

paralysis had started with an attack six months earlier for which he had been admitted to hospital and which recovered spontaneously after two days with no diagnosis being made. Subsequently he had had several attacks. His mother was told to bring him as soon as the next attack began and the diagnosis of "pulled elbow" was immediately obvious. Other cases were those of young children with episodes of painful arm whose families were suspected of causing non-accidental injury.

Altogether 30 children had symptoms for 12 hours or more before being treated. There was no indication that parents of children who had had previous episodes were quicker in coming for medical help than those whose children had not had an earlier attack. A girl of 5½ years who had had at least five earlier episodes was not brought for 12 hours and a 4-year-old with two previous attacks arrived after 48 hours. The striking exceptions were the twin sisters who between them had had pulled elbows at least six times and who both came half an hour after the onset. Apart from these twin sisters there was no evidence that siblings of patients were at increased risk of pulled elbow.

Even when symptoms had been present for up to four days the child obtained immediate and complete relief with the first manipulation. The exceptional child who needed six manipulations had had symptoms for only two hours before being seen. After the sixth manipulation the mother, when the child was seen a few minutes later, said, "I knew it was all right this time—she forgot about it straight away."

Just as pain in the knee may be referred from a hip and vice versa, pain from an elbow may be referred to the wrist or shoulder; 15 children had pain only in the wrist, and a further six had pain predominantly in the shoulder. If this is not realized by doctors it may cause difficulty in diagnosis.

The survey could not have been carried out without the helpful co-operation of Dr. Helen Wesley, Dr. Patricia Brennan, and the senior house officers of the paediatric accident and emergency department. I thank Mr. John Sharrard for his most valuable advice.

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General Practice Observed

High Blood Pressure: Detection and Treatment by General Practitioners

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Summary

A questionnaire was sent to a 10% random sample of general practitioners in England and Wales on their attitudes to the detection and treatment of hypertension; 62% responded and no further inquiry was made. Their views on detection and criteria for treatment and investigations performed were considered in relation to their background. More of the older general practitioners always measured blood pressure and 36% of all practitioners believed that hypertensive patients usually present with symptoms. Altogether 91% thought that strokes could be prevented by treating hypertension, and only 18% reported difficulty in keeping patients on treatment. Older practitioners preferred to measure the

diastolic pressure using phase five, while the younger preferred phase four. Nearly all doctors were satisfied with their current sphygmomanometers.

Introduction

The evidence favours the early treatment of moderate and severe hypertension,¹⁻⁴ even in symptomless cases. The attitudes of general practitioners to the detection of high blood pressure and their criteria for treatment are therefore important. A questionnaire was sent to a 10% random sample of general practitioners in England and Wales to gauge their attitudes. The results may be valuable in the development of community control of hypertension.

Method

A 10% random sample of doctors in England and Wales providing general medical services was prepared with the approval of the General Medical Services Committee and the Statistics and Research Division of the Department of Health and Social Security. The updated Register as at October 1972, completed in May 1973, was used. A random sample of every 10th doctor was obtained; there were no appreciable differences between the sample and the total population of principal general practitioners in age, sex, area, list size, and year of registration. A total of 2067 doctors were available

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for study. A pilot study was carried out in November 1972 at a meeting of the General Practitioner Research Club and the questionnaire modified in the light of comments made by doctors there.

The questionnaires were sent out in the last week of June 1973 and all replies received by 30 September 1973 were considered as responses. No "reminders" were sent, and there was no identification of the recipient on the questionnaire. There were 18 questions and adequate space for comment.⁵

Table I shows that female general practitioners tended to be younger than their male colleagues, though 89% of the whole sample were men. Tables II and III give the characteristics of the whole sample (2067 doctors) by list size, size of practice, and year of qualification. The proportions of general practitioners from each standard region were as follows: North 6.2%, Yorkshire and Humberside 9.7%, East Midlands 6.7%, East Anglia 3.8%, South-east 37.0%, South-west 7.6%, West Midlands 9.6%, North-west 13.3%, and Wales 5.9%. As expected, a high proportion lived in the South East; most had a list size between 2000 and 3000; most were in partnership; and few had qualified before 1935 or after 1964.

Results

The analysis was performed on the information given in the 1265 completed questionnaires—a response rate of 61%.⁶ Another 45 questionnaires were returned blank and were not included in the analysis of results. Questions on list size, year of qualification, type of practice, and membership of the Royal College of General Practitioners were included to give some idea of the general practitioners' backgrounds so that response rates could be calculated according to type of practice and year of qualification. There were no significant differences in the response rates in group and single-handed practices, but doctors who qualified between 1925 and 1934 had a significantly lower response rate (42%; $P < 0.001$; table II).

