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## Management of meningitis

We welcome the paper by Brennan *et al*, stimulating the debate on the management of meningitis in primary care.<sup>1</sup> Firstly, we echo the views expressed by the participating practitioners about the dilemmas inherent in managing the pyrexial child. It was disappointing, however, that the authors did not state their research question or describe the demography of their sample in detail.

Secondly, the views expressed cover a variety of issues with the focus shifting from the febrile child to the systemically ill child. We would argue that these are two very different groups and that the interviewees should have been asked to consider the latter for the purposes of this paper. The important question is why GPs do not administer benzyl penicillin before admitting systemically ill patients where a differential diagnosis includes meningitis? This question receives scant attention. It is clear from the interviews that GPs do not favour administering parenteral antibiotics in the community and this might have been explored in some depth. One might hypothesise that it is because intravenous cannulation of a distressed child by an anxious GP, surrounded by distraught parents, in a dimly lit room with only basic equipment and no assistant poses a singular challenge. Or that the journey time to hospital, counted in minutes, renders the effort futile, especially when the condition is more often than not in doubt. This study offered the opportunity to address an important question that might explain the failure of an annual public health message. In our view the paper only partially succeeds.

Lastly, one has to question the premise that the problem lies within primary care. We note a previous paper where only 50% of patients admitted to hospital under suspicion were offered a lumbar puncture, and less than half were diagnosed as suffering from meningitis.<sup>2</sup> We wonder what percentage of those investigated were treated with penicillin before that diagnostic procedure? If, within secondary care, the diagnosis and management can be delayed, then it suggests, as is our experience, that meningococcal meningitis follows a relatively benign course in some patients. In any future survey, one might usefully consider the interval between the appearance of significant clinical features and the administration of penicillin rather than where treatment is initiated and by whom.

MOYEZ JIWA  
DAVID TOOTH  
JOHN REID  
HELEN SPEIGHT  
DEREK SAY  
PAUL GALPIN

The Journal Club, Kiveton Park Surgery, Chapel Way, Kiveton Park Sheffield S26 6QU.

## References

1. Brennan CA, Somerset M, Granier SK, Fahey TP, Heyderman RS. Management of diagnostic uncertainty in children with possible meningitis: a qualitative study. *Br J Gen Pract* 2003; **53**: 626-631.
2. Nielsen B, Sorensen HT, Nielsen JO. Children admitted for observation for suspected meningitis. Problems in diagnosis in general practice. *Scand J Prim Health Care* 1988; **6**(4): 229-232.

## Authors' response

The febrile child, who may have an occult systemic bacterial infection, is a difficult diagnostic dilemma. The Kiverton Park Surgery Journal Club have raised a number of issues for clarification and discussion in relation to our paper.<sup>1</sup> In response to their initial points, our paper clearly states that we set out to describe how GPs evaluate and manage febrile children with possible meningitis or meningococcal septicaemia, with the aim of identifying methods to improve early intervention. The demographics of the sample were described in a table that unfortunately succumbed to editorial review. The 26 subjects were selected to represent a range of characteristics: sex (M:F = 1:1), age (median = 43 years [range 32-59]), practice setting (median number of FTE partners = 4 [1-6]), practice size (median list size = 7300 [1400-13 500]) and previous experience (median years as principal = 13 years [1-33]); median hospital paediatric experience = 6 months [0-18]).

Jiwa *et al* do, however, raise two important points. Firstly, they ask why GPs do not administer penicillin to febrile children who may have meningitis or meningococcal septicaemia. The GPs interviewed in our study placed great emphasis on their reluctance to administer pre-hospital antibiotics in the absence of a definitive clinical diagnosis. They also, as Jiwa *et al* suggest, felt that the practicalities of giving IM or IV antibiotics and the proximity to hospital might play a part. It is noteworthy that we did not detect a difference in attitudes to parenteral antibiotics between rural

and urban GPs in a region where journey times to hospital may vary considerably.

Secondly, Jiwa *et al* question our premise that the problem lies with primary care. The suggestion that our paper promotes this premise is disingenuous and was not part of the thinking behind the study. The potential for improvement in the management of individuals who may have bacterial meningitis or meningococcal septicaemia continues to exist across all levels of health care. We agree that there is a widely held view from outside that improvements in primary care management are possible. Our findings highlight a substantial gap in perception and reported clinical practice between primary and secondary care over the diagnosis and management of such children.

We are concerned that Jiwa *et al* indicate that meningococcal meningitis may be relatively benign and that a delay in treatment may be acceptable. A delay in the sterilisation of the cerebrospinal fluid is associated with increased neurological sequelae and early treatment with antibiotics (presumably reducing the bacterial load) improves outcome in meningococcal disease.<sup>2-5</sup> We hope that our paper will continue to promote a debate surrounding these diagnostic and management uncertainties, resulting in a greater consensus across all levels of health care.

