

Why do GPs not implement evidence-based guidelines? A descriptive study

Mike Cranney, Erica Warren^a, Stuart Barton^b, Katy Gardner^c
and Tom Walley^b

Cranney M, Warren E, Barton S, Gardner K and Walley T. Why do GPs not implement evidence-based guidelines? A descriptive study. *Family Practice* 2001; **18**: 359–363.

Background. There is an acknowledged gap between research findings and their implementation in clinical practice despite the existence of effective educational interventions.

Objectives. Our aim was to identify what is impeding GPs from pursuing currently recognized good practice and implementing evidence-based guidelines in their management of hypertension in the elderly.

Method. We carried out a qualitative study using semi-structured interviews conducted during focus group outreach visits to 34 GPs from nine practices in Merseyside involved in an educational programme designed to improve the management of hypertension in the elderly.

Results. Several barriers to the implementation of evidence-based guidelines in the management of hypertension in the elderly were identified. These included: doubts about the applicability of trial data to particular patients; the poor adherence of GPs to practice protocols; ageist attitudes of some GPs; the effect of time pressure and financial considerations making the subject a low priority; the absence of an effective computer system; and the absence of an educational mentor. All participants demonstrated a very positive attitude to practice-based education. They also welcomed external audit data, which compared their performance with that of other practices. Single-handed GPs were particularly enthusiastic about this approach as it provided them with the peer pressure they lacked.

Conclusions. In order to bridge the gap between research and practice, educators need to address the various 'barriers to change' amongst practitioners.

Keywords. Barriers to change, education, GPs, hypertension, qualitative research.

Introduction

Recently there has been increased interest in the gap between research findings and their implementation in clinical practice.¹ The simplest practical route for most GPs to implement evidence-based medicine is to use evidence-based guidelines, both in practice and as audit standards. To support this, effective educational strategies are necessary. Outreach visits are an effective educational intervention, particularly if delivered by an opinion leader.^{2,3} We have already reported that by identifying and addressing 'barriers to change', the effectiveness of such interventions can be enhanced.⁴

We have also shown that GPs currently are under-treating hypertension⁵ and, despite being aware of the risks of hypertension in the elderly and the benefits of its treatment,⁶ fewer than half comply with the broad recommendations of even the most conservative evidence-based guidelines.^{6,7} Yet good management of hypertension in the elderly is one of the most effective and cost-effective ways of preventing heart disease and stroke,^{8,9} and is a key objective in public health policy today.¹⁰

This study is part of a larger project investigating the important issues that influence GPs in their management of hypertension in the elderly. The GPs involved had already participated in a multipractice audit of this topic.⁵ From the quantitative data already accumulated, we knew 'how' a group of GPs was performing in relation to their peers but, in order to understand 'why' they were performing in this way, a qualitative approach was necessary.¹¹ This paper explores the underlying explanations for the clear gap between research evidence and actual practice, and focuses on those barriers which result in the failure of GPs to apply either the knowledge they already possess or evidence-based guidelines.

Received 17 August 2000; Revised 2 March 2001; Accepted 12 March 2001.

17 Villiers Crescent, Eccleston, Merseyside WA10 5HP, ^aBradford Health Authority, Victoria Road, Shipley, West Yorkshire BD18 3LD, ^bPrescribing Research Group, Department of Pharmacology and Therapeutics, University of Liverpool, 70 Pembroke Place, Liverpool L69 3BX and ^cPrinces Park Health Centre, Liverpool L8 0SY, UK.

Methods

Subjects

We performed a content analysis of transcripts of visits performed in nine practices which were involved in an educational programme on the management of hypertension in the elderly.⁴

The nine practices (34 GPs) were drawn randomly from a larger study of 76 practices that examined their management of hypertension in the elderly.⁵ The method of selection of these practices is summarized in Figure 1.

Over 6 months, each practice received up to three, hour-long visits from an educational facilitator (MC) and a trained researcher (EW). These lunchtime meetings provided GPs with an opportunity to reflect on their own practice by including feedback from the previously undertaken hypertension audit.⁵ They were conducted as semi-structured 'focus group'-style interviews¹² involving all of the partners. Each session was audiotaped. The interview schedule was constructed so as to allow

