

briefing

HEALTH INFORMATION AND THE CONSUMER

Introduction

In the last decade society has become more health conscious than ever before. A major factor in this change of attitude is the widespread availability of information about healthy lifestyles from both the media and health professionals. People have a greater awareness of the dangers of smoking, of a high fat diet and of taking little or no exercise. They might be expected to be more willing to make changes in their own lifestyle, to participate in health screening and to self-medicate for minor ailments. Greater knowledge of health matters might also be expected to lead to an increase in 'consumerism' in the health service and to clearer expectations of the services being provided.

The White Paper 'Health of the Nation' published in 1991, stressed the responsibility of the individual in improving their health, and thus the health of society as a whole, and the importance of health information from a variety of sources (the media, the Health Education Authority, voluntary organisations and health service personnel) in educating people about their lifestyle.

"Everyone has a part to play in improving health,To seize the opportunity, people need information to help make the right choices."

(Health of the Nation, 1991)

With this in mind, the Office of Health Economics commissioned a survey of 1,200 randomly selected members of the public to ascertain what sources of health information people used, the relative value placed on these sources of information and how effective health information was in altering behaviour and lifestyle.

In this briefing we set out the results of the survey, together with our review of other research to discuss:

- the relative importance of health information provided by the media, health professionals and friends and relatives;
- the effectiveness of these sources of information in changing people's behaviour, lifestyle, and willingness to self-medicate, and in stimulating participation in screening programmes and visits to their general practitioner;

- the role and attitudes of the general practitioner and the impact of the consultation process on patients attitudes and behaviour;
- patient satisfaction and compliance with advice and treatment provided by general practitioners;
- the implications for future health promotion campaigns.

Methodology

The survey was undertaken, on behalf of the Office of Health Economics, by Survey Research Associates and Milpro¹ and was conducted over a period of three weeks in October 1993.

Interviews were carried out nationally in 103 distributed parliamentary constituencies, randomly selected from a sampling frame of all constituencies in Great Britain (excluding those north of the Caledonian canal). The sampling frame was stratified firstly by the Registrar General's standard regions and secondly, within each standard region by descending order of first party, second party vote ratio as determined by the 1987 General Election.

In each of the three weeks of the survey nearly 400 men and women over the age of 15 were interviewed. The total sample size was 1,194. Interviewing was conducted on a face-to-face basis in the interviewee's home by a trained interviewer. Quota controls were set on age (15-24, 24-44, 45-64, 65+), social class (AB, C1, C2, DE), working status and sex.

All interviewees were asked details of the following:

- Their usage of various sources of health information;
- The relative importance of the various sources;
- The influence of media coverage on their attitudes towards screening, purchases from pharmacists, visits to GP's and lifestyle;
- Satisfaction with the treatment/advice received from their GP;

¹ Survey Research Associates are specialists in researching the consumer population and Milpro are market research specialists in health care. Both are part of the NOP Research Group.

Table 1 Question—From which of these sources, if any, do you obtain your health information?

Response	Age							
	ALL	15-20	21-24	25-34	35-44	45-54	55-64	65+
MEN								
Number of respondents	575	73	34	116	101	85	72	94
	Percentages							
Magazines/Newspapers	33	36	40	33	36	44	27	21
TV	34	38	28	36	46	29	24	29
Radio	9	4	5	15	8	11	5	11
Leaflets in GP waiting room	12	19	6	14	15	13	7	5
GP	37	19	28	33	29	46	48	49
Practice nurse/health visitor/midwife	4	1	5	5	3	4	7	4
Pharmacist	13	15	3	16	18	11	10	14
Other health professional	5	1	4	8	4	7	3	3
Friends or relatives	19	28	14	23	16	25	21	7
WOMEN								
Number of respondents	619	59	44	113	102	85	77	140
	Percentages							
Magazines/Newspapers	44	53	46	46	57	52	38	29
TV	29	36	34	27	40	22	26	23
Radio	9	2	6	7	13	7	13	10
Leaflets in GP waiting room	16	21	23	18	22	15	11	8
GP	39	43	44	34	38	37	41	45
Practice nurse/health visitor/midwife	10	2	19	18	10	9	7	8
Pharmacist	16	16	23	20	19	15	13	12
Other health professional	7	5	11	7	8	7	11	4
Friends or relatives	19	36	30	22	24	15	15	8

Note: Columns do not add up to 100 per cent as respondents were able to select more than one source of information.

Answers to the questions were analysed by Survey Research Associates and Milpro according to age, sex, social class, marital status, working status and Regional Health Authority of residence. We now discuss the results.

Sources of health information

1,194 people were asked to indicate which sources of information they used (Table 1) and secondly which they regarded as being of most importance (Table 2).