ROBERT S HEYDERMAN

Department of Pathology and Microbiology and Division of Primary Health Care, University of Bristol.

CATHY A BRENNAN

Academic Unit of Psychiatry and Behavioural Sciences, School of Medicine, University of Leeds.

MAGGIE SOMERSET

Department of Postgraduate Health, Bath Spa University College.

STEPHEN K GRANIER

Whiteladies Medical Group, Bristol.

TOM FAHEY

Department of Primary Care Medicine, University of Dundee.

## References

1. Brennan CA, Somerset M, Granier SK, Fahey TP, Heyderman RS. Management of diagnostic uncertainty in children with possible meningitis: a qualitative study. *Br J Gen Pract* 2003; **53**: 626-631.
2. Lebel MH, McCracken GH, Jr. Delayed cerebrospinal fluid sterilization and adverse outcome of bacterial meningitis in infants and children. *Pediatrics* 1989; **83**: 161-167.
3. Begg N, Cartwright KA, Cohen J, *et al*. Consensus statement on diagnosis, investigation, treatment and prevention of acute bacterial meningitis in immunocompetent adults. British Infection Society Working Party. *J Infect* 1999; **39**: 1-15.
4. Cartwright K, Reilly S, White D, Stuart J. Early treatment with parenteral penicillin in meningococcal disease. *BMJ* 1992; **305**: 143-147.
5. Heyderman RS, Klein NJ. Emergency management of meningitis. *J R Soc Med* 2000; **93**: 225-229.

## Can patients choose consultation length?

Seaton Hirst is a 12 000 patient, eight doctor practice in the ex-mining, urban, south-eastern corner of Northumberland. The practice is a long-standing training practice, characterised by high levels of cardiovascular and respiratory morbidity, high teenage pregnancy rate, and a high consultation rate.

It was noted that a high level of patient demand was producing unacceptable access problems — patients were often having to wait several days or even a week or two for a routine appointment, particularly with a doctor of their choice. As a consequence, it was decided to revisit two seminal papers from the 1980s which concluded that patients were capable of judging their own appointment length with a degree of accuracy,<sup>1,2</sup> and pilot how such a system would work at Seaton Hirst.

During the trial period, the normal 10-minute standard consultation was replaced by a system in which patients were offered a choice of 5-, 10-, 15- or 20-minute appointments. During the

trial period, consultation lengths were monitored from the time the patient entered the room to the time they left the room, and compared to the patient chosen length. Total surgery lengths were measured and patient perceptions of the new system were assessed by questionnaire. Doctors' perceptions were assessed, and problems encountered by reception and administration staff were assessed by questionnaire and focus groups.

Eighty-six patients were evaluated during the study period (Table 1). Of these, 48 requested a nominal 5-minute appointment, 34 had 10-minute appointments, 3 had 15 minutes and one had 20 minutes. Of the patients requesting a 5-minute appointment, mean length of time in the consulting room was actually 8.00 minutes. Of patients requesting 10 minutes, mean actual length was 8.76 minutes. Patients booking a consultation length of 15 minutes took a mean time of 13.33 minutes, and the patient requesting 20 minutes actually took 18.00 minutes. In addition, an average length of time of 1.54 minutes was spent between patients, including time spent reading notes prior to arrival of patient, entering data afterwards, phone calls, and other interruptions. The overall average consultation length was thus 8.94 minutes, with an average length of time per patient of 10.48 minutes (including time when the patient was not actually in the room).

Because of the gross underestimation of patients requesting 5-minute appointments, waiting times increased and surgeries over-ran by an average of 35%, i.e. an average of 42 minutes late by the end of the surgery. This compares to an average over-running of 16 minutes under normal 10-minute consultations.

Patient feedback from 60 questionnaires indicated a high level of patient satisfaction with consultations during the trial period. Ninety-three per cent of patients felt that their problems had

Table 1. Requested and actual appointment lengths.

Number of patients	Chosen appointment length (mins)	Actual mean appointment length (mins)
48	5	8.00
34	10	8.76
3	15	13.33
1	20	18.00

- Patients underestimate 5-minute appointments and these were felt to be unworkable.
- Patients' empowerment and the value of patients being given choice should not to be underestimated. Patients value being consulted.
- Surprisingly few patients requested appointments longer than 10 minutes, but when they did so they estimated accurately.
- A few reception and administration problems could be overcome, particularly if 5-minute appointments were discontinued.

