

respiratory tract infection and tonsillitis was significantly more common in asthmatic boys than asthmatic girls (Table 1). The presence of bronchitis in non-asthmatic children was significantly more common in boys.

Wheezy children, acute chest infections and the catarrhal child syndrome have for many years been known to be more common in boys than in girls<sup>2</sup> and this is supported by data from the third national morbidity survey for all respiratory illnesses in boys.<sup>3</sup> Catarrhal otitis media is also more common in boys.<sup>4</sup> There is well documented evidence that asthma is more common in boys than girls, with a ratio of approximately 1.5:1.<sup>5</sup> Using data from the national child morbidity study Anderson and colleagues showed male sex to be a predictive factor in asthma, pneumonia, whooping cough, tonsillectomy/adenoidectomy, allergic rhinitis and eczema.<sup>5</sup> However, the concept put forward by Washburn and colleagues, relating to sex differences in susceptibility to infection, would not seem to answer all the questions.<sup>6</sup>

It is possible that the many related respiratory illnesses all belong to a partly sex linked immunological disease which are part of the same spectrum as asthma. This may be related genetically to the presence of atopy, as has been shown by Cookson and Hopkin<sup>7</sup> but much more work needs to be carried out, particularly in primary care epidemiological studies to cast further light on these important sex differences.

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## Comparison of peak flow meters

Sir,

Ian Gregg has raised doubts about the reliability and repeatability of results obtained using Wright pocket peak flow meters (Ferraris).<sup>1</sup> We report a pilot study comparing meters currently available on prescription in the United Kingdom: two Wright pocket meters (pA and pB) and two mini-Wright peak flow meters (wA and wB) (Clement Clarke).

Consecutive asthmatic patients attending one general practice surgery performed four maximum effort peak flow readings using two meters (two blows on each, alternating from one meter to the next). Four pairs of comparison were made. The order of meters was alternated to reduce bias. The values obtained with the different devices were compared using the differences between readings.<sup>2</sup> The limits of agreement are defined as the range within which 95% of the differences between meters lie; provided differences within this range are not clinically important then the two meters can be used interchangeably. We used the highest reading for each meter in our calculations. In order to determine the limits of agreement between the two meters the following formula was used:

Mean difference  $\pm$  (1.96  $\times$  standard deviation of difference).

The repeatability of measurements for individual meters was assessed for one each of the pocket meters (pA) and mini-Wright meters (wB). Two groups of consecutive patients attending the surgery were asked to perform two maximum effort peak flow readings at the beginning and end of their consultations, the highest readings in each case being used for comparison.

Table 1 shows unacceptably wide limits of agreement in all four comparisons, although that between the two mini-Wright meters is smaller. In other words 95% of the differences in readings between meters were unacceptably high. If a diagnosis of asthma is taken to be more than 15% peak flow variation, a mistaken diagnosis could be made simply by interchanging peak flow meters (even those of the same make).

**Table 1.** Variation in readings between the makes and models of meter.

Group	No. of patients	Mean difference between meters (l min <sup>-1</sup> )	Limits of agreement (l min <sup>-1</sup> )
pA-wB	59	22.9	-19.1 to 64.9
pB-wA	31	0	-58.8 to 58.8
pA-pB	30	-5.7	-55.0 to 43.6
wA-wB	31	3.5	-29.1 to 36.2

The mini-Wright meter was found to give more repeatable measurements than the Wright pocket meter: within-subject standard deviations were 8.2 l min<sup>-1</sup> (33 patients; 95% confidence interval 5.2 to 14.3 l min<sup>-1</sup>) and 30.8 l min<sup>-1</sup> (38 patients; 95% CI 20.4 to 51.9 l min<sup>-1</sup>), respectively.

This study reaffirms previous recommendations that repeat peak flow examinations should be performed using the same meter in any one patient,<sup>3</sup> because of problems related to repeatability of readings when using different meters.

With the availability of peak flow meters on National Health Service prescription, there has been considerable interest in the use of continuous home self-monitoring by people with asthma.<sup>4-7</sup> However, if prescriptions simply state a peak flow meter, pharmacists will dispense the cheapest meter. It is therefore essential that general practitioners state the name of the manufacturer as well as the trade name of the meter required.

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**Table 1.** Clinical conditions among asthmatic and non-asthmatic boys and girls.

