

- Full immunisation lower in hesitant group compared to AEFI group ($p < 0.001$)
Vaccine Uptake at Follow Up

Vaccine Hesitant (VH) Cohort:

- most hesitant parents (47.3%) adopted a selective schedule post clinic attendance
- significant increase in selective vaccination

* $p = 0.01$
Vaccine Uptake at Follow Up

- All vaccine refusing families remained unimmunised
- 56% of hesitant families proceeded with full schedule

Definitions from Leask, BMC Pediatrics 2012
Omitted Antigens

• most frequently omitted vaccines included Hib (56%), Hep B (65%), MMR (53%) and meningococcal (53%)
• Men C low due to co-administration with MMR
Conclusions

• VH families most likely to be vaccinating their first child
• Many prompted to seek information based on VPD in the child or family or family history of AEFI
• Most are already selectively vaccinating on arrival at clinic
• Strength and quality of the concern is greater in vaccine hesitant families than for AEFI families
  • Validates Leask definitions and need for tailored communication approach
  • High uptake amongst AEFI families
  • No vaccine refusers gave a vaccine
• Selective vaccination remains most common outcome
  • are we too permissive of selective vaccination?
  • Safety not tested
• Men C omitted frequently when MMR ommitted
Victorian Vaccine Hesitancy Program

Program includes:

1. **Survey to quantify parental vaccination concerns, attitudes and beliefs**
   - **Hospital:** parents of children less than 5 years of age, attending general paediatric outpatient clinics in a tertiary paediatric hospital
   - **Antenatal:** mothers attending clinic
   - **Post-natal:** mothers attending mothers group 6-8 weeks
   - Ascertain vaccine decision making over time
Vaccine Education and Communication program for Paediatricians

2. National survey of paediatricians in Australia and NZ through the Australian Paediatric Research Network to quantify their contact with VH parents and to measure willingness to participate in online training.

3. Develop an online vaccine education and communication training program for paediatricians and all HCPs.
Online Vaccine Education and Communication program for Paediatricians

- **Aims to:**
  - Update paediatricians and other HCPs knowledge of the NIP schedule
    - Vaccine specific advice, new changes
  - Introduce them to the Vaccine communication framework (VCF) and be able to identify parental positions and tailor their approach
  - Use linked, point-of-care parent downloadable resources
  - Also offer webinars
New strategies to target vaccine confidence

• Immunisation discussions: both primary and secondary care

• Primary care: GPs or community nurses/health centres in each state
  • National working group led by A/prof Julie Leask to develop a program for primary health care providers to be embedded into everyday practice

• Secondary care: Paediatricians:
  • under-utilized workforce but need up skilling
  • 1200 paediatricians in Australia: longer consultation times (30-40 minutes) compared to GPs (10-15 minutes)
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