What’s Different about Children in Urgent & Emergency Care?

Dr Ffion Davies
Consultant in Emergency Medicine, University Hospitals of Leicester
NHS Trust
It’s the elderly that are a problem. Children cause no problems.

?
A&E attendances aged 0-19 years and 65+ years

August 2015 data with commentary by Dr Ffion Davies
### A&E attendances 2013/14 - England, aged 0-19 years

<table>
<thead>
<tr>
<th></th>
<th>0-1 years</th>
<th>2-4 years</th>
<th>5-19 years</th>
<th>Total 0-19 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of A&amp;E Attendances</td>
<td>936,172</td>
<td>876,113</td>
<td>3,060,368</td>
<td>4,872,653</td>
</tr>
<tr>
<td>Crude rate per 100,000 pop.</td>
<td>67,946.3</td>
<td>43,024.4</td>
<td>32,491.2</td>
<td>37,969.1</td>
</tr>
<tr>
<td>Number of admissions to hospital following A&amp;E attendance</td>
<td>180,673</td>
<td>98,896</td>
<td>280,518</td>
<td>560,087</td>
</tr>
<tr>
<td>Percentage of A&amp;E attendances who were admitted to hospital</td>
<td>19.3</td>
<td>11.3</td>
<td>9.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Number of A&amp;E Attendances brought in by ambulance (including helicopter / Air Ambulance)</td>
<td>133,368</td>
<td>92,520</td>
<td>313,439</td>
<td>539,327</td>
</tr>
<tr>
<td>Percentage of A&amp;E attendances who were brought in by ambulance</td>
<td>14.2</td>
<td>10.6</td>
<td>10.2</td>
<td>11.1</td>
</tr>
</tbody>
</table>

0 – 19 years 37.9 per 100,000
### A&E attendances 2013/14 - England, aged 65+ years

<table>
<thead>
<tr>
<th></th>
<th>65-74 years</th>
<th>75-84 years</th>
<th>85+ years</th>
<th>All age 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of A&amp;E Attendances</td>
<td>1,397,524</td>
<td>1,353,366</td>
<td>904,203</td>
<td>3,655,093</td>
</tr>
<tr>
<td>Crude rate per 100,000 population</td>
<td>27,819.3</td>
<td>44,463.9</td>
<td>73,045.2</td>
<td>39,280.2</td>
</tr>
<tr>
<td>Number of admissions to hospital following A&amp;E attendance</td>
<td>497,492</td>
<td>657,957</td>
<td>542,126</td>
<td>1,697,575</td>
</tr>
<tr>
<td>Percentage of A&amp;E attendances who were admitted to hospital</td>
<td>35.6</td>
<td>48.6</td>
<td>60.0</td>
<td>46.4</td>
</tr>
<tr>
<td>Number of A&amp;E Attendances brought in by ambulance (including helicopter / Air Ambulance)</td>
<td>529,030</td>
<td>766,091</td>
<td>681,048</td>
<td>1,976,169</td>
</tr>
<tr>
<td>Percentage of A&amp;E attendances who were brought in by ambulance</td>
<td>37.9</td>
<td>56.6</td>
<td>75.3</td>
<td>54.1</td>
</tr>
</tbody>
</table>

65+ years 39.2 per 100,000
## Comparison

<table>
<thead>
<tr>
<th></th>
<th>0-1 years</th>
<th>85+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED attendances per annum per 100,000 population</td>
<td>68,000</td>
<td>73,000</td>
</tr>
<tr>
<td>Admitted to hospital from ED</td>
<td>19.3%</td>
<td>60%</td>
</tr>
<tr>
<td>Arrival by ambulance</td>
<td>14.2%</td>
<td>75.3%</td>
</tr>
</tbody>
</table>
Less obvious issue than the elderly, but could be much more efficient

<table>
<thead>
<tr>
<th>Elderly</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>High volume</td>
<td>High volume</td>
</tr>
<tr>
<td>Long LOS + delayed discharge</td>
<td>Short LOS</td>
</tr>
<tr>
<td>Multiple, inter-related health problems</td>
<td>Usually simple single disease in U&amp;EC practice – therefore could be managed more efficiently</td>
</tr>
</tbody>
</table>

- therefore high cost and difficult

  Costs go unnoticed

  Savings are possible
Children usually present for U&EC with simple, single disease

NB. ….. where U&EC is being accessed for acute-on-chronic disease, integrated care / multi-speciality care provider models are just as relevant for children as for adults
Children attending the ED

Self-limiting minor illness or routine problem

Needs hospital care

Severely Ill
Elderly patients attending the ED

Problem amenable to community care

Needs hospital care

Severely Ill
We need to get more confident with the green children and better at spotting the red children.

