A needs analysis of catch-up immunisation in refugee background and asylum seeker communities in Victoria

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Project Objectives & Methodology

Purpose
• To examine catch-up immunisation for people of refugee background in Victoria and explore effective models of service delivery to deliver complete catch-up immunisation.

Methodology
• A variety of data sources were used to develop this needs analysis
• Qualitative phone & face-to-face stakeholder interviews
• Survey of refugee health nurses
• Specialist review of the final report
Refugee communities – why they are at risk

Before arrival

- Vaccine preventable diseases are endemic and/or epidemic in many countries of origin and asylum
- Differences in country of origin schedules
- Disruption of health services
- Vaccine quality

After arrival

- Difficulty of assessment
- Complexity of catch-up
- Gaps in vaccine funding
- Difficulty accessing & navigating the health system
- Higher levels of susceptibility & ongoing risk of transmission
### Table 6: Comparison of immunisation schedules: Australia and humanitarian source countries (WHO 2014)

Immunisations shown are the national schedules – specific vaccines for risk groups are not included. The orange squares represent a gap compared to the Australian NIP. Table includes refugee source and countries of asylum.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Australia</th>
<th>Iraq</th>
<th>Afghanistan</th>
<th>Burma</th>
<th>Iran</th>
<th>Bhutan</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
<th>Thailand</th>
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</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>DTPa</td>
<td>DTwP</td>
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<tr>
<td>Tetanus</td>
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<tr>
<td>Polio</td>
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<td>Hep B</td>
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<tr>
<td>Pneumococcal</td>
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<td>Pn conj</td>
<td>Pn conj&lt;sup&gt;8/13&lt;/sup&gt;</td>
<td>Pn conj</td>
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<td>Mumps</td>
<td>MMR / MMR</td>
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</tbody>
</table>

#### Missing compared to Australian schedule
- MenC
- VV
- HPV
- Rotavirus
- Pneum
- Mumps
- Rubella
- Varicella
- HPV

#### Additional compared to Australian schedule
- BCG
- JE

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Additional compared to Australian schedule
- BCG
- JE
- BCG
- JE
- BCG
- JE
- BCG
- JE
Low immunisation coverage

- No population data available for immunisation coverage in refugee or asylum seeker Victorians
- CGD report to DH: May-June 2013, only 6% fully immunised
- Triage data

Studies – incomplete immunisation

- 98% for Asian & African refugees attending screening in Darwin in 2009 (Johnson, 2011)
- Over 90% of children & 50% of adolescents in a study of 259 African refugees attending primary care in Melbourne (Tiong, 2006)
Gaps in vaccine funding

Gaps & cost

- Hepatitis B
- Meningococcal C
- Varicella
- HPV
- Fully immunising an adolescent child according to the NIP is around $725.

Future issues

Emerging gaps in the availability of vaccines & additional doses:

- Meningococcal vaccine
- Hepatitis B vaccine
- Hib vaccine
- $7 co-payment
<table>
<thead>
<tr>
<th>Vaccine type</th>
<th>Age Number of doses</th>
<th>Funding eligibility</th>
<th>Year introduced Victoria/retrospective catch-up if relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria Tetanus Pertussis (DTP)</td>
<td>&lt; 10 years (4 doses)</td>
<td>Infanrix hexa® funded for catch-up to 9 years of age (inclusive). Infanrix IPV® funded for catch-up single dose from 4 years</td>
<td>1953</td>
</tr>
<tr>
<td></td>
<td>10 years and older (3 doses)</td>
<td>ADT Booster® funded for 10 years of age and over for a primary course for an Indigenous/refugee/assembly seeker person. Boostrix® funded for 10 years of age and over for an Indigenous/refugee/assembly seeker person as a single dose as part of the 3 dose dT primary course.</td>
<td></td>
</tr>
<tr>
<td>Measles, Mumps, Rubella (MMR)</td>
<td>&lt; 10 years (2 doses)</td>
<td>MMR II®/Priorix® funded for catch-up from 13 months to 9 years of age (inclusive). Priorix®-Tetra® funded for catch-up single dose from 19 months to 9 years of age (inclusive) but not used as first dose age &lt; 4 years</td>
<td>1969 Measles 1971 Rubella 1981 Mumps 1989 MMR</td>
</tr>
<tr>
<td>Inactivated Poliomyelitis Vaccine(IPV)</td>
<td>Any (3 doses)</td>
<td>IPOL® funded for Indigenous/refugee/asylum seeker person from 10 years of age for a primary course. Infanrix-IPV® funded for catch-up single dose from 4 years and 1 month to 9 years of age (inclusive)</td>
<td>1956</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>&lt; 10 years (3 doses)</td>
<td>Infanrix-hexa® funded for catch-up to 9 years of age (inclusive). HB-VaxII-Paed® funded for catch-up to 9 years of age (inclusive)</td>
<td>2000 - infant immunisation 2001 - Year 7 immunisation, ceased and 2013</td>
</tr>
<tr>
<td></td>
<td>11 - 15 years (2 or 3 doses depending on schedule)</td>
<td>EngerixB® funded for household contacts or sexual partners of people living with hepatitis B infection (not specified if both paediatric and adult formulation)</td>
<td>Victorians born 1989 onwards have had access</td>
</tr>
<tr>
<td></td>
<td>&gt; 16 years (3 doses)</td>
<td>Hepatitis B not funded for children &gt; 9 years.</td>
<td></td>
</tr>
<tr>
<td>Meningococcal C</td>
<td>&lt; 10 years (1 dose)</td>
<td>Menitorix® funded for catch-up single dose from 13 months to 9 years of age (inclusive).</td>
<td>2003 – immunisation at 12m 2003 – 2006 catch-up 1-19 years Victorians born 1987 onwards have had access</td>
</tr>
<tr>
<td></td>
<td>10 years and older (1 dose)</td>
<td>Meningococcal vaccine not funded for children &gt; 9 years. Menitorix® not licensed for use in older children</td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>2 – 11 months (2 or 3 doses depending on vaccine type)</td>
<td>Infanrix hexa® funded for catch-up to 9 years of age (inclusive). Menitorix® funded for catch-up single dose from 13 months to 9 years of age (inclusive)</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>12 – 59 months (1 dose + booster)</td>
<td>Prevenar 13® funded for catch-up if less than 5 years of age.</td>
<td></td>
</tr>
<tr>
<td>13-valent Pneumococcal conjugate vaccine (13vPCV)</td>
<td>&lt; 7 months (3 doses)</td>
<td>Prevenar 13® funded for catch-up if less than 5 years of age.</td>
<td>2005 – infant immunisation, catch-up program at the time for children born 2003 -2004</td>
</tr>
<tr>
<td></td>
<td>7 – 11 months (2 doses)</td>
<td>Prevenar 13® funded for catch-up if less than 5 years of age.</td>
<td></td>
</tr>
<tr>
<td>Varicella vaccine (VV)</td>
<td>18m – 13 years (1 dose)</td>
<td>Varilrix®/Varivax® funded for catch-up single dose to 9 years of age (inclusive). Given Year 7 in the secondary school or at 12 to 13 years of age outside of school</td>
<td>2005 – immunisation at 18m and catch-up for year 7 Victorians born 1993 onwards have had access</td>
</tr>
<tr>
<td></td>
<td>14 years and older (2 doses)</td>
<td>Varilrix®/Varivax® funded for catch-up single dose to 9 years of age (inclusive). Given Year 7 in the secondary school or at 12 to 13 years of age outside of school</td>
<td></td>
</tr>
<tr>
<td>Human Papilloma Virus (HPV)</td>
<td>9 – 18 years (3 doses)</td>
<td>Gardasil® funded for Year 7 in the secondary school program or 12 to 13 years of age outside of school. Gardasil® funded for Year 9 boys in the secondary school program or 14 to 15 years of age outside of school - time-limited 2013 and 2014 HPV not funded for females &gt; 13 years and males &gt; 15 years</td>
<td>2007 – immunisation for females 13 – 26 years Victorian females born 1981 onwards and males born 1999 onwards have had access</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>&lt; 6 months (3 doses)</td>
<td>Rota Teq® funded for primary course - strict timing prohibits most catch-up.</td>
<td>2007</td>
</tr>
<tr>
<td>Bacillus Calmette Guerin (BCG)</td>
<td>Not part of NIPS (1 dose)</td>
<td>School based BCG ceased 1984/5</td>
<td></td>
</tr>
</tbody>
</table>
Service delivery