The results for each question were analysed against the background information. The four background variables were not independent of each other, but the exact relation was not clear. Year of qualification was related to the other three variables and list size to type of practice. Generally, about 1% of the respondents did not reply to each question.

Questions

(1) *Do you measure the blood pressure of middle-aged patients (40-60 years) who attend your surgery?*—Only 11% of the doctors said they

always measured the blood pressure of middle-aged patients, but another 87% said they did so sometimes. Older doctors and doctors in single or two-partner practices were the most likely to measure blood pressure always: 23% of those qualified in 1925-34 compared with 9% of those qualified after 1955 ($P < 0.001$); and 15% of those in single or two-partner practices compared with 8% of the rest ($P < 0.001$).

(2) *Do you believe that hypertensive patients usually present with symptoms?*—This belief was held by 36% of the doctors. Table IV shows that doctors who qualified before 1945 ($P < 0.05$), worked single-handed or with only one partner ($P < 0.01$), or did not belong to the R.C.G.P. ($P < 0.01$) were more likely to believe that hypertensive patients present with symptoms. All doctors who held this belief were then asked to tick what they thought were the three most common presenting symptoms. The percentages opting for each symptom were as follows: headache (84%), vertigo (79%), dyspnoea (52%), lassitude (40%), nervousness (13%), insomnia (8%), and pain (8%). Because of the small numbers significance tests were not performed. The proportions did not seem to vary with any of the background variables, except for dyspnoea; only 26% of the doctors qualified in 1925-34 mentioned this compared with 58% of those qualified in 1955-64.

(3) *Do you tell patients requiring treatment that they have hypertension?*—Overall 76% of the doctors said they always told such patients that they had hypertension, and another 21% said that they did so sometimes. Younger doctors were more likely to always tell their patients—91% of those qualified after 1964 compared with only 50% of those qualified before 1925 ($P < 0.01$).

(4) *Do you believe that treatment of hypertension may prevent coronary heart disease, strokes, renal failure, or heart failure?*—Table V shows that 4.9% of doctors did not answer this question; 91% thought that strokes could be prevented, 91% heart failure, 76% renal failure, and 63% coronary heart disease. For strokes ($P < 0.05$), renal failure ($P < 0.05$), and heart failure ($P < 0.01$), these proportions varied with year of qualification. More of the younger doctors believed that these diseases may be prevented by treatment of hypertension than older doctors.

(5) *Do you have difficulty in keeping patients in treatment for hypertension?*—Only 18% of the doctors reported such difficulty.

TABLE I—Percentage of Doctors in Whole Sample in Each Age Group (Years) according to Sex

	No. of Doctors	<30	30-34	-39	-44	-49	-54	-59	-64	-69	≥70
Men ..	1848	4.9	7.9	13.4	15.2	17.7	14.1	12.5	6.9	4.3	3.1
Women ..	219	8.3	11.5	14.2	19.4	19.4	12.4	9.2	3.7	0.9	0.9

TABLE II—List Sizes and Size of Practices among Doctors in Whole Sample

	List Size					Practice Size		
	<1600	1600-1999	-2499	-2999	≥3000	[Single-handed	2 Partners	≥3 Partners
% of Doctors ..	9.3	14.6	30.4	27.7	18.0	20.2	22.7	57.1

TABLE III—Year of Qualification in Doctors in Whole Sample and Response Rate to Questionnaire according to Year of Qualification

Year:	Before 1925	1925-34	-44	-54	-64	After 1964	Total
No. (%) of doctors in sample ..	29 (1.4)	115 (5.6)	425 (20.6)	653 (31.6)	601 (29.1)	244 (11.8)	2067 (100)
Response rate	71	42	64	66	62	52	61.18

TABLE IV—Percentage of Doctors who Believed that Hypertensive Patients Present with Symptoms according to Background Variables

	Year of Qualification						Type of Practice			Membership		
	Before 1925	1925-34	-44	-54	-64	After 1964	Single-handed	2 Partners	≥3 Partners	M.R.C.G.P.	A.R.C.G.P.	Neither
% of Doctors	45	48	42	34	34	42	42	38	32	31	31	34

TABLE V—Percentage of Doctors who Believed Treatment of Hypertension would Prevent Coronary Heart Disease, Strokes, Renal Failure, or Heart Failure

Year of Qualification	Coronary Heart Disease	Strokes	Renal Failure	Heart Failure
Before 1925 ..	60	75	65	75
1925-34 ..	60	83	65	85
-44 ..	58	89	71	85
-54 ..	63	90	77	92
-64 ..	66	95	82	94
After 1964 ..	63	95	72	94
Total ..	63	91	76	91
% Not answering ..	9	4	9	5

(6) What percentage of your hypertensive patients continued treatment for at least one year?—Table VI shows the proportion of general practitioners with a given percentage of their patients under treatment for at least one year. Most (64%) doctors believed that most of their patients (80%) remained under hypotensive treatment for over a year.

