Authors' response

We are grateful for the opportunity to respond to our colleagues' comments on the investigation of children with UTI.

(1) Both commentators recommend following the Royal College of Physicians' guidelines but it should be noted that those pertaining to investigation 'must be considered interim suggestions until the results of more definitive research are available'.

(2) The working party recognised the need for further assessment of the sensitivity and specificity of ultrasonography, DMSA scan and IVU in the detection of renal abnormalities. Our paper comparing four methods of investigation of children with UTI addresses this question.

This study indicates that ultrasonography alone is inadequate for investigating children with UTI at any age and the histories of children in the 'pitfalls' paper, illustrate how unreliable dependence on a single imaging modality may be. We made no firm recommendations because any scheme of investigation will be determined not only by the child's age and clinical history, but also by the facilities and expertise available: all district general hospitals do not yet have access to either nuclear medicine facilities or specialist ultrasonography.

(3) Audit, as recommended in the report of the Royal College of Physicians, will test the assertion of Drs Moncrieff and Lindsell that paediatricians no longer need to be reminded of the importance of prompt investigations or the limitations of ultrasonography. Unfortunately, children similar to those described in the pitfalls paper, all but two of whom were first investigated between 1987 and 1991, continue to present to specialist paediatric renal clinics with unacceptable frequency.

(4) Dr Verrier Jones' counsel of perfection for the performance of ultrasonography may improve its sensitivity, but as both commentators agree, this remains an inappropriate technique for the diagnosis of VUR and renal scarring.

Contrary to the statement of Drs Moncrieff and Lindsell, children in the comparative study were investigated by experienced imagers. Even under optimal conditions, as recently reported in a study from Göteborg, 10 examiners obtained sensitivities for renal scarring ranging from 30–80%, and false positive rates of 6–33%.²

(5) We agree with, and have repeatedly stated, Dr Verrier Jones' view that the prevention or limitation of acquired scarring depends first on the rapid recognition and treatment of UTI, but also on prevention of further infection until its cause is known.³–⁵

A controlled trial of prophylaxis or no prophylaxis in children with reflux, which she suggests, could give valuable information. However, we found considerable difficulty in recruiting patients, with informed consent, to such a randomised prospective study, set up in 1987. Among the 20 children enrolled, one without prophylaxis developed a small scar (unpublished). Observations on schoolgirls aged 5 years and over with 'screening' bacteriuria receiving either no treatment or short courses of prophylaxis are not relevant in this context. More pertinent perhaps is that 22% of 120 children, aged 0–12 years, with symptomatic UTI and reflux treated with short courses of antibacterial drugs for recurrent UTI developed new scars compared with 2% of 75 children of similar age with reflux receiving uninterrupted low dose prophylaxis.⁷