As can be seen from Table 1, there are three key sources of information, television, magazines and newspapers and the GP. Table 2 shows that for all age groups the source of information considered to be of primary importance was that given by the GP. Forty eight per cent of the sample considered the GPs to be the most important source of health information, with magazines and newspapers scoring 16 per cent, and television, 13 per cent. Information received from friends and relatives ranked highly among those aged 24 and under (14 per cent) but only eight per cent of the total sample considered it to be the most important source of health information. The number of people from all age groups who considered television to be an important source of health information is surprisingly low given that in any month 99 per cent of the population will have watched some television (General Household Survey, 1990). The survey highlighted a number of differences relating to age, sex, social class and Regional Health Authority² of residence.

² The pre-October 1993 Regional Health Authorities boundaries were used to identify variations in attitudes and use of health information among consumers between different areas of the country.

Age

Although the GP was regarded as the most important source of health information for all age groups (Table 1), the percentage of people who relied primarily for health information on their GP was highest amongst those aged over 55 (45 per cent) and lowest amongst those aged under 24 (32 per cent). This may be due to a greater acceptance of a doctor's authority and knowledge by the older age group, or that health information from GP's is less important to young people because their consultation rates with GPs are that much lower.

The media, as represented by magazines, newspapers, television and radio, is undoubtedly a powerful method of conveying information to a wide audience. The influence that media information has largely depends on its nature and/or method of presentation. A 'news' item about a particular product will have a greater impact on consumer behaviour than a straightforward advertisement. Advertising is recognised to be promotion of a product whereas a news story is held to be fact, the "I read it in a newspaper, so it must be true" syndrome. Whilst many people will remain sceptical of some articles they read, if it is a subject about which they know very little, it will frequently be accepted at face value. A similar situation occurs with television and radio. However, with these two mediums there is the additional force of the face/voice of the presenter. If the presenter is thought to be credible by the audience the power of the message is quite considerable.

In our survey only 28 per cent of people aged over 55 considered newspapers and magazines to be an important source of health information as compared to 43 per cent of those aged under 24 and 44 per cent of those aged 25 to 54. It is possible that many

Table 2 All respondents' most important source of health information ranked from 1 to 9 (1 being high)† Base: All (Percentages*)

Source	ALL	15-20	21-24	25-34	35-44	45-54	55-64	65+
Magazines/Newspapers	2 (16)	4 (11)	2 (14)	2 (18)	2 (19)	2 (20)	2 (18)	3 (11)
TV	3 (13)	2 (19)	4 (7)	3 (13)	3 (17)	3 (9)	3 (9)	2 (12)
Radio	9 (3)	9 (2)	9 (—)	7 (5)	9 (3)	9 (1)	9 (1)	7 (5)
Leaflets in GP waiting room	7 (5)	8 (3)	5 (4)	7 (5)	4 (8)	7 (3)	8 (3)	5 (7)
GP	1 (48)	1 (48)	1 (50)	1 (44)	1 (42)	1 (47)	1 (55)	1 (54)
Practice nurse/health visitor/midwife	5 (6)	6 (7)	5 (4)	4 (8)	5 (7)	4 (5)	5 (6)	8 (4)
Pharmacist	5 (6)	4 (11)	7 (3)	5 (7)	5 (7)	8 (2)	7 (4)	4 (8)
Other health professional	7 (5)	6 (7)	8 (2)	7 (5)	5 (7)	6 (4)	6 (5)	8 (4)
Friends or relatives	4 (8)	3 (14)	2 (14)	6 (6)	5 (7)	4 (5)	3 (9)	6 (6)

† Question asked was: Please can you rank these sources from 1 to 9, in order of importance to you in terms of where you obtain your health information (1 high, 9 low)?

* Note: Percentage columns do not total 100 per cent since some people selected and ranked some sources as being of equal value.

pensioners living on a limited budget spend less on magazines and newspapers and there are very few magazines specifically targeted towards this age group.

However, financial constraints, at most, can only be part of the explanation since a similar pattern emerges with regard to television, which in today's society most regard as an essential (98 per cent of households in Great Britain have at least one television (Social Trends, 1993)). Whilst only 25 per cent of the over 55's consider television to be an important source of health information, 35 per cent of those under 24 and 34 per cent of those aged 25 to 54 do. This may reflect the type of health message being shown on television. Many programmes which contain a 'health message' have, particularly in recent years, concentrated on the 'fashionable' aspects of health care such as AIDS, drug misuse and life saving operations for young children, which although interesting are not likely to be seen as having a direct bearing on the lives of people in the over 55 age group.

As sources of information, the importance of friends and relatives also varied between the different age groups. Of those aged 15 to 20, 32 per cent considered their friends and relatives to be an important source of information, and although the age groups 21 to 64 were fairly stable at around 20 per cent, only 7 per cent of those aged 65 and over obtained health information from family and friends. Generally speaking people rarely feel comfortable receiving advice from someone younger than themselves, unless they are in a position of authority such as a GP. It is also probably true to say that the older generations are less happy to discuss personal health matters with friends and relatives than younger generations.