*Box 1. Conclusions.*

been dealt with at least satisfactorily, 4% were neutral, and 4% felt that problems were not dealt with satisfactorily. Very similar results were obtained when a survey was carried out under normal 10-minute consultations. During the trial period, 88% of patients felt positive about being offered a choice of appointment length, 6% were neutral, and 4% gave a negative response. Although a lot of patients requested 5-minute appointments, most thought the ideal length should be 10 minutes or longer. However, the late running of surgeries during the experimental period was commented upon adversely by 12% of patients. Two patients mentioned the positive value of seeking their opinions.

Reception and administration staff encountered a number of problems. Some patients asked reception staff how long the receptionist thought their problem would take. The late running of surgeries (due to underestimates of 5-minute patients) was noted by reception staff. Difficulties were encountered when appointment requests were made by a relative, carer, or any third party. The logistics of coordinating variable appointment lengths was also noted, particularly when appointments were cancelled by patients, which left perhaps a few unfilled 5-minute appointments and the temptation to fill these with patients whose problems may have otherwise required longer.

Overall conclusions were that patients underestimated 5-minute appointments, but could reasonably estimate 10-minute or longer consultations. Surprisingly few patients requested an appointment longer than 10 minutes. Difficulties were encountered by reception staff, mainly related to 5-minute appointments. Patients like 10-minute appointments and also value being given a choice, but understandably do not like to be kept waiting (Box 1).

As a result, it was decided not to pursue the option of 5-minute appoint-

ments, and the option of 15-minute appointments was felt to be unworkable. Thus the option of longer appointments, in multiples of 10 minutes, was made more freely available. This has been emphasised in the practice brochure and by reception staff, doctors, and other healthcare professionals.

ROBERT LAMBOURN

General Practitioner, Seaton Hirst, Ashington and General Practice Trainer and Course Organiser, Northumbria Vocational Training Scheme.

**References**

1. Lowenthal L, Bingham E. Length of consultation: How well do patients choose? *J R Coll Gen Pract* 1980; **30**: 496-498.
2. Harrison AT. Appointment systems: feasibility of a new approach. *Br med J (Clin Res Ed)* 1988; **294**: 1465-1466.

**Has Alan Maynard gone fluffy?**

A recent editorial in the *BJGP* by Alan Maynard may mark an important turning point for health economics.<sup>1</sup> Historically, the canonisation of health economic theory has developed isolated from contamination with the contingencies of the real world. But has Professor Maynard really come in from the cold?

Health economists have been in the vanguard of attempts to engineer the health service through a system of measurement and control. An approach that assumes that outcomes can be clearly measured and that the transfer process that relates inputs to outputs is well understood. Implicit decisions undertaken by practitioners and managers are seen as incoherent leading to inefficiency and inequity.<sup>2</sup> The metaphor for health care is the machine — there is a simple linear relationship between cause and effect, and the system can be understood by reducing it into its component parts. Professor Maynard's approach to management is

unequivocal: '... only when rationing is explicit will patients be empowered to question practice and will practitioners be managed scientifically and enabled to give evidence-based answers to the issue of who gets treatments and why in the NHS'.<sup>3</sup>

But now the talk is of 'honesty, justice, and duty' strengthened by the central role of trust. Professor Maynard has not been the first health economist to adopt this softer perspective. Mannion has argued that a full verification of all actions and their consequences is simply not possible and that there is a need for a balance between checking and trust. The inevitability of incomplete monitoring means that there will be merit in devising strategies aimed at fostering trust. Use of performance indicators, especially when published, may imply a lack of trust in professionalism and impact deleteriously on performance.<sup>4</sup>

There is no one correct model of how the health economy does or should operate. But it is unlikely that Professor Maynard has finally come to his senses and accepted that the complexities of the healthcare system cannot be condensed into a rational model of cause and effect underpinned by statistical manipulation. Paradigm shifts are rare and health economists do not change their spots. However, it may mark a recognition of the importance of dialogue and an appreciation that there are alternative models of the world. A move from an obsession with methodological competence to a recognition of the importance of a conversational competence would mark an important first step for mainstream health economics in the developing healthcare agenda.

DP KERNICK

Lead Research GP, St Thomas Health Centre, Exeter.

**References**

1. Maynard A, Bloor K. Trust, performance management and the new GP contract. *Br J Gen Pract* 2003; **53**: 754-755.
2. Maynard A. Rationing healthcare. *BMJ* 1996; **313**: 1499.
3. Maynard A, Bloor K. *A certain fate: rationing in health care*. London: Office of Health Economics, 1998.
4. Davies HTO, Lampel J. Trust in performance indicators. *Quality in Health Care* 1998; **7**: 159-162.

