Asthma Clinics for Children in General Practice
Outline:

• Why start an asthma clinic?
  • The Equity Issue

• What to do?

• What did we roll out?

• What happened?

• What worked and what did not?
Manurewa’s Population

- 27% One parent families
- 25.3% indigenous Māori (NZ 14.9%)
- 33% Pacific peoples (NZ 7.4%)
- 27% 0-14 years

Statistics New Zealand 2013. 2013 Census data: QuickStats about Manurewa Local Board

CMDHB, 2011
Why start an asthma clinic?

- Subjective reports from General Practitioners
- Audit data from 2013
- Nurse Practitioner and child health champion
- Cases of Amy and Mary
- An equity issue
The Equity Issue:

- Prevalence rates higher in Maori
- Hospitalisation rates higher among Maori and Pacific children
- Perhaps higher rates of severe asthma symptoms cause for increased morbidity

<table>
<thead>
<tr>
<th></th>
<th>Maori</th>
<th>Pacific</th>
<th>European</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma ever in 6-7yr olds</td>
<td>31.7%</td>
<td>21.2%</td>
<td>25.9%</td>
</tr>
<tr>
<td>Asthma ever in 13-14 year olds</td>
<td>24.7%</td>
<td>19.2%</td>
<td>25.2%</td>
</tr>
<tr>
<td>Wheeze in the last 12 months 6-7 year olds</td>
<td>27.6%</td>
<td>22.0%</td>
<td>24.2%</td>
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<tr>
<td>Wheeze in the last 12 months: 13-14 yr olds</td>
<td>30.8%</td>
<td>21.1%</td>
<td>31.7%</td>
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<tr>
<td>Night time waking with wheeze (6-7 year olds)</td>
<td>5.8%</td>
<td>5.7%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Night time waking with wheeze (13-14 year olds)</td>
<td>4.9%</td>
<td>3.8%</td>
<td>2.7%</td>
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</tbody>
</table>

The Equity Issue

Hospital admissions for conditions with a social gradient in children aged 0–14 years (excluding neonates) by primary diagnosis, New Zealand 2009–2013.


<table>
<thead>
<tr>
<th>Medical condition</th>
<th>Number</th>
<th>% of total admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma and wheeze</td>
<td>31,390</td>
<td>15.4%</td>
</tr>
<tr>
<td>Acute bronchiolitis</td>
<td>29,431</td>
<td>14.4%</td>
</tr>
<tr>
<td>Acute respiratory infections</td>
<td>28,418</td>
<td>13.9%</td>
</tr>
</tbody>
</table>
Equity Issue Applied:

Presentations to EC by Children 15 years and Under for Asthma
August 2012- August 2013

- All asthma: 11
- Mod-severe asthma: 9
- Māori: 7
- Pacific: 2
- Pakeha: 1
- Asian: 1
Presentations to OOH Care for Children 15 years and Younger with Asthma
August 2012-August 2013

- All asthma: 14
- Mod-severe asthma: 10
- Māori: 12
- Pakeha: 2
- Pacific: 0
- Asian: 0
Starting Points:

• Educational intervention reduces risk of:
  • Emergency department visits (RR 0.73, 95% CI 0.65 to 0.81)
  • Hospital admissions (RR 0.79, 95% CI 0.69 to 0.92)
  • Unscheduled doctors visits (RR 0.68, 95% CI 0.57 to 0.81)

Cochrane Review: Boyd et al., 2009
Starting Points:

• BTS/Sign Guidelines
  • Written asthma plans
  • Good spacer technique
  • Flu vaccines
  • Smoking cessation
  • Follow up of patients presenting to Emergency Department within 30 days
  • Housing

• Paediatric Society of New Zealand’s *Management of Asthma in Children Aged 1-15 year*
  • Focus on application of above to context of New Zealand

• Starship’s *Asthma: Management of Acute Asthma*
Starting Points:

• Cost for a small-medium General Practice
  • Diabetes models of care cost prohibitive
  • The “Annual Asthma Review”
  • As needed phone and in clinic follow up
What we did:

• Created the list
  • Classification of asthma
  • Preventer prescription in past year

• Substituted flu vaccine recall letter for “Annual Asthma Review”

• Training of nurses to deliver asthma review

• Booked and opportunistic appointments using standardised template
Asthma screening prompt:
**Paediatric Asthma Action Plan**

**Name:** Minnie Mouse  
**NHl:** ABC1234

**Doctor:** Karen Haare  
**This plan issued:** October 05, 2016  
**Expires and needs replacing on:** Tuesday, 5 January 2016

**Starship Health Care Limited**

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**WELL - No cough or wheeze**

- No day or night time cough or wheeze  
- Play and behaviour same as other children

Use 1 puff of your Orange Flixotide (50 mcg per dose) inhaler morning and night, via spacer.

Use 2 puffs of your Blue Salamol (100mg per dose) inhaler and when required.

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**MILD COUGH OR WHEEZE OR GETTING A COLD - Child not distressed**

- Mild-moderate daytime cough or wheeze.  
- Occasional cough at night.  
- Cough or wheeze when excited or running.  
- No need for reliever to control symptoms  
- Go to see your doctor

Use 1 puff of your Orange Flixotide (50 mcg per dose) inhaler morning and night, via spacer.

Use 4 puffs of your Blue Salamol (100mg per dose) inhaler Every 3-4 hours and before exercise and when required, via spacer.

Please come and see nurses at Greenstone Clinic.

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**ASTHMA WORSE - Short of breath, Child becoming distressed**

- Moderate daytime cough or wheeze.  
- Unable to play like other children.  
- Sleeps very little due to asthma.  
- Only able to sit quietly, no energy.  
- Go to see your doctor

Use 1 puff of your Orange Flixotide (50 mcg per dose) inhaler morning and night, via spacer.

Use 6 puffs of your Blue Salamol (100mg per dose) inhaler Every 1-2 hours and when required, via spacer.

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**EMERGENCY - Severe or sudden onset, child distressed, gasping for breath, pale, quiet, finding it hard to speak. RELEIVER NOT WORKING**

**DIAL 111 for an AMBULANCE.**

Keep child calm and sit upright.

Give 6 puffs of your Blue Salamol (100mg per dose) inhaler via spacer - child to take 5 breaths after each puff. Repeat 5 times. Repeat treatment every 5 minutes until ambulance arrives.
Progress over three years:

Percentage of children on preventor medication for asthma with an up to date asthma management plan

- 2013: 2.30%
- 2014: 46%
- 2015: 65%
Progress over three years:

Rates of flu vaccination in under 16 year olds with asthma eligible for a free flu vaccine
Progress over three years:

• Spacer technique recorded increased from 8% to 57% from 2013-2015
• PEF documented increased from 30% to 61%
• Unknown smoking status decreased from 84% to 47.6%
• 100% of children recorded as smoke exposed were given “family brief advice” or personal brief advise if the child/adolescent was smoking
Progress over three years:

Number of under 16 year olds presenting to Emergency Care from active asthma programme

- 2013: 11
- 2014: 10
- 2015: 6
users of the health system. Fontaine has asthma which has put her in Middlemore Hospital twice and has led to more than 10 visits to an accident and medical clinic and regular trips to the GP.

Her chronic breathing disorder is now well-managed thanks to a good asthma management plan devised by the Greenstone Family Clinic.
Learning Points:

• Flexibility within the nursing staff
• All nurses involved and confident in asthma management
• Supportive GP’s
• Structure and prompt
  • Allowed auditing
  • Missing points missed
References:


