Self monitoring of high blood pressure

**Doing it in the practice’s waiting room may be better than doing it at home**

Lowering raised blood pressure reduces patients’ risk of developing cardiovascular disease.1,2 But the control of hypertension is often suboptimal, and this is borne out by the poorer effectiveness of treatment in observational studies than in randomised clinical trials.3 A recent systematic review by Fahey and colleagues emphasised that effective care for people with hypertension requires rigorous management with regular review and willingness to intensify drug treatment.4

The outcome of regular care depends on patients as much as, or more than, it does on practitioners. Evidence on managing chronic diseases such as diabetes mellitus and asthma emphasises the value of patients’ participation, and the same is probably true for self monitoring of blood pressure. Measuring blood pressure is straightforward and has become even more so with the development of validated electronic measuring devices, which are now available to the public.5 Self monitoring satisfies the public’s demand for more control and knowledge about health and disease. In addition, it may affect workload in primary care.

A randomised controlled trial by McManus and colleagues in this issue (p 493) reports on self monitoring of blood pressure in the patient’s general practice rather than at home.6 Practice based self monitoring of blood pressure is an original concept and is worth testing. The self measured and professionally measured blood pressure values were comparable, suggesting that hypertension guidelines, which will be based for the foreseeable future on professional measurement data, are applicable to self monitoring. In this study self monitoring resulted in a cost effective reduction in blood pressure, with no increase in patients’ anxiety.

This new study provides valuable empirical data in line with earlier studies showing that home monitoring is more effective than usual care in controlling blood pressure and achieving targets.7 This effect is probably explained by the absence of a white coat effect and better adherence to treatment through self control. Despite these promising findings, some important questions remain unresolved.

Even though small gains in blood pressure reduction provided by self monitoring are clinically relevant, it is crucial to know whether they can be sustained over time, given the chronic nature of hypertension. If adherence to home monitoring declines over time it could lead to even poorer control of blood pressure through diminished contact between patients and doctors.8 Yet the average follow-up in all but a few studies of self monitoring has been less than a year.9

A weakness in the study by McManus and colleagues was the absence of cluster randomisation. As a consequence, general practitioners may have optimised their measurement during usual care, diminishing the effect size. Furthermore, systematic reviews show that most studies have been marred by methodological problems and have included only a small part of the hypertensive population in general practice.10 Self selection by enthusiastic participants in these studies may partly explain effectiveness, and this makes it difficult to recommend self measurement to all patients.11

Self monitoring of blood pressure should be part of a plan that includes patients more fully in decisions over treatment; includes regular checks of patients’ blood
pressure measurement technique, and provides some form of regular professional supervision. The hyperten-

sivity population in general practice is heterogeneous—for example, in terms of age, comorbidity, and individual preferences. That many patients declined the offer to join the self measurement group in the study by McManus and colleagues hampered recognitions of this heterogeneity. A practical solution could be to offer self monitoring only to those most likely to practise it, probably minimising the risk of anxiety and other adverse effects among patients. Testing patients’ motivation and allocating a treatment strategy accordingly, along the lines of the stages of change model used in risk factor management, could facilitate selection.

Given that the current value of self monitoring of blood pressure remains uncertain, we recommend carefully designed experiments within the broader context suggested in the Cochrane review by Fahey and colleagues. Consultation at the practice at least once a year seems necessary to check whether the conditions for successful self measurement of blood pressure are still in place. But practice based self monitoring, as introduced by McManus and colleagues, offers a greater safety net. It allows active par-


ticipation by patients without losing professional supervision, which may prove to be a considerable advantage over self monitoring at home.

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5 O’Reiern E, Anmar R, Belilos L, Imai Y, Mancia G, Mengden T, et al. Practice guidelines of the European Society of Hypertension for clinic, ambula-