## Author's response

Dr Kernick's letter, asking whether I 'had gone fluffy', highlights his misinterpretation of the contribution of economics to the improvement of the NHS by the pursuit of greater equity in quality-adjusted life expectancy for the population.

Dr Bloor and I drew on the established mainstream of economics to emphasise that while financial incentives may be important at the margin, other factors, in particular trust, affects the behaviour and performance of doctors.<sup>1</sup> Thus the new GP contract will use financial rewards to ensure GPs pursue the 'quality agenda'.<sup>2</sup> Both the compliance with this agenda and the rest of the activities of GPs in the future will be based largely on trust, particularly as the fragmented information systems that exist at the moment mean that much of what GPs do is unknown in terms of comparative national data.

Dr Kernick's simplistic view of economics is not what we teach to students nor what we practice as economists. Neither clinicians nor managers can manage without measurement. The use of routine data, such as the hospital episode statistics, can tell us much about the referral variations of GP practices and this information can be used as a basis for intelligent and sensitive analysis. Without such data, clinical practice variations remain unmanaged, wasting resources and potentially damaging patient health.<sup>3</sup>

Measurement has to be incentivised so that data about failure (such as those available for a decade and ignored in Bristol) and success is used collaboratively to improve practice and the health of patients. This is never easy but if practice is not informed by evidence and explored systematically, inefficiency is condoned. How can clinicians manage their patients if they do not have basic comparative information about what they do and how successful they are? Failure to 'confuse' practice with facts, can only damage patients' health.

Economics is a unique tool kit with which to analyse behaviours and to evaluate, for instance, the social experiments of continuous, often ill-designed healthcare reforms so that such 'redisorganisations' produce a knowledge base to inform and improve future decision making. It is sad that Dr Kernick cannot see the

benefits of such work over recent decades.

Economists and clinical colleagues have to accept that scepticism about the 'givens' in clinical practice and policy making is essential. We share common goals of improving population health and its social distribution. Let's trust each other to pursue these goals scientifically.

ALAN MAYNARD

Professor of Health Economics,  
University of York.

## References

1. Maynard A, Bloor K. Trust, performance management and the new GP contract. *Br J Gen Pract* 2003; **53**: 754-755.
2. Maynard A, Bloor K. Do those who pay the piper call the tune? *Health Policy Matters* 2003 Oct(8): 1-8. <http://www.york.ac.uk/healthsciences/pubs/hpmindex.htm> (accessed 14 Nov 2003)
3. Fisher ES. Medical care: is more always better? *N Eng J Med* 2003; **349**,17:1665-1667.

## Wishful pharmaceutical thinking

Lenox-Smith and Reynolds put forward the conclusion that venlafaxine is efficacious in the treatment of patients with generalised anxiety disorder (GAD) with and without depression.<sup>1</sup> We think that this conclusion is not supported by the results of their study.

The primary endpoint of this study was the score on the Hamilton anxiety (HAM-A) scale. A priori a 4 point difference in the HAM-A total score between the venlafaxine group and placebo group was considered clinically relevant according to the power calculation in the study protocol. The results showed a significant 2 points ( $P = 0.05$ ) improvement on the HAM-A scale by the end of the study. The clinical relevance of this improvement is obviously doubtful. Concerning the secondary endpoints, only the clinical global impression (CGI) scale and two of the eight SF36 scales improved significant, whereas the hospital anxiety depression (HAD), Montgomery Asberg depression rating (MADRS) and HAM-A psychic anxiety scores showed no improvement at all.

Even the most important outcome, the remission rate, showed no significant increase. We think that the effec-

tiveness of venlafaxine XL in patients with GAD is not demonstrated. So, venlafaxine should not be prescribed in these patients based on this study.

This study shows, once again, that caution is needed in the interpretation of results from studies sponsored by pharmaceutical industries. This has been emphasized by Melander *et al*, who found evidence of duplicate publications, selective publication, and selective reporting in 42 trials of five selective serotonin reuptake inhibitors sponsored by the pharmaceutical industry.<sup>2</sup> This study adds 'selective concluding' to this list.

Obviously the influence of the pharmaceutical industry is of great importance on reporting and publishing results. We should be more careful with publishing prejudiced interpretation of results from such studies.

TIM C OLDE HARTMAN  
ERIC VAN RIJSWIJK  
PETER LBJ LUCASSEN

Department of General Practice (229),  
University Medical Centre St. Radboud,  
PO Box 9101, 6500 HB Nijmegen,  
The Netherlands.