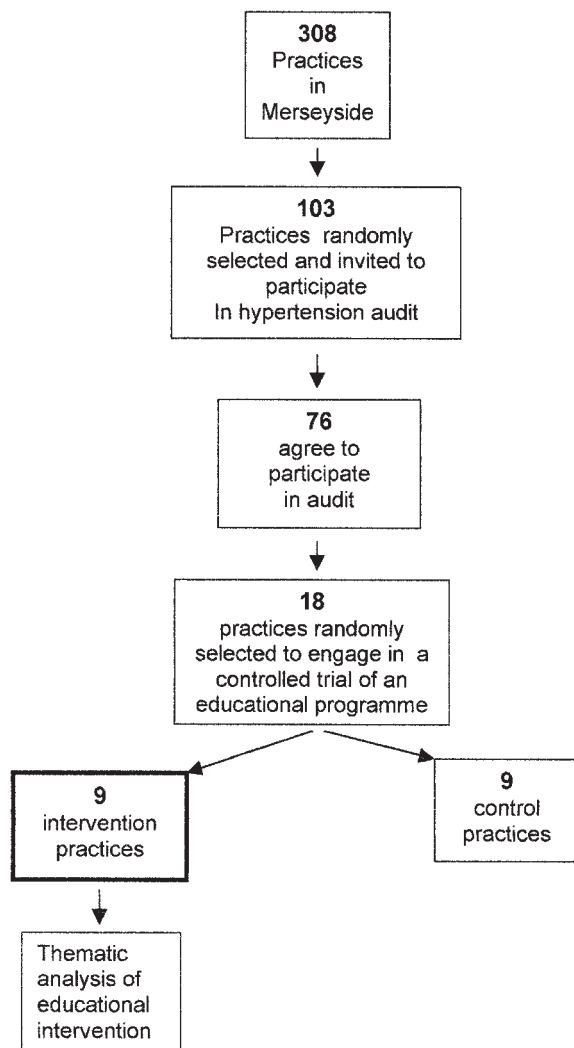


FIGURE 1 Selection of GPs

an adaptable approach¹³ and explored the underlying attitudes of GPs towards the management of elderly hypertensives. In particular, barriers and facilitators to the evidence-based management of hypertension in the elderly were discussed.

Data analysis

All tapes were transcribed. Data analysis was iterative, and emerging themes were used to inform the discussions of subsequent group interviews within the intervention practices. The data were analysed manually using a form of content analysis¹⁴ that followed the 'framework' approach.¹⁵ Codes were developed independently using a constant comparative method, by each of two authors (MC and EW), who then met to agree the final framework. This framework was used by three of the authors (MC, EW and SB) independently to analyse the transcripts.^{14,16} To avoid violating the inductive process implicit within qualitative data analysis, it was important that some of the raters had experienced the interviews.¹⁷ Results of the separate analyses revealed good agreement between the raters. A strategy of respondent validation^{16,17} was used with themes emerging from the first round of interviews presented to the interviewees, who confirmed the validity of the data and analyses.

Results

Several barriers to evidence-based practice in the management of hypertension in the elderly were identified, encompassing a wide range of underlying factors such as shortage of time and pressure of work. Various factors were competing for the attention of the GP, including clinical and administrative issues. These areas explain why GPs are often unable or unwilling to comply with some evidence-based recommendations.

Applying guidelines based on trial data to individual patients

Although GPs largely were willing to practise evidence-based medicine, some expressed a concern about applying guidelines based on trial data to their own patients. Guidelines were often viewed as having been developed by enthusiasts, outlining 'ideal' practice which did not always translate to typical patients within practices with differing demographics:

"The trial data are always derived from relatively fit healthy people, all the 'grottos' (sic) are excluded . . . so your typical trial patient is not necessarily the typical patient we see in general practice." PN 276 P1

Almost all saw hypertension as an area that did not readily lend itself to guidelines, in the context of elderly patients who often have other more significant problems. The presence of other diseases limited therapeutic options, making a decision to treat less likely. Prolonging

life by treating hypertension in a patient with a poor quality of life was viewed by many as inappropriate:

“Can I translate the trial data to this individual patient in front of me? Does it really matter for her, if she’s had a stroke, if she’s got Parkinson’s disease, if she’s moderately demented? Is lowering her blood pressure the most important thing?” PN 276 P3

Some commented that certain conditions, for example angina, diabetes and previous transient ischaemic attacks, might increase their likelihood to treat an elderly patient. A related area of concern was the adverse effects of anti-hypertensive medication, particularly when there is interplay between different drugs and different diseases. The majority felt that side effects were not only more problematic in the elderly but also more common. This produced reluctance to initiate aggressive anti-hypertensive drug treatment that might render a previously healthy patient unwell.

“That’s the trouble with treating blood pressure . . . they came in expecting nothing. They felt fine, thank you very much, we just go along and make them impotent!” PN 253 V1, P3

Many GPs stated that poor compliance of patients with anti-hypertensive medication limited their ability to manage hypertension in elderly patients. This was of particular concern when additional treatment was needed, as the burden of taking tablets for the patient would increase. Some patients were reluctant to accept medication, as they do not want to acknowledge that they have a problem, particularly in relation to a symptomless condition such as hypertension.

