Health Needs of Refugee Children in New Zealand

By Dr Santuri Rungan
(Pediatric Fellow at Starship Children’s Hospital)

Co-Authors:
Dr Lesley Voss
Dr Martin Reeve
Dr Peter Reed
New Zealand

- NZ Population: 4.4 million
- 750 UNHCR refugees per year
  - 75 women at risk
  - 75 medical conditions or disabilities
  - 600 in urgent need of protection
- 200-300 asylum seekers
New Zealand

Mangere Refugee Resettlement Centre (MRRC):

- Auckland
- Groups of 130 people
- Stay for 6 weeks

- Collection of agencies:
  - Medical screening
  - Immigration
  - Education
  - Language
  - Welfare
  - Counseling
Pediatric Refugees

- Highly vulnerable and often traumatized
- Complex medical and psychological needs
- Screening identifies health needs of asymptomatic children
Aim

Review outcomes of health screening in under 5 year olds between 2007 to 2011

1. Infectious Diseases:
   - Tuberculosis
   - Parasites
   - Vaccine-preventable diseases
   - Hepatitis B and C
   - HIV
   - Syphilis

2. Non-infectious Diseases:
   - Iron deficiency
   - Vitamin D deficiency
   - Hemoglobinopathy
Methods

• **Retrospective audit:**
  – Outcomes of screening and referrals:
    • computerized patient management system:
      – MedTech
      – Concerto/CRIS
  
  – Documentation of:
    • complete vaccination certificates
    • developmental screening
    • need for an interpreter

  – Data Analysis:
    • Microsoft Excel
    • JMP V10 (SAS Institute Inc.)
Results

a) Demographics
b) Infectious Diseases
c) Non-infectious Diseases
d) Referrals
e) Conclusions
a) Demographics

- 343 children under 5 years (10% of total)
- Females (51%) and males (49%)
a) Demographics

- Mainly Asia (53%)
- 96% required interpreter
b) Infectious Diseases

• **Tuberculosis:**
  – Tuberculin skin test (TST):
    • TST > 5mm (no BCG), or > 9mm (with BCG)
    ⇒ referral pediatric TB clinic
  – Latent TB infection (LTBI): 15% (n=51)
  – No active TB

  – TB reactivation common in first 5 years after migration

  – No association between Vitamin D deficiency and LTBI (p-value 0.78)
b) Infectious Diseases

• **Parasites:**
  – Fecal samples (3x): 11% positive (giardia (58%))
  – Schistosomiasis serology positive: 4%

• **Other:**
  – Hepatitis B carriers (1%)
  – Hepatitis C carriers (0.6%)
  – No HIV or syphilis
b) Infectious Diseases

• **Vaccine-preventable diseases:**
  – 50% immune to rubella and measles
    • Lower than reported elsewhere
    • No pre-departure MMR
  – 2/3 immune to hepatitis B
  – At risk e.g. hepatitis A, VZV

• **Documentation/verbal recounts unreliable:**
  – 66% complete vaccination certificate
  – 73% required vaccinations
  – Currently NZ vaccination schedule re-started
Tests to Consider

1) Giardia
   - Direct microscopy used
     • Consider direct immunoassays

2) Malaria
   - No mosquito vector in NZ
   - 36 cases in Auckland over a year (Camburn A, E., et al. NZMJ 2012)
     • 11 were refugees
   - 1 in our study

3) Helicobacter pylori
   - Serology or immunoassays
   - Guidelines yet to be established
   - Symptomatic colonization uncommon
   - Symptomatic children:
     • either method +/- referral
c) Non-Infectious Diseases

• Iron deficiency = 33%
  – NZ children (13%-23%)
  – Iron essential for immune function

  – Low ferritin as marker
    • reticulocyte hemoglobin content instead
      – routinely measured in full blood counts
c) Non-Infectious Diseases

<table>
<thead>
<tr>
<th>Condition</th>
<th>Range</th>
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<tbody>
<tr>
<td>Sufficiency</td>
<td>50-230nmol/L</td>
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<tr>
<td>Mild Deficiency</td>
<td>26 - 50nmol/L</td>
</tr>
<tr>
<td>Moderate Deficiency</td>
<td>12.5 – 25nmol/L</td>
</tr>
<tr>
<td>Severe Deficiency</td>
<td>&lt;12.5nmol/L</td>
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- **Vitamin D deficiency:** 15% (n = 41)
  - Mild deficiency (n = 34, 83%)
  - Moderate deficiency (n = 7, 17%)

- **Current NZ guidelines** *(Paxton G, A et al. Medical Journal of Australia 2013):*
  - Screen those with risk factors
  - Treatment: daily or intermittent supplement
  - Compliance problems:
    - appropriate education and interpreters
d) Referrals

- 58% requiring referral:
  - 37% to primary care services (community-based):
    - 50% health support services
    - 21% developmental services
    - 14% primary care physician
  - 63% to secondary care services (hospital-based):
    - 16 services consulted:
      - TB clinic (33%), pediatric surgery (10%), pediatrician (9%)
      - 51% required ongoing follow up
  - > 1 referral needed by 19% (n = 65)
e) Conclusions

- **Current screening appropriate**
  - Small defined population in a single center setting
  - Opportunity to optimize health
  - Minimize transmission of infectious diseases
  - Provide continuity of care

- **Screening needs regular review**

- **Proportion requiring more intensive support**
  - adequately resourced, comprehensive pediatric and family-centered refugee service in NZ
References


The End