Sex

Variations were also found in the value placed on friends and relatives between men and women. Women between the ages of 15 and 44 were more likely to obtain information from friends and relatives than men in same age groups. A possible explanation is that these are the years when women are likely to be having and rearing children and are therefore more likely to be discussing concerns relating to the health of themselves and their children with friends and

relatives. It is often opined that women have a different kind of relationship with female friends than men have with theirs and therefore women will discuss health matters more openly. Whether or not this is true it does not explain the finding from our survey which showed that men between the ages of 45 and 64 were almost twice as likely to obtain health information from friends and relatives as women in this age group, although it is possible that this could be a 'chance' finding.

Our survey showed that for both sexes and all age groups television, magazines and newspapers were considered to be a very important source of health information (radio was not seen to be important by either sex or any age group). A higher proportion of women (44 per cent) than men (33 per cent), of all ages, regard newspapers and magazines to be an important source of health information. This probably reflects the fact that the majority of magazines which include health columns are targeted at women. Most magazines aimed at men concentrate on specific hobbies or sports. However, surveys have shown that a high number of men do read women's magazines (see Table 3), although they probably do not purchase them. Certainly, in our survey nearly 20 per cent of men aged 21 to 54 thought magazines and newspapers were the most important source of health information.

Differences in attitudes to screening between men and women were found to be particularly marked. Respondents were asked to what extent media coverage of health problems had affected their attitudes to health screening (see Table 4) and whether they would be more or less likely as a result to have some form of screening. As can be seen from Table 4, around 50 per cent of women would be more likely to have some form of screening as compared to approximately 25 per cent of men. This finding may in part be explained by the fact that the screening programmes which are generally well known, such as cervical smear testing and mammography, are aimed at women.

Other important variations between men and women were found in their respective use of practice nurses, health visitors and midwives. Eighteen per cent of women between the ages of 21 and 34 said that they obtained health information from this source as compared to 5 per cent of men, 14 per cent of women aged 25 to 34 considered them to be the most

important source of health information. Clearly, this relates to the ages at which women are having children. In the same age group there is also a difference between the sexes on the value placed on the information obtained from the pharmacist. This is probably explained by the fact that women in this age group are likely to be the people purchasing over the counter remedies from pharmacies for the entire family.

In the 1990's health administrators see women as the key to health education. It is women who are at

Table 3 *Readership of Women's Magazines (millions)*

Magazine	Readership		
	Female	Male	Total
Bella	2.76	0.84	3.60
Best	1.59	0.41	2.00
Chat	1.44	0.29	1.73
Company	0.49	0.08	0.57
Cosmopolitan	1.50	0.50	2.00
Elle	0.67	0.20	0.87
Essentials	1.25	0.18	1.43
Good Housekeeping	1.55	0.45	2.00
Hello!	1.05	0.31	1.36
Living	0.53	0.08	0.61
Marie Claire	0.66	0.13	0.79
More	0.56	0.06	0.62
My Weekly	1.51	0.22	1.73
New Woman	0.53	0.05	0.58
Options	0.51	0.10	0.61
Prima	2.18	0.26	2.44
She	1.05	0.18	1.23
Take A Break	2.80	0.70	3.50
Woman	2.50	0.29	2.79
Women's Journal	0.52	0.10	0.62
Woman's Own	3.40	0.54	3.94
Woman's Realm	1.27	0.19	1.46
Woman's Weekly	2.33	0.34	2.67

Data provided by individual journals (January-June 1992)

the forefront of patient groups and it is predominantly women who, as can be seen from the results of the survey, read health literature. Women have lobbied government to set up cervical and breast cancer screening services and, against the medical profession's wishes, demanded menopause/hormone replacement therapy (HRT) clinics. Few men are campaigning for screening for prostate cancer which kills five times as many men as cervical cancer kills women.

Not only have women been more influential in telling the medical profession which health services the public requires, they also use more of them. With a condition such as neuralgia, which affects men and women in equal numbers, women are four times more likely to seek treatment. There are likely to be many possible explanations for this variation including a male 'stiff upper lip' philosophy, and the convenience of doctors' surgery times. A significant reason is likely to be ignorance.