% of immunisations by provider type

State/Territory

ACT  NSW  NT  QLD  SA  TAS  VIC  WA  AUST

General practitioner  Local government clinic  Hospital  Indigenous health service  Community health centre  Other
Local Government

“to seek to protect, improve and promote public health and wellbeing within the municipal district by- co-ordinating and providing immunisation services to children living or being educated within the municipal district”.

• Public session
• Adolescent program
• ELS

Consideration of funding and human resource allocations
Different approaches for ELS

City of Hume (Collingwood ELS & Hume Central ELC)
- Catch-up vaccinations offered to those receiving adolescent program
- Students provided with vaccine cards at immunisation session, including dates for follow-up doses
- Sends letter to parents to follow-up on completion

CGD NPELS
- Catch-up for all students
- Information & consent forms at enrolment
- Follow-up information sessions for parents
- CGD nurse immunisers work out schedule & try to coordinate with others
- Vaccine cards provided with dates/info for follow-up doses
- LGA tracks students that transition within LGA
Different approaches contd.

City of Maribyrnong (WELS)

- Request past vaccination records as part of enrolment
- Circulates info about immunisation session closer to the time
- Employ a sessional nurse immuniser – schedule, consent, coordination

City of Maroondah (BELS)

- Circulates immunisation info & consent forms 2 weeks before session
- Coordinates well with EACH to prevent over – immunisation
- CC quality management process for immunisation program is ISO accredited
# Assessment of the model

## Strengths
- Large numbers of students requiring catch-up in one location
- MEA able to assist with providing information
- Potential to gain consent for immunisation at enrolment or information sessions

## Challenges
- Only address immunisation for school-aged children
- Potential for over or under immunisation
- LGAs do not have GP information
- Course not completed at ELS
- Access to translated materials
Primary Care

Challenges
- Solo GPs without a practice nurse
- Time constraints
- Up-to-date knowledge
- Unfunded vaccines
- Reduced incentives
- Future co-payments
- Variable approach by RHNs and hospitals

Strengths
- Able to provide catch up to whole family
- Role of practice nurses
- Able to provided within the context of refugee health assessment
Immunisation surveillance & data collection

Registers, Records & Systems

- ACIR
- HPV
- ImPS
- Immunisation Central
- Patient held
- PCEHR

Issues

- Lack of written documentation
- Variety of registers or systems
- None of the registers record information on refugee indicators
- No identification of catch-up immunisation
- No linkage between registers
Professional development & support

• Need for a review and further development of clinical decision-making tools and professional development opportunities
• Practical, easy to follow and utilise guidelines
• Immunisation calculator
## Catch-up plan/record for all ages