- Over – admitted especially if under one
- Often short LOS
- Can be missed
RIGHT CHILD, RIGHT PLACE

Sick       Well

Hospital   Family

Blue sky   Green grass
Good U&EC systems identify patients correctly

Telephone triage is not clinically safe for those under one’s
2 problems:

1. Inefficient care pathways for large volumes of patients
   - Poor frontline paediatric skills cause
   - Risk-averse management
   - CAU’s have fallen behind adult MAU counterparts, in efficient processing

2. Occasional failure to spot critically ill children

The evidence?
Up to 13 healthcare contacts for minor viruses
High unwarranted variation for acute care episodes

Failure of staff to recognise a very sick child
High child death rates in UK cf other wealthy countries
We need to get more confident with the green children and better at spotting the red children.
Peak ED / UCC attendance times for children: 7pm – 11pm

Parents unwilling to “chance” the 08.30 lottery of the GP surgery next day
OOH urgent and emergency care face-to-face visits (eg UCCs, ED)

- Children: 30%
- Adults: 70%
Number of NHS111 calls by age of patient

Infants aged under 2 account for almost 50% of activity
Parental actions following NHS111 call

Graph 5. Breakdown of what parents or carers did if they did not follow the advice from NHS 111

Q14. What else did you do/do instead? (n=84)

- Nothing (n=11)
- I called 999 (n=6)
- I went to another urgent care service such as a walk in clinic or A&E (n=28)
- I went to the pharmacist (n=0)
- I contacted another health professional such a health visitor or midwife (n=8)
- I waited until I could make an appointment with my own GP (n=14)
- Other (please specify below) (n=17)
RIGHT CHILD, RIGHT PLACE

Sick
Well

Hospital

Well family home
Staff skills and confidence

PATIENT IS AN ADULT       PATIENT IS A CHILD

Confident Clinician       Less Confident Clinician
Zero LOS is interesting:

This is naturally high in children.

This is clinically correct.

If you are an outlier, it may represent either:

1. Too many risk-averse referrals in to hospital

   OR

2. Highly efficient hospital processing of acutely ill children
ZLOS

Therefore examine ZLOS data *locally* – is it over-referral?
Or
senior-led, rapid, acute patient management?
Paediatricians are nice people

They tolerate over-referral!
But it can’t go on…. 

- More than 1 in 4 posts at pre-consultant level in general paediatrics are unfilled
- More than half of paediatric units are not meeting recommended staffing levels

Paediatric Rota Gaps and Vacancies 2016

Findings of a survey carried out between January and March 2016

June 2016
Correspondence to: workforce@rcpch.ac.uk
Over 50% of senior medical posts in A&E departments have been unfilled for 4 years.

There are over 500 UK trained A&E doctors in Australia.
Solutions to risk-averse frontline staff

Positive messaging and teaching from credible clinicians

PLUS

Knowledge

PLUS

Use of acuity scoring tools

www.spottingthesickchild.com
### Patient Details
- **Name:**
- **Date:** DD/MM/YY
- **Time:** HH:MM
- **Nurse:** Name and ID
- **Allergies:** Nameband on patient: ✓ (tick when done)

### Presenting Complaint
Single-sentence summary if at all possible

### Pain
<table>
<thead>
<tr>
<th>Score</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
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<tr>
<td>6</td>
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<tr>
<td>7</td>
<td></td>
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<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Analgesia declined in spite of reassurance and good explanation of the benefits. Analgesia pre-hospital: Further analgesia required and given. Repeat score due at:

### Planned Interventions
- Time and ID when done.
- Oxygen
- Fluid Challenge
- Urine Dip
- X-ray
- CBC & U&Es
- NPT
- Cannula
- ECG
- Peak Flow
- Other:

### Good Communication
- Time and ID when done.
- Social worker; Y/N
- A form needed? Y/N
- NBM or other diet restrictions? Y/N
- Do the child understand what is happening to them? Y/N

### POPS Score

<table>
<thead>
<tr>
<th>Score</th>
<th>Consider Urgent Care</th>
<th>GCS</th>
<th>CRT</th>
<th>Glucose</th>
<th>BP</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>Consider Urgent Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8+</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Any child with a POPS of 8+ must be considered for transfer to resus.

### Summary
**POPS**
Summary POPS records for patients presenting in the last 2 hours at Leicester:

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Age</th>
<th>Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>11538</td>
<td>13:31:02</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>11558</td>
<td>13:22:27</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>11577</td>
<td>15:05:17</td>
<td>13</td>
<td>4</td>
</tr>
</tbody>
</table>

**Injuries**
Summary POPS scores for patients presenting in the last 2 hours at Leicester:

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Age</th>
<th>Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>11538</td>
<td>13:31:02</td>
<td>38</td>
<td>3</td>
</tr>
<tr>
<td>11544</td>
<td>14:00:38</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>11547</td>
<td>14:11:20</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11551</td>
<td>14:16:35</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
Free online learning resource for frontline staff

NHS England
Royal College of Paediatrics & Child Health

www.spottingthesickchild.com
Summary

• Children get sick quickly and better quickly: U&EC services need to be good at sorting sheep from goats, and hospitals need an efficient CAU

• Examine your paediatric referral rates per U&EC unit (and per practitioner?)

• Examine your hospital’s paediatric ZLOS

• Educate frontline staff to correctly identify well children and potentially very ill children

You will find cost efficiencies

and possibly save a child’s life