Practice protocols

Fewer than half of participating GPs were aware of a practice protocol for the management of hypertension. Even when aware that their practice had a protocol, many admitted that they ignored it, and others commented that their existing protocol was outdated. Some said that their hypertension practice protocols were written by their practice nurses, who were also good at using them. A few GPs mentioned that their nurses were keen to see doctors using protocols more often:

“The practice nurses here have insisted that we try and work to some protocol and I think they quite often do, but whether we [doctors] do is another question entirely.” PN 64 1

In general, where protocols existed and even where the GPs had drawn them up, there was a sense of lack of ownership and of lack of commitment to their use. This often was due to a combination of factors—that doctors considered that they did not need the protocols or that they saw the more ‘difficult’ patients to whom the protocols did not apply or the protocols were simply not readily accessible at the time they were needed.

Attitudes towards the elderly

Many GPs commented that they were more likely to investigate and treat hypertension aggressively in the young who were perceived to have more stressful and active lifestyles. Some acknowledged that these assumptions were not always justified. Others commented that despite being aware of the benefits of treating hypertension in the elderly, they still found it difficult to start anti-hypertensive treatment for this group:

“Although we know what the benefits are, whether it’s an innate conservatism or what, I don’t know, but something does seem to hold us back a little bit.” PN 276 1

A minority were quite clear that because elderly patients had reached their life expectancy, pursuing treatment was unnecessary and could make their remaining years uncomfortable:

“You have to die sometime of something, yet for every 18 who are on this treatment for a long time, one lives longer but the other 17 feel miserable.” PN 64 1

This was expressed more strongly in relation to disabled elderly patients. There was a consistent view that treating hypertension in patients with dementia was not worthwhile, due to their poor quality of life.

Young hypertensive patients were considered more likely than the elderly to modify their lifestyles; consequently, some said that they would not discuss lifestyle changes with the elderly.

Hypertension—a practice priority?

Many felt that hypertension was not a priority. Among the many reasons given for this, the commonest were lack of time and administrative burdens.

“We spend more time worrying about the financial side of things than anything, both personally and clinically.” PN 123 P1M

Others stated that hypertension was one of a vast number of important clinical areas and, due to increasing workload, combined with continuous changes in clinical practice, it was difficult to become experts in every area:

“We see somebody like yourself, who thinks that hypertension is the bee’s knees . . . and we sit here feeling ignorant, stupid and uncaring doctors because we don’t have your knowledge, but tomorrow we’re going to see somebody who is going to come and say exactly the same thing about Parkinson’s . . . and it’s quite disturbing to be honest, everybody wants us to be an expert!” PN 253 P6 M

Many commented that patients were becoming increasingly concerned about blood pressure and consequently requesting more checks, particularly elderly patients who were often fearful of having a disabling stroke.

Other factors influencing an evidence-based approach
GPs felt that the everyday practicalities of ‘real life’ often prevented a strict adherence to clinical guidelines. Frequently cited problems included observer error in measuring blood pressure, calibration of sphygmomanometers and time of day when blood pressure is measured. A few stated that they had difficulty with the auscultatory method, being unable to identify the various Korotkov phases, which caused errors in their measurements. Some stated that other pressures could sometimes influence their decisions:

“I’m sure that at 6 o’clock on Friday, I’m not that fussed whether it’s 160 or 164—I just want to go home!” PN 296 1

Those practices which were computerized commented that their management of conditions such as hypertension was improved through their ability to perform systematic audits.

“It’s something that can be audited through the computer. Without the computer search, it would be impossible.” PN 296 V3 P14 M

Another barrier that a few GPs referred to was the lack of direction in educational activities. “How do we know what we don’t know?” as one GP put it. This leads into the concept of mentoring and portfolio-based education, and although the following extract does not refer to mentoring directly, it demonstrates why the absence of a mentor could be a barrier to effective education:

“So it’s choosing what is effective education. If we all have to manage, for example, non-insulin-dependent diabetics, it should be compulsory for all GPs to go on a course. Next year it may be compulsory to go on one in some other subject, because it’s easy to avoid things if you don’t find them interesting.” PN 103 3P5TE

One single-handed practitioner felt that all these problems were even more troublesome for doctors practising alone, and that being single handed was the major barrier to keeping up to date.

Practice-based learning

All GPs demonstrated a very positive attitude to this type of initiative in comparison with external, lecture-based methods of education. They described a sense of ownership of the educational processes, which was satisfying, and permitted active involvement in the learning process.