TABLE VI—Percentage of Doctors who Believed that a Given Percentage of Hypertensive Patients Continued Treatment for at least One Year

% of Patients	<20	20-39	-59	-79	-99	100	Not Recorded
% of Doctors	0.4	0.9	6.3	25.1	51.1	13.5	2.6

(7) and (8) Please indicate at what level of blood pressure you begin treatment of patients?—This question was asked for both systolic and diastolic blood pressure and for four groups of patients in each case—patients aged 40-49 and 50-59 and those with and without symptoms in each age group. The results are plotted as cumulative frequency curves in fig. 1. For both pressures, younger patients were treated at quite low levels, and patients with symptoms were treated at lower levels than those without. In particular, symptomless patients aged 40-49 were treated in the same way as patients with symptoms aged 50-59.

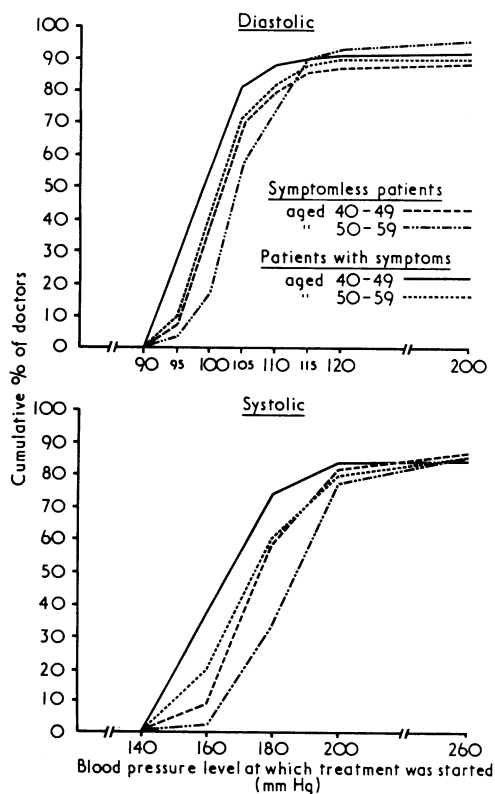


FIG. 1—Response to questions (7) and (8): at what level of blood pressure (diastolic and systolic) do you begin treatment of patients for hypertension?

(9) If treating middle-aged patients (40-60) with hypertension to what level do you aim to reduce the diastolic blood pressure?—In table VII the distribution of the level to which doctors aimed to reduce diastolic blood pressure is shown. About 80% of doctors aimed to reduce diastolic blood pressure to below 95 mm Hg and very few to below 85 mm Hg.

TABLE VII—Level to which General Practitioners Aimed to Reduce Diastolic Blood Pressure

Blood pressure (mm Hg)	80-84	-89	-94	-99	≥100	Not recorded
% of Doctors	7.9	32.7	38.6	16.8	1.7	2.2

(10) Do you treat male and female hypertensive patients in the same way?—Altogether 65% of doctors said they did treat hypertensive men and women similarly. This was more likely if the practitioner had no partners, when the proportion rose to 74% compared with 63% of those with at least one partner ($P < 0.01$). Also, more non-members of the R.C.G.P. (68%) than members (56%) treated men and women the same way ($P < 0.01$).

(11) When you measure diastolic blood pressure do you use diastolic phase 4 (muffling of sounds), diastolic phase 5 (disappearance of sounds), or both?—The doctors fell into three groups on this question: 31% reported using phase 4, 42% phase 5, and 27% both. Phase 5 was preferred by older doctors and phase 4 by younger ones (fig. 2; $P < 0.01$).

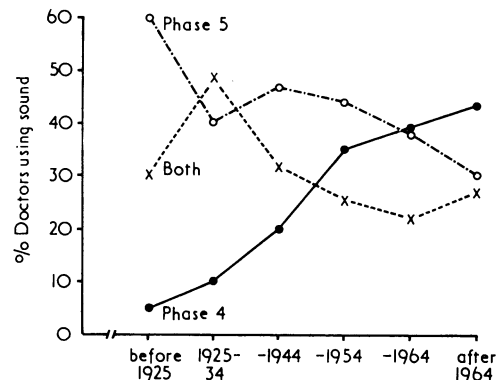


FIG. 2—Sound used to measure diastolic blood pressure in relation to year of qualification.

(12) Before treating patients for hypertension do you refer them for X-ray examination, electrocardiography (E.C.G.), blood urea or cholesterol estimations?—Most general practitioners did these investigations at least sometimes (table VIII). Only 17% never sent for an x-ray examination, 19% E.C.G.s, 19% blood urea estimation, and 27% cholesterol estimation. Cholesterol estimation was the least likely to be requested. Younger doctors were more likely to investigate than older ones; this was significant for x-ray examinations ($P < 0.001$), E.C.G.s ($P < 0.001$) and blood urea estimations ($P < 0.001$).