E-mail: t.oldehartman@hag.umcn.nl

## References

1. Lenox-Smith AJ, Reynolds A. A double-blind, randomised, placebo controlled study of venlafaxine XL in patients with generalised anxiety disorder in primary care. *Br J Gen Pract* 2003; **53**: 772-777.
2. Melander H, Ahlqvist-Rastad J, Meijer G, Beermann B. Evidence b(i)ased medicine — selective reporting from studies sponsored by pharmaceutical industry: review of studies in new drug applications. *BMJ* 2003; **326**: 1171-1173.

## The stethoscope and cross-infection

Much has been written in the press of late about methicillin resistant *Staphylococcus aureus* (MRSA),<sup>1,2</sup> and a search for MRSA on yahoo.com yields 153 000 references! My attention was recently drawn to a study in hospital practice in which six out of seven stethoscopes used on a medical ward were shown to be carrying MRSA.<sup>3</sup>

I, therefore, conducted a pilot microbiology study on my practice stethoscope. The diaphragm was pressed onto Columbia blood agar plates daily

and the plates were submitted for incubation and identification to The Doctors Laboratory. The initial results showed that over a period of 5 days, normal skin flora was present on four occasions and *S. aureus* (MRSA negative) on one occasion. I then instituted daily evening stethoscope cleaning with isopropyl alcohol swabs and subsequent morning cultures did not yield any bacteria. Pre-cleaning evening cultures yielded skin flora on three out of five occasions, but no MRSA.

From this limited study it would appear that MRSA is not a problem in my practice, despite the fact that the stethoscope was used on two occasions during the study period on a patient who had recently undergone surgery and was a known MRSA carrier. Clearly this study needs to be expanded and I shall be reporting further on my examination of other practices' stethoscopes in due course.

STUART SANDERS

22 Harmont House, 20 Harley Street,  
London W1G 9PH.

E-mail: drsanders@msn.com

**References**

1. Time to wash our hands of superbugs. *The Times*, 20 September 2003.
2. Britten N. Washing hands cuts superbug cases. *The Daily Telegraph*, 25 May 2003.
3. O'Malley A, Lok S. Cross-infection in hospitals: an audit of stethoscope use. *Clinical Governance Bulletin*, 2003; **4**(1): 9-10.

**Protest about the GP contract**

I am rising to Dougal Jeffries' challenge to write to you about the quality framework in the new contract. My reasons for not writing before are, firstly, that I didn't think it would do any good, and secondly, it is so appalling that I hardly know where to start with it. The rot runs very deep — into the underlying assumptions about what health is and what general practice is about. I, and no doubt many others, could fill the Journal with expositions about this and, because we are live, thinking beings, and products of nature, they would all be different (although there would, of course, be common emergent themes). I can say, however, that health is not being registered with a practice that scores 100% on the quality framework,

and general practice is not a set of tasks that achieves that score.

So, unlike King Canute, I have not sought to hold back the woeful tide, but instead have been building local flood defences. In time, the waters will recede and then we shall breathe again.

WILLIAM HOUSE

General Practitioner, St Augustine's Practice, 4 Station Road, Keynsham, Bristol, BS31 2BN.

**References**

1. Jeffries D. Save our soul [Letter]. *Br J Gen Pract* 2003; **53**: 888.

I would like to echo the sentiments expressed by Dougal Jeffries in his letter published in the November *BJGP*.<sup>1</sup> Why haven't there been more letters protesting about the new GP contract? Are we really happy to see the demise of personal doctoring and the introduction of yet more box-ticking in order to earn more money?

As one of the GPs who voted 'No' to the new contract, I am appalled at the lack of thought as to how out-of-hours cover will be provided. Why did the government not support the excellent work started by the cooperative movement? Surely much of the money spent on NHS Direct and walk-in centres could have been directed to establishing efficient well-manned cooperatives? There would have been no need to 'opt out' of 24-hour responsibility. I think the profession will come to regret the day they voted 'Yes' to this contract.

TRICIA BERRY

Ellesmere Medical Centre,  
262 Stockport Road, Cheadle Heath,  
Stockport SK3 0QQ.

**References**

1. Jeffries D. Save our soul [Letter]. *Br J Gen Pract* 2003; **53**: 888.

**Ambulatory blood pressure monitoring**

Both of the papers in October's *BJGP* on ambulatory blood pressure monitoring in primary care by Lindbæk *et al* and

Lorgelly *et al* conclude that the clinical case for ambulatory blood pressure monitoring for treatment monitoring is strong.<sup>1,2</sup> We recently performed a similar study, with similar results, but are less sure of the conclusion.