They also welcomed the external audit data that compared their performance with those of 76 other practices and provided the opportunity to discuss the results within their own practices.

Single-handed GPs were particularly enthusiastic about this approach as it provided them with the ‘peer

pressure’ they lacked and gave them ‘protected time’ to address their educational and audit needs.

“It’s useful to have an opportunity to compare what we’re actually doing with other practices because we are very isolated.” PN 296 1

Discussion

This study used a qualitative approach to explore the attitudes of GPs towards the subject of evidence-based medicine in general and to the management of hypertension in the elderly in particular. We have reported the attitudes of patients to treatment of hypertension in an earlier paper.⁶ Barriers to the effective implementation of current research findings were identified, some of which are immutable, but many can be overcome. The identification of such barriers is an important first step in the process of getting research results into practice.¹ These barriers are structural (workload, lack of ready access to protocols, inadequate computerization), attitudinal (ageist attitudes, a reluctance to adhere to protocols where they exist, and other practice priorities) and educational (methods of education). Changing practice requires all of these barriers to be addressed. For those barriers linked to structural issues at a practice level, it may be necessary to consider introducing a truly new system as an appropriate way forward,¹⁸ such as computer-based decision support systems and reduced list sizes.

We have focused here on the educational aspects. These have been little studied in the past,^{19,20} and with adequate resources are the most likely to bring about change in the other aspects too. This study confirms the findings of others that educational interventions are more effective if they are practice based and incorporate audit and the use of opinion leaders.^{21–24} Similarly, GPs dislike lectures²⁵ and prefer topics that are based upon their daily work,^{26,27} a form of problem-based learning. This study incorporated these various educational strategies, which were well received by the participants. With the development of portfolio-based self-directed learning linked to the expanding role of GP tutors as mentors, GPs will be able to access this varied educational approach more easily.

This becomes increasingly important with the advent of clinical governance, in which health authorities and primary care groups or trusts are expected to pursue a policy emphasizing the quality of care provided to patients. Several new initiatives²⁸ to achieve this goal are to be introduced, including National Service Frameworks on the standard of care expected for certain key illnesses, and guidelines and advice from the National Institute for Clinical Excellence. These initiatives will encourage practitioners to adopt good practice and to act upon research evidence when appropriate. This cannot be achieved unless the barriers are recognized and addressed in parallel.

The qualitative nature of this study augmented the quantitative information already obtained from the

same participants and reported elsewhere.⁴ The relatively large number of participants for a study of this kind²⁹ provided a wide range of opinions. However, in collecting such a volume of data, we may have sacrificed some of the depth and richness which could have been extracted from more detailed analysis of fewer data. As the participating GPs were selected randomly from a much larger study, it is likely that the views expressed here are actually widely held. However, the sample of GPs was not statistically representative of all GPs but statistical representativeness is not normally sought in qualitative research.¹⁶ This is partly because qualitative data collection is too time consuming and expensive to permit use of a probability sample, but mainly because the utility of a study such as this does not stem from its generalizability but from the ability to generate hypotheses and to provoke comparisons between the experiences of the participants. The generalizability of this type of research is therefore accepted on a conceptual rather than a numerical level.^{30,31} Practices were selected partly according to list size and existing management of hypertension in elderly patients. This 'purposive' sampling is entirely consistent with a qualitative approach, and ensured that some of the sample should in some way be atypical and therefore encourage a wider range of views to be collected.

We have explored systematically the barriers to implementation of evidence-based medicine which will enable future educational interventions to be more effective. We recommend the use of a multifaceted educational approach: practice-based education linked to audit with peer referencing, underpinned by evidence in a readily understandable format. Such a strategy has been found to be successful as a means to promote change in clinical practice.³²

Acknowledgements

We would like to thank the participating GPs, North West NHS Executive R&D who funded Dr Cranney, and the anonymous referee for valuable comments.

References

- 1 Haines A, Donald A. Getting research findings into practice: making better use of research findings. *Br Med J* 1998; **317**: 72–75.
- 2 Thomson MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Outreach visits to improve health professional practice and health care outcomes. *The Cochrane Library*. Issue 3. Oxford: Update Software, 1998.
- 3 Thomson MA, Oxman AD, Haynes RB, Davis DA, Freemantle N, Harvey EL. Local opinion leaders to improve health professional practice and health care outcomes. *The Cochrane Library*. Issue 3. Oxford: Update Software, 1998.
- 4 Cranney M, Barton S, Walley T. Addressing barriers to change: an RCT of practice-based education to improve the management of hypertension in the elderly. *Br J Gen Pract* 1999; **49**: 522–526.
- 5 Cranney M, Barton S, Walley T. The management of hypertension in the elderly by general practitioners in Merseyside: the rule of halves revisited. *Br J Gen Pract* 1998; **48**: 1146–1150.
- 6 Cranney M, Warren E, Walley T. Hypertension in the elderly: attitudes of British patients and general practitioners. *J Hum Hypertens* 1998; **12**: 539–545.

- 7 Sever P, Beevers G, Bulpitt CJ. Management guidelines in essential hypertension: report of the second working party of the British Hypertension Society. *Br Med J* 1993; **306**: 983–987.
- 8 NHS Centre for Reviews and Dissemination. Drug treatment of essential hypertension in older people. *Effectiveness Matters* 1999; **4**: Issue 2.
- 9 Mulrow CD, Cornell JA, Herrera CR, Kadri A, Farnett L, Aguilar C. Hypertension in the elderly. Implications and generalizability of randomized trials. *J Am Med Assoc* 1994; **272**: 1932–1938.
- 10 Secretary of State for Health. *Our Healthier Nation: A Contract for Health* (cm 3852). London: The Stationery Office, 1998.
- 11 Pope C, Mays N. Qualitative Research: Reaching the parts other methods cannot reach: an introduction to qualitative research methods in health and health services research. *Br Med J* 1995; **311**: 42–45.
- 12 Britten N. Qualitative interviews in medical research. *Br Med J* 1995; **311**: 251–253.
- 13 McCracken G. *The Long Interview*. Thousand Oaks (CA): Sage, 1988.
- 14 Greenhalgh T, Taylor R. How to read a paper. Papers that go beyond numbers (qualitative research). *Br Med J* 1997; **315**: 740–743.
- 15 Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In Bryman A, Burgess RG (eds), *Analysing Qualitative Data*. London: Routledge, 1994.
- 16 Mays N, Pope C. Rigour and qualitative research. *Br Med J* 1995; **311**: 109–112.
- 17 Morse J. *Designing Funded Qualitative Research: Strategies of Qualitative Inquiry*. Thousand Oaks (CA): Sage, 1998.
- 18 Berwick D. Education and debate: a primer on leading the improvement of systems. *Br Med J* 1996; **312**: 619–622.
- 19 Haynes B, Haines A. Getting research findings into practice: barriers and bridges to evidence-based clinical practice. *Br Med J* 1998; **317**: 273–276.
- 20 Thomson MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Audit and feedback to improve health professional practice and health care outcomes (part II). *The Cochrane Library*. Issue 3. Oxford: Update Software, 1998.
- 21 Davis DA, Thomson MA, Oxman AD, Haynes RB. Changing physician performance: a systematic review of the effect of continuing medical education strategies. *J Am Med Assoc* 1995; **274**: 700–705.
- 22 Soumerai SB, Avorn J. Principles of educational outreach ('academic detailing') to improve clinical decision making. *J Am Med Assoc* 1990; **263**: 549–556.
- 23 Hiss RG, MacDonald R, David WR. Identification of physician educational influentials in small community hospitals. Proceedings of the Seventeenth Annual Conference on Research in Medical Education, 1978; 283–288.
- 24 Thomson MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Audit and feedback to improve health professional practice and health care outcomes (part I). *The Cochrane Library*. Issue 3. Oxford: Update Software, 1998.
- 25 Long A, Atkins JB. Communication between general practitioners and consultants. *Br Med J* 1974; **4**: 456–459.
- 26 Westerman RF, Hull FM, Bezemer PD, Gort GA. A study of communication between general practitioners and specialists. *Br J Gen Pract* 1990; **40**: 445–449.
- 27 Newton J, Hutchinson A, Hayes V, McColl E, Mackee I, Holland C. Do clinicians tell each other enough? An analysis of referral communication in two specialities. *Fam Pract* 1994; **11**: 15–20.
- 28 NHS Executive (1999) *Clinical Governance: Quality in the New NHS*. HSC 1999/065 (16 March 1999).
- 29 Patton MQ. *How to Use Qualitative Methods in Evaluation*. London: Sage, 1987.
- 30 Fitzpatrick R, Boulton M. Qualitative methods for assessing health care. *Qual Health Care* 1994; **3**: 107–113.
- 31 Green J, Britten N. Qualitative research and evidence based medicine. *Br Med J* 1998; **316**: 1230–1232.
- 32 Wensing M, Grol R. Single and combined strategies for implementing changes in primary care: a literature review. *Int J Qual Health Care* 1994; **6**: 115–132.