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum dosing intervals</th>
<th>Subsequent</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DT (P) containing IM</strong></td>
<td></td>
<td></td>
<td><strong>See note</strong> Age &lt; 10y - booster 6m after primary course or at age 3.5 – 4y, usually given as combination vaccine – see below – for Hep B need 2m between dose 2 &amp; 3 Age 10 and older – dTpa then ADT®, ADT®, then booster after 10 y</td>
</tr>
<tr>
<td><strong>IPV IM or SC</strong></td>
<td></td>
<td></td>
<td><strong>SC</strong> if given as IPV only, IM in combination vaccines</td>
</tr>
<tr>
<td><strong>Hepatitis B IM</strong></td>
<td></td>
<td></td>
<td>Age 11 – 15y - can be given as alternate 2 dose schedule (adult dose), with 4 m interval. Paediatric dose 0.5ml (0 – 19y), adult dose 1ml (20 y +)</td>
</tr>
<tr>
<td><strong>Hib IM</strong></td>
<td></td>
<td></td>
<td>Only &lt; 5y, dosing varies, 2 – 11m: 2 or 3 doses then booster, 1 – 5y: 1 dose then booster, interval varies. Children &lt; 10y get extra doses due to combination vaccines (see below)</td>
</tr>
<tr>
<td><strong>13vPCV IM</strong></td>
<td></td>
<td></td>
<td>Only &lt; 5y. Dosing varies, &lt; 7m 3 doses, 7 – 11m 2 doses, 1 – 5 yrs 1 dose, minimum interval 1m</td>
</tr>
<tr>
<td><strong>MMR IM</strong></td>
<td></td>
<td></td>
<td>Born after 1966 Now available as MMR-V, see below</td>
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<tr>
<td><strong>MMR-V SC</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Varicella SC</strong></td>
<td></td>
<td></td>
<td>&lt; 14 one dose, now available as MMR-V, see below Age 14 and older, born after 1992 - 2 doses</td>
</tr>
<tr>
<td><strong>MenC IM</strong></td>
<td></td>
<td></td>
<td>Age &lt; 10 years, see below</td>
</tr>
<tr>
<td><strong>HPV IM</strong></td>
<td></td>
<td></td>
<td>+ 4 months Age 12 – 15 years, born after 1981 (females) and after 1999 (males)</td>
</tr>
</tbody>
</table>

### Combination vaccines – use where possible
- Infanrixhexa® – DTP-IPV-Hib-Hep B – age < 10 years (IM)
- DTPa-IPV
- MMR-V – age < 14 years, not used as first dose MMR age < 4 years (SC)
- MenC-Hib – if possible not with Infanrixhexa®, OK with DTP-IPV, HBV instead

### Other notes
- Offshore entrants may have MMR and YF – wait 1m before other vaccines
- Do not give TST within 4 weeks of live viral vaccines (inc. DHC vaccines)
- Rotavirus not usually catch-up – has to be given before 13 – 15 weeks
- Consider BCG in age < 16 yrs if not given – needs negative TST first
- All 0.5 ml dose except adult HBV vaccine, also used for adolescent catch-up
Conclusions

• Almost all refugees require catch-up immunisation on arrival
• Catch-up immunisation challenging for providers and for people of refugee background
• Immunisation policy across 3 levels of Government
• Strengths & limitations with service delivery models
• Current numbers mean there is a need to strengthen both LGA & general practice delivery
• Data
Recommendations - overview

The needs analysis makes 42 recommendations across 8 areas:

• Victorian advocacy for national policy
• Victorian policy
• Vaccine funding
• Vaccine administrative arrangements
Recommendations - overview

• Service delivery
  – Local government
  – General practice
• Immunisation register
• Professional development  clinical guidance
• Patient health information & community engagement
Summary of key recommendations

• Commonwealth funding for catch-up to recognise new arrivals
• Surveillance data – range of options canvassed
• Vaccine record – hand held & electronic
Summary of key recommendations

• Information for families about immunisation delivery in Victoria
• Guidelines & capacity building/support for General Practice
• Guidelines for LGAs and consider further development/piloting of catch-up programs in select ELS
“Vaccination is very important. We have to always maintain vaccination for every whatever. Vaccination is coming – we have not to miss it and follow…the doctor’s appointment.”

South Sudanese focus group, 2007