Best paediatric evidence; is it accessible and used on-call?

F A I Riordan, E M Boyle, B Phillips

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Background: Paediatricians wanting to use evidence based medicine (EBM) strategies, need to be able to track down and critically appraise evidence. This requires access to quality filtered resources (for example, Cochrane Library), bibliographic databases (for example, Medline), and paediatric journals.

Aims: To determine whether paediatricians have access to these resources when on-call and if they use them to answer clinical questions.

Method: A telephone survey of paediatric and neonatal units was performed during November 2001. The “paediatrician-on-call” was asked whether they could access Medline, Cochrane, and paediatric journals, and if they used these when on-call.

Results: Paediatric trainees were available in 87 of the 97 units contacted. All except one had access to Medline; although only 56 (64%) could do this near their ward. Eighty had access to Cochrane. Thirteen (15%) could not gain access to their library out-of-hours. All except one department had local guidelines, with 71% having >15 guidelines. Access to any of the top seven “best evidence” paediatric journals varied from 64% to 100%. Only 26% of trainees had read the evidence based section of Archives of Disease in Childhood, Archimedes. Many trainees claimed to use guidelines when on-call (61; 70%), but few used Medline (14; 16%).

Conclusions: Paediatric trainees mostly have access to facilities to help them to track down and critically appraise evidence. However, few of them have used it to help make clinical decisions when on-call. Many of the doctors contacted said they used local guidelines as their source of information on-call.

METHODS

During November 2001 the authors telephoned hospitals with a paediatric and/or neonatal unit in Scotland, Yorkshire, West Midlands, and North and South Thames. The “paediatrician-on-call” was contacted and asked if they had access to: Medline, the Cochrane database, the seven best evidence paediatric journals, the internet, textbooks, and local guidelines. They were specifically asked which of these they could access when on-call. They were also asked which, if any, of these they had actually used when on-call. Finally they were asked if they had read Archimedes. Information was recorded using a standard data collection sheet.

RESULTS

The on-call paediatrician was available in 87 of the 97 hospitals telephoned (Scotland 24, Yorkshire 25, Thames 20, West Midlands 18). All except four were paediatricians in training (senior house officer 49, specialist registrar 34, staff grade 4).

All except one unit had access to Medline, 80 could access the Cochrane database, and 75 had access to the internet (table 1). Most doctors said they had access to paediatric textbooks. However, 13 doctors could not gain access to their hospital library out-of-hours to use a computer, get journals, or study textbooks (table 1).

The doctors were asked what resources they had used on-call. Many said they used local guidelines or textbooks; a few said they used the internet, Medline, journals, or the Cochrane database (table 1). Many doctors commented they had no time to practice EBM on-call.

Information on journals and guidelines was available for 69 units (Scotland, Yorkshire, Thames). The most commonly available journal was The Lancet (68/69 units). Availability of the other best paediatric evidence journals varied (table 2). Local guidelines were available in all except one unit. Most had more than 15 guidelines (49/69, 71%). However, many doctors commented that the guidelines were of “variable quality”.

Only 23/69 of the doctors contacted were aware of the Archimedes section in the Archives of Disease in Childhood.

DISCUSSION

This study has found that most paediatricians on-call believe they have access to resources which they could then use to practise evidence based medicine. However, few used them for this purpose. It was not clear whether Medline was unavailable to the doctor who said they could not access it. Alternatively, individual doctors may have been unaware or unable to access it via the hospital computer. It is assumed
that “nearly all hospitals have internal computer systems”;
however, individual doctors need to be able to use these
computers to track down evidence.

Many doctors commented that they had no time to track
down and critically appraise evidence while on-call. Evidence
based scenarios suggest that the answers to clinical problems
are not always easy to find and many doctors have struggled
to find the evidence for clinical problems in paediatrics.
Various resources are becoming available to short cut the
five step process. Clinical Evidence is a digest of randomised
trials and systematic reviews that answer common therapeutic
questions.

