Towards evidence based medicine for paediatricians

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In order to give the best care to patients and families, paediatricians need to integrate the highest quality scientific evidence with clinical expertise and the opinions of the family.¹ *Archimedes* seeks to assist practising clinicians by providing "evidence based" answers to common questions which are not at the forefront of research but are at the core of practice. In doing this, we are adapting a format which has been successfully developed by Kevin Macaway-Jones and the group at the *Emergency Medicine Journal*—"BestBets".

A word of warning. The topic summaries are not systematic reviews, though they are as exhaustive as a practising clinician can produce. They make no attempt to statistically aggregate the data, nor search the grey, unpublished literature. What *Archimedes* offers are practical, best evidence based answers to practical, clinical questions.

The format of *Archimedes* may be familiar. A description of the clinical setting is followed by a structured clinical question. (These aid in focusing the mind, assisting searching² and gaining answers.³) A brief report of the search used follows—this has been performed in a hierarchical way, to search for the best quality evidence to answer the question.⁴ A table provides a summary of the evidence and key points of the critical appraisal. For further information on critical appraisal and the measures of effect (such as number needed to treat, NNT) books by Sackett *et al*⁵ and Moyer *et al*⁶ may help. To pull the information together, a commentary is provided. But to make it all much more accessible, a box provides the clinical bottom lines.

Electronic-only topics that have been published on the BestBets site (www.bestbets.org) and may be of interest to paediatricians include:

- Is bupivacaine alone fast enough for analgesia in paediatric femoral shaft fractures?
- Should children with UTI be given short-course treatment?

Readers wishing to submit their own questions—with best evidence answers—are encouraged to review those already proposed at www.bestbets.org. If your question still hasn't been answered, feel free to submit your summary according to the Instructions for Authors at www.archdischild.com. Three topics are covered in this issue of the journal:

- Is there any evidence for influenza vaccination in children with asthma?
- Safety of anti-infective agents for skin preparation in premature infants
- Should creatinine kinase be checked in all boys presenting with speech delay?

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REFERENCES

- 1 Moyer VA, Elliott EJ. Preface. In: Moyer VA, Elliott EJ, Davis RL, *et al*, eds. *Evidence based pediatrics and child health*, Issue 1. London: BMJ Books, 2000.
- 2 Richardson WS, Wilson MC, Nishikawa J, *et al*. The well-built clinical question: a key to evidence-based decisions. *ACP J Club* 1995;123:A12-13.

Sketch it out

We've all been in (or observed, at least) a situation where a congenital heart defect is being explained to non-medical folk: parents, teachers or social workers. The first thing the doctor tends to reach for is a pen and a blank piece of paper, and starts to sketch a schematic heart.

This reasonable and rational use of graphics to explain a complex phenomenon hasn't been tested against textual descriptions (as far as I can tell) and yet it is practised and known to work well.

Why then, in describing the complex interventions often used in non-drug trials, do we insist on relying on the written word? When you've a trial involving provision of increased physical activity in nurseries, coupled with education packs for the parents of the children, applied over 24 weeks, wouldn't it be easier to look at a drawing which showed who got what, when, and how long it lasted for? This is an idea proposed by Perera *et al*¹ and should be taken into practice immediately by all those who appraise research. When you pick up a paper, pick up a pen and draw out who is doing what, to whom and when; it makes murky heavily written studies become understandable and can highlight aspects to be careful or critical about. (After all, if you can't draw what happened, you can't understand it and probably shouldn't be believing what the paper tells you.) Go on – try it today – flick back three pages and turn the study you find into a work of art.

- 1 Perera R, Heneghan C, Yudkin P. Graphical method for depicting randomised trials of complex interventions. *BMJ* 2007;334:127-9.

- 3 Bergus GR, Randall CS, Sinift SD, *et al*. Does the structure of clinical questions affect the outcome of curbside consultations with specialty colleagues? *Arch Fam Med* 2000;9:541-7.

- 4 <http://www.cebm.net> (accessed 4 April 2007).

- 5 Sackett DL, Starus S, Richardson WS, *et al*. *Evidence-based medicine. How to practice and teach EBM*. San Diego: Harcourt-Brace, 2000.

- 6 Moyer VA, Elliott EJ, Davis RL, *et al*, eds. *Evidence based pediatrics and child health*, Issue 1. London: BMJ Books, 2000.

Is there any evidence for influenza vaccination in children with asthma?

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A 12 year old boy presents for a routine asthma follow-up appointment during the autumn. He takes 200 µg per day of inhaled budesonide and uses his salbutamol 3-4