We invited 100 randomly selected patients over 65 years of age with treated hypertension from two general practices in Exeter, Devon, to a study comparing ambulatory blood pressure monitoring with conventional measurement: 61 joined. Participants had ambulatory blood pressure monitoring at home. We compared the control of their blood pressure against the relevant British Hypertension Society guidelines for both conventional measurement and ambulatory monitoring, which have three categories for control.<sup>3,4</sup> For comparability we have simplified our results to two: conventional, controlled blood pressure <150/90 mmHg; ambulatory monitoring, controlled blood pressure <140/90 mmHg. The conventional measurement was calculated as the mean of the three most recent primary care measurements, including one on the day of study. This was chosen to mimic a routine hypertension review in primary care. The results are shown in Table 1.

A substantial percentage (31%) of patients apparently uncontrolled by conventional measurement were controlled by ambulatory monitoring, as Lindbæk and Lorgelly also found (27% and 31% respectively). Where we differ is in interpretation. All we know from these three studies is that categorisation of blood pressure is different between the two systems; we do not know which is right and which is wrong. Although the body of evidence for ambulatory monitoring as a prognostic marker is growing,<sup>5</sup> the evidence for ambulatory monitoring as a treatment guide is minute compared with that for conventional measurement.<sup>6</sup> We urgently need a trial comparing the two, including the examination of the side-effects of drugs (if ambulatory monitoring is better, the conventional group are over-treated) and cardiovascular end-points (if conventional is better, the ambulatory monitoring group have a higher risk of end-organ damage). Until this is done, we simply do not know which system to use.

DAVID RUSSELL

General Practitioner

Table 1. Categorisation of blood pressure control by conventional or ambulatory measurement.

	Patients controlled on ambulatory blood pressure monitoring (%)	Patients not controlled on ambulatory blood pressure monitoring (%)	Total (%)
Controlled on conventional measurement	21 (34)	3 (5)	24 (39)
Not controlled on conventional measurement	18 (30)	19 (31)	37 (61)
Total	39 (64)	22 (36)	61 (100)

WILLIAM HAMILTON

Primary Care Research Fellow,  
Exeter Research Practice Collaboration,  
Mount Pleasant Health Centre, EX2 5DW

## References

1. Lindbaek M, Sandvik E, Liodden K, *et al*. Predictors for the white coat effect in general practice patients with suspected and treated hypertension. *Br J Gen Pract* 2003; **53**: 790-793.
2. Lorgelly P, Siatis I, Brooks A, *et al*. Is ambulatory blood pressure monitoring cost-effective in the routine surveillance of treated hypertensive patients in primary care? *Br J Gen Pract* 2003; **53**: 794-796.
3. Ramsay LE, Williams B, Johnston GD, *et al*. British Hypertension Society guidelines for hypertension management 1999: summary. *BMJ* 1999; **319**: 630-635.
4. O'Brien E, Coats AJ, Owens P, *et al*. Use and interpretation of ambulatory blood pressure monitoring: recommendations of the British Hypertension Society. *BMJ* 2000; **320**: 1128-1134.
5. Staessen JA, Thijs L, Fagard R, *et al*. Predicting cardiovascular risk using conventional vs ambulatory blood pressure in older patients with systolic hypertension. *JAMA* 1999; **282**: 539-546.
6. Staessen JA, Wang J, Thijs L. Cardiovascular protection and blood pressure reduction: a meta-analysis. *Lancet* 2001; **358**: 1305-1315.

## Authors' response

We first of all thank Dr Hamilton and Dr Russell for their valuable comments on our article. Mostly, we agree with them.

It is uncertain whether 24-hour ambulatory blood pressure measurements in patients predict cardiovascular events independently of blood pressure measurements obtained in the physician's office and other cardiovascular risk factors. There are few longitudinal studies with hard endpoints where 24-hour ambulatory blood pressure monitoring have been used. On the other hand, we have a lot of studies showing the close relationship between 24-hour ambulatory blood pressure measurements and end-organ damage.<sup>1-3</sup> At this stage of knowledge, our conclusions could have been slightly different depending

on the studies that one emphasises.

Among low risk patients and for primary prevention, we have trusted the many studies showing the close relationship between 24-hour ambulatory blood pressure monitoring and end-organ damage. It is important, however, to stress that 24-hour ambulatory blood pressure measurements must still be regarded as a supplement to measurements done by the physician during clinic visits. Using this statement, 24-hour ambulatory blood pressure monitoring helps the physicians to clarify the medical blood pressure situation in 65% of the cases showed in Table 1 in Hamilton and Russell's letter. There is a significant risk of undertreatment in a group that is uncontrolled by conventional measurement and controlled by ambulatory monitoring. We believe that, especially among patients already suffering from heart disease, this can be the case. Calculation of absolute risk for cardiovascular disease must therefore be crucial in the evaluation of start or change of antihypertensive treatment.<sup>4</sup>

MORTEN LINDBÆK

Associate Professor, Department of General Practice and Community Medicine, University of Oslo. E-mail: morten.lindbak@samfunnsmed.uio.no

ENDRE SANDVIK

General Practitioner, Stovner Health Care Centre, Oslo.