Clinical Evidence has now become available to NHS
doctors in England via the National Electronic Library for
Health.6 Evidence-based On Call provides evidence summaries
for diagnosis, investigation, treatment, prognostication, and
prevention in adult general medicine.7 A study in adult in-patient
practice found that most questions could be answered in less than one minute, with access to the
appropriate resources.7

Access to the seven “best evidence” paediatric journals was
variable across the hospitals studied. However, many EBM
experts suggest that single articles (rather than summaries of
data) should not be the basis of decisions. Searching journals
may thus not be critical, unless the search is for meta-
analyses or high quality summaries.

Many of the doctors we contacted said they used local
guidelines as their source of information on-call. This
contrasts with other studies where physicians perceived
guidelines to be less useful than other sources of medical information.8 However, paediatricians in training or in non-
university affiliated hospitals (such as the majority of those
we contacted) may be more likely to find guidelines useful.9

This study has a number of limitations. We were unable to
independently verify the resources available to the doctors we
contacted and those they used on-call. However, since we
spoke with the paediatric doctor who would be making
decisions on call, the answers we obtained are more likely to
reflect what happens in real life.

The implication of our study is that in order for
paediatricians to practise evidence based medicine on-call
they need easy access to evidence based answers to common
clinical problems. There are developing knowledge banks
that contain easily digested summaries of evidence.7 The format
used by many is the “critically appraised topic” (CAT), as
used in Archimedes.

However, there are many sites that collate CATs, some of
which may give differing answers for the same clinical problem.10 BestBets,11 the originator of the format used by
Archimedes, provides a website around which we suggest a
problem.12 BestBets, the originator of the format used by
Archimedes, provides a website around which we suggest a
problem.12

In conclusion, paediatricians on-call mostly have access to
facilities to help them to track down and critically appraise
evidence, but few use them to help make clinical decisions.
Most claim to use local guidelines. To help paediatricians-im
training practise EB requires the development of evidence based
guidelines and access to critically appraised information,
rather than training in clinical epidemiology.

ACKNOWLEDGEMENTS

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time to talk to us, and Ewa Posner for helpful comments.

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REFERENCES

1 Sackett DL, Starus S, Richardson WS, et al. Evidence-based medicine. How to

Table 1 Resources available to, and used on-call by
paediatricians in 87 hospitals

<table>
<thead>
<tr>
<th>Availability</th>
<th>Location</th>
<th>24 hours</th>
<th>9–5</th>
<th>Ward</th>
<th>Library</th>
<th>Used on-call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td></td>
<td>66</td>
<td>9</td>
<td>57</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Medline</td>
<td></td>
<td>73</td>
<td>13</td>
<td>56</td>
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<td>14</td>
</tr>
<tr>
<td>Cochrane</td>
<td></td>
<td>60</td>
<td>24</td>
<td>43</td>
<td>37</td>
<td>5</td>
</tr>
<tr>
<td>Textbooks</td>
<td></td>
<td>80</td>
<td>1</td>
<td>76</td>
<td>5</td>
<td>49</td>
</tr>
<tr>
<td>Guidelines</td>
<td></td>
<td>82</td>
<td>0</td>
<td>82</td>
<td>0</td>
<td>61</td>
</tr>
</tbody>
</table>

Table 2 “Best evidence” paediatric journals available to
paediatrician on-call in 69 units in Scotland, Thames, and
Northern and Yorkshire regions

<table>
<thead>
<tr>
<th>Journal</th>
<th>Scotland (n = 24)</th>
<th>Thames (n = 20)</th>
<th>North/York (n = 25)</th>
<th>Total (n = 69)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch Dis Child</td>
<td>22</td>
<td>20</td>
<td>24</td>
<td>66</td>
</tr>
<tr>
<td>BMJ</td>
<td>22</td>
<td>20</td>
<td>25</td>
<td>67</td>
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<tr>
<td>JAMA</td>
<td>18</td>
<td>20</td>
<td>18</td>
<td>56</td>
</tr>
<tr>
<td>J Pediatr</td>
<td>18</td>
<td>20</td>
<td>17</td>
<td>55</td>
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<tr>
<td>Lancet</td>
<td>24</td>
<td>20</td>
<td>24</td>
<td>68</td>
</tr>
<tr>
<td>N Engl J Med</td>
<td>20</td>
<td>19</td>
<td>25</td>
<td>64</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>21</td>
<td>19</td>
<td>16</td>
<td>56</td>
</tr>
</tbody>
</table>

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