Condition	No. of asthmatic children		No. of non-asthmatic children	
	Boys (n = 58)	Girls (n = 57)	Boys (n = 58)	Girls (n = 51)
Tonsillitis	16	5**	5	6
Bronchitis	18	4**	10	1**
URTI	26	7***	13	7
Coup	3	1	3	0
Hearing defects	5	2	1	1
Grommets	3	0	0	0
Myringotomy	3	0	1	0
Otitis media	18	9	11	9
Serous otitis media	0	0	0	0

n = number of children in group. URTI = upper respiratory tract infection. \*P<0.05, \*\*P<0.01, \*\*\*P<0.001.

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## Nitrite test for bacteriuria detection

Sir,

We were interested to read the letter by Cooper and colleagues (August *Journal*, p.346) which stated that use of nitrite strip testing in general practice detected urinary tract infection with a sensitivity of 33%. In a study involving elderly hospital inpatients and day hospital outpatients, sensitivities of 83% and 90%, respectively, were obtained.<sup>1</sup> A sensitivity of 95% was reported for hospital patients by Flanagan and colleagues,<sup>2</sup> where the nitrite test was used combined with the leucocyte esterase reagent strip test. Three possible explanations may account for the differences in sensitivities.

The timing of obtaining a urine sample can influence the result, as the chance of there being a positive nitrite test in the presence of a urinary tract infection depends in part on the length of time organisms incubate within the bladder. Assessment of urine which has been in the bladder for at least four hours, or ideally early morning specimens, is likely to increase the sensitivity of the test, but this may not be practicable within a general practice setting.<sup>3</sup> A number of the patients described by Cooper and colleagues may have recently passed urine before providing the sample for testing at the surgery, thus decreasing the test's sensitivity.

Secondly, sensitivities may be affected by the type of organism grown. Most pathogens convert urinary nitrate into nitrite. Any study which by chance includes a high prevalence of non-

converting pathogens would result in a reduced sensitivity for nitrite testing. Unfortunately, the authors did not comment on the timing of the urine samples or the organisms grown.

Thirdly, the colour change of nitrite strips in response to a urinary tract infection may affect results. In our experience the colour changes may be subtle when there is a low concentration of urinary nitrite. A positive reaction may therefore be missed unless particular care is taken when interpreting results.

When interpreting the result of nitrite testing, it is important to be aware of the limitations, since we believe the test is likely to be of more use than would be suggested by the results of the report by Cooper and colleagues.

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## Mental health care

Sir,

I was encouraged to see that Chris Dowrick's review article emphasized the pivotal position of general practice in the care of people with mental health problems (September *Journal*, p.382). However, in emphasizing the potential for development of services in the future, we should not lose sight of the fact that general practice already provides most of the professional mental care available to patients.<sup>1</sup> Furthermore, it has the advantages of being both accessible, and free of much of the stigma that can be associated with psychiatric services.

Counselling in general practice remains something of a 'trendy panacea'.<sup>2</sup> Formal counselling, as opposed to the use of

counselling skills, remains to be properly evaluated in the context of primary care. For general practitioners to offer formal counselling is not without considerable problems.<sup>3</sup> We should extend the Balint idea<sup>4</sup> of the doctor acting as a drug to counsellors too, and therefore we need to ask what are the potential side effects and dangers associated with the drug's use?

In the Edinburgh primary care depression study, the differences between psychiatrists, clinical psychologists, social workers and general practitioners were minimal in terms of short term outcome for people with depression, but general practitioners were the cheapest option, and also managed to achieve their results in considerably less time than it took the other professions.<sup>5</sup>

The principal initiative, in both research and service development, should be the maximizing of the potential of ordinary general practitioner care for people with mental health problems. This allows readily accessible care for most people and is available long term. For the many people whose mental health problems are ill defined and inseparable from their physical health and the context of their families, general practitioner care will remain the best option.

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Sir,

In Chris Dowrick's review article (September *Journal*, p.382) it was disappointing to see that the role of the patient with psychosis or schizophrenia in his or her own care was omitted. Patient held records are of considerable value in long term care.<sup>1</sup> They are acceptable to patients with severe mental illnesses, they increase patient autonomy, and improve communication and effectiveness of shared care. Compliance is good, but patient held records seem more acceptable to patients than to psychiatrists.<sup>1</sup> It is important to work with patients, and the pa-