KÅRE LIODDEN

JOHNNY MJELL

KAI RAVNSBORG-GJERTSEN

General Practitioners, Stokke Doctors Centre, Stokke, Norway.

## References

1. Denis L, Clement *et al*. Prognostic Value of Ambulatory Blood-Pressure Recordings in Patients with Treated Hypertension. *N Engl J Med* 2003; **348**: 2407-2415.
2. Sandvik E, Steine S. White coat hypertension in a general practice. *Scand J Prim Health Care* 1998; **16**: 222-226.

3. Verdecchia P. Prognostic value of ambulatory blood pressure; current evidence and clinical implications. *Hypertension* 2000; **35**(3): 844-851.
4. Ramsay LE, Williams B, Johnston D *et al*. Guidelines for management of hypertension; reprint of the third working group of British Hypertension Society. *J Hum Hypertens* 1999; **13**: 569-592.

## Authors' response

It is reassuring that Russell and Hamilton report similar results to our own, and they highlight an important point. In randomised trials of blood pressure-lowering therapy there has been a continuous relationship between achieved blood pressure (usually office blood pressure) and cardiovascular event rates, but categorising treated hypertensive patients into those 'controlled' or 'not controlled' raises several uncertainties about the methodology and interpretation; for example, which blood pressure measurement technique and cut-off provide maximum prognostic separation with good reliability and repeatability? Other specific problems with this approach have also been highlighted; for example, we showed how terminal digit preference in the recording of office blood pressure reduces considerably the number of patients in a practice who achieve a target blood pressure <140/90 mmHg; had the target been defined as <140/90 mmHg, 25% more patients would have been deemed to have adequate office blood pressure control.<sup>1</sup>

It is surprising that Russell and Hamilton do not mention what is arguably the most important study to address their concern, published recently in the *New England Journal of Medicine*, demonstrating the prognostic utility of ambulatory blood pressure measurements in treated hypertensives. In a prospective study over several years, Clement *et al* recorded new cardiovascular events in 157 out of 1963 patients and related clinical outcomes to baseline office and ambulatory blood pressure recordings.<sup>2</sup> A higher ambulatory systolic or diastolic blood pressure was highly predictive of major cardiovascular events (for example, fatal or non-fatal myocardial infarction and stroke) even after adjustment for classic risk factors including measurements of office blood pressure (Figure 1).

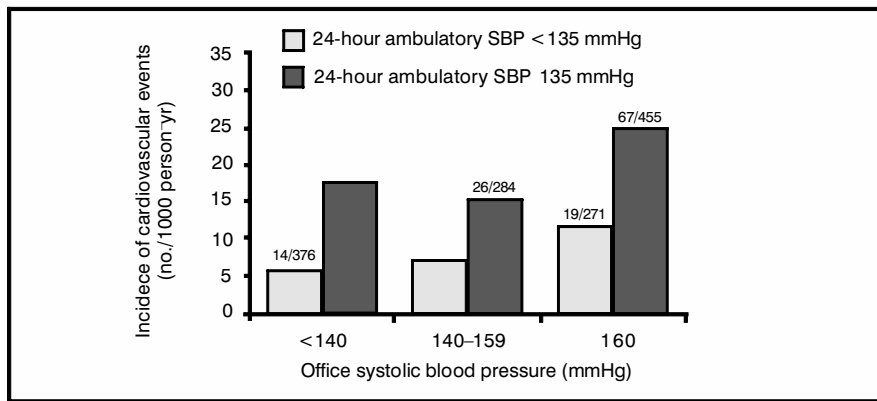


Figure 1. Incidence of cardiovascular events according to category of office systolic blood pressure (SBP) among 1963 treated hypertensives followed-up for a median of 5 years. In all three categories of office SBP, a 24-hour ambulatory SBP of 135 mmHg or higher was predictive of a higher incidence of cardiovascular events. For example, the unadjusted relative risk of an ambulatory SBP > 135 mmHg was 3.19 among patients with an office SBP <140 mmHg. © 2003 Massachusetts Medical Society. All rights reserved.<sup>2</sup>

Thus, identifying patients on treatment with a 24-hour ambulatory systolic blood pressure >135 mmHg is a simple but effective approach for risk-stratification of the treated hypertensive population. Taken in conjunction with our own study, there is now an even stronger case for undertaking annual ambulatory blood pressure recordings as part of the routine surveillance of treated hypertensive patients in primary care. Ambulatory blood pressure measurements will provide better prognostic separation and identify more reliably those patients requiring additional blood pressure-lowering treatment to reduce excess cardiovascular risk, but even more importantly, ambulatory blood pressure monitoring will clearly identify those in whom office blood pressure is misleading, and unnecessary add-on treatments and follow-up visits can be avoided.