TABLE VIII—Percentage of General Practitioners who sent their Hypertensive Patients for Other Investigations before Treatment according to Year of Qualification and Frequency with which They Did so

Year of Qualification	X-Ray Examination	E.C.G.	Blood Urea Estimation	Cholesterol Estimation
Before 1925 ..	5	10	15	20
1925-34 ..	15	13	13	8
-44 ..	13	10	15	14
-54 ..	15	9	20	13
-64 ..	30	15	30	15
After 1964 ..	34	20	44	9
Total				
{ Always ..	21	13	24	13
{ Sometimes ..	59	67	57	56
{ Never ..	17	19	19	27

(13) Do you use in your surgery a mercury sphygmomanometer, an aneroid sphygmomanometer, or both?—Most (63%) of the doctors used

a mercury sphygmomanometer alone, 8% an aneroid one, and 29% both. The use of aneroid sphygmomanometers is rising among recently-qualified doctors. Of doctors qualified after 1964 39% used an aneroid one and 43% a mercury one, whereas only 25% of those qualified before 1925 used an aneroid one and 70% used a mercury one ($P < 0.001$).

(14) *Are you satisfied with your present equipment for measuring blood pressure?*—Nearly all the doctors (92%) were satisfied with their present equipment.

Notes on the "correct" answers to these questions are given in the Appendix.

Discussion

The findings of this study are based on the reports of the general practitioners who were interested enough to reply to one questionnaire. Space was available in the questionnaire for comment and was used by many of the practitioners. There was much interest in various aspects of high blood pressure, particularly the treatment and aetiology of hypertension.

There were substantial differences between older and younger practitioners, which is important for the design of educational programmes. Differences between doctors working alone and those working in groups may also have been due to age, but were more probably due to the regular contact with colleagues and the greater opportunities to attend courses and meetings of those in group practices.

There were differences between the treatment of patients with and without symptoms in our study. A study of headache and blood pressure in the community⁷ showed that most people with headache and migraine have blood pressures similar to those who do not have headaches. A more recent report noted that the responses to questions on headache, epistaxis, and tinnitus showed no relation to systolic or diastolic blood pressure; dizziness was more frequent only in people with very high diastolic pressure.⁸

Methods of measuring the blood pressure and the instruments used varied. Though most general practitioners were satisfied with their equipment some degree of standardization in recording is desirable to ensure compatibility of measurements for treatment and research.

Few doctors reported difficulty in keeping patients on treatment for hypertension, which may indicate the good doctor-patient relationships existing in general practice in the National Health Service. Such relationships are essential for the early

diagnosis and continued treatment of high blood pressure and for the community control of this condition.⁹

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Appendix

NOTES ON QUESTIONNAIRE

- Q. (1) It would be reasonable to measure and record the blood pressure each year if the patient is seen.
- Q. (2) Hypertensive patients do not usually present with symptoms. Symptoms may be reported if the patient is carefully questioned.
- Q. (3) Why not tell patients requiring treatment that they have hypertension?
- Q. (4) Treatment of hypertension prevents stroke and heart failure.
- Q. (5) Most reports to date have indicated considerable difficulty in keeping patients in treatment.
- Q. (6) In addition to the usual difficulty of prolonged treatment hypotensive drugs have unpleasant side effects.
- Q. (7) and (8) Generally, younger patients were treated at quite low levels. It would be of interest to know levels of treatment for patients over 65 years.
- Q. (9) There was general agreement on this difficult question.
- Q. (10) This was a difficult question for a yes or no answer. A major difference is the impotence caused by drug treatment.
- Q. (11) When recording diastolic blood pressure it should be clearly stated which sound (phase 4 or phase 5) is being used.
- Q. (12) Open access to pathology services is now very extensive and many general practitioners take their own E.C.G.s

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Letter from . . . Brisbane

The New Disease—"Administration"?

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A new disease has arisen in this part of the world. It attacks not the human body but the bodies of institutions, is a low-grade malignancy, may have effects varying from irritant to crippling, and might possibly even be fatal. The name of this disease is

"administration"—with inverted commas to distinguish it from administration of benevolent type.

The onset of this disease may be marked by the appearance of a herald spot—a management consultant. After a latent period he produces aberrant mitoses in the administrative staff, so that they begin to proliferate in an uncontrolled fashion, leading to the appearance of committees of various types. Just as malignant cells invade the tissues of the host, to the latter's detriment, so these committees invade the body of the institution, making all sorts of plans which have little bearing on its normal function.

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