RICHARD DONNELLY  
GILLIAN MANNING

University of Nottingham Medical School, Derby City General Hospital Derby DE22 3DT. E-mail: Gillian.manning@nottingham.ac.uk

References

- Manning G, Brooks A, Slinn B, et al. Effects of terminal digit preference on the proportion of treated hypertensive patients achieving target blood pressure. *J Hum Hyperten* 2001; **15**: 365-366.
- Clement DL, De Buyzere ML, De Bacquer DA, et al. Prognostic value of ambulatory blood pressure recordings in patients with treated hypertension. *New Engl J Med* 2003; **348**: 2407-2415.

Treatment for impetigo

The meta-analysis carried out by George and Rubin, which was published in a recent issue of the *BJGP*, showed that topical antibiotic therapy is at least as effective as oral treatment in patients with impetigo who do not exhibit systemic disturbances.<sup>1</sup> The study also demonstrated that there was no statistically significant difference between the two topical formulations available for this purpose: fusidic acid and mupirocin. The authors concluded that one of these agents should be used to treat systemically well patients with limited disease.

We, and others, have reported increasing incidences of resistance to fusidic acid among isolates of *Staphylococcus aureus* (as high as 36% in some centres) and have attributed this worrying development to the selective pressures resulting from the administration of the topical formulation of the drug, principally to patients with impetigo. We have cautioned against its excessive use in this clinical setting in order to preserve the efficacies of both the topical and systemic formulations (the latter often being given as a 'treatment of last resort' to patients with severe staphylococcal sepsis).<sup>2-4</sup>

Topical treatment is clearly an attractive option for patients with impetigo and, as George and Rubin have shown, it is equivalent to systemic agents in terms of efficacy; it is also associated with fewer adverse effects. Currently, mupirocin is the only suitable and effective alternative to fusidic

acid. However, simply substituting fusidic acid with mupirocin is not the ideal solution to this problem as increasing use of this agent will similarly promote the emergence of resistance to it, although low-level resistance to mupirocin may be overcome by the high concentration of the drug in existing formulations. Nonetheless, until additional therapeutic options with low likelihood of selecting for resistant strains become available, and in order to minimise the development of resistance to mupirocin, we recommend that it should not be obtainable without a prescription and that resistance rates should be monitored by microbiology laboratories. In addition, prescriptions should not exceed 10 days and patients should not be given repeat prescriptions within 1 month of completing a first course. When these guidelines were introduced in Western Australia,<sup>5</sup> they led to a reversal of a trend towards increasing resistance to mupirocin, with resistance rates falling from 15% in 1993 to 0.3% in 1997.<sup>6</sup>

ERWIN BROWN

Consultant Medical Microbiologist, Frenchay Hospital, Bristol BS16 1LE. E-mail: erwin.brown@north-bristol.swest.nhs.uk

RICHARD WISE

Professor of Medical Microbiology and Chairman, Standing Advisory Committee on Antibiotic Resistance, City Hospital NHS Trust, Birmingham B18 7QH. E-mail: r.wise@bham.ac.uk

References

- George A, Rubin G. A systematic review and meta-analysis of treatments for impetigo. *Br J Gen Pract* 2003; **53**: 480-487.
- Brown EM, Wise R. Fusidic acid cream for impetigo. Fusidic acid should be used with restraint [Letter]. *BMJ* 2002; **324**: 1394.
- Sule O, Brown N, Brown DFJ, Burrows N. Fusidic acid cream for impetigo. Judicious use is advisable [Letter]. *BMJ* 2002; **324**: 1394.
- Weston VC, Boswell TCJ, Finch RG, Perkins W. Fusidic acid cream for impetigo. Emergence of resistance to fusidic acid limits its use [Letter]. *BMJ* 2002; **324**: 1394.
- Riley TV, Carson CF, Bowman RA et al. Mupirocin-resistant methicillin-resistant *Staphylococcus aureus* in Western Australia. *Med J Aust* 1999; **161**: 397-398.
- Torvaldsen S, Roberts C, Riley TV. The continuing evolution of methicillin-resistant *Staphylococcus aureus* in Western Australia. *Infect Control Hosp Epidemiol* 1999; **20**: 133-135.