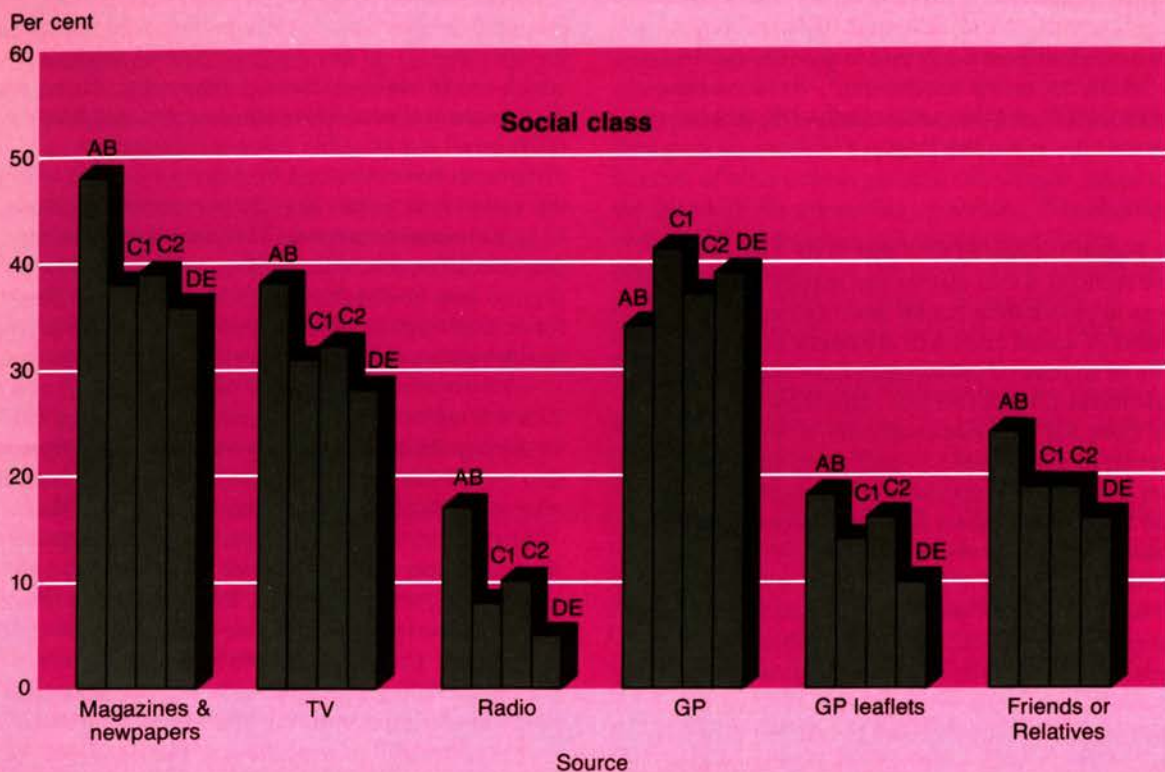
Women are generally better informed about health matters than men. The explanation for this difference is likely to be multi-factorial. Firstly, for many women their nurturing role as mothers will bring them into contact with health professionals. Secondly, most health information as presented by the media is principally aimed at women. Most women regularly read some kind of magazine, the majority of which have a health column. Television and radio programmes which contain health information are generally broadcast during the day and are aimed at women working inside the home.

This being said, it might be expected that women would get a better deal from the medical system than men - but this does not always appear to be the case. Despite the fact that coronary artery disease is a leading cause of death among women, recent results from a survey by Steinhardt et al (1991) conducted in the USA suggest that there are clear differences in the

Table 4 *Question - To what extent do you think media coverage of health problems has affected your attitude towards screening services?*

Response	Age						
	15-20	21-24	25-34	35-44	45-54	55-64	65+
MEN							
Made me much more likely to have screening	8	8	8	14	11	7	6
Made me a little more likely to have screening	17	13	22	10	19	25	12
Made no difference	69	72	66	71	64	63	76
Made me less likely to have screening	1	-	1	4	1	-	1
Don't know	6	7	2	2	5	5	5
WOMEN							
Made me much more likely to have screening	33	28	29	26	35	19	18
Made me a little more likely to have screening	18	32	22	34	25	25	16
Made no difference	41	32	46	40	33	52	61
Made me less likely to have screening	4	2	1	-	4	3	1
Don't know	3	6	1	1	3	1	5

Figure 1 Sources of health information by social class



way men and women are treated for coronary artery disease by specialist cardiologists. Before their myocardial infarction, women were as likely as men to have gone to their doctor complaining of angina and to have received medication. However, even though on average women were more likely to have been affected by their heart condition men were twice as likely to be given intensive testing and twice as likely to get coronary artery bypass surgery. The study concluded by saying that physicians “pursue a less aggressive management approach to coronary

disease in women than in men, despite greater cardiac disability in women”.³

If it is accepted that women are better informed, it is important to consider why US evidence suggests in some important areas they may not be receiving appropriate care. One possible explanation for the US

³It should be noted that whilst women more often complain of angina they are less likely than men to have a myocardial infarction or die as a consequence. This high ‘false-positive’ rate may mean that less attention will be paid to women.

Table 5 Most important source of health information by rank order (Percentages)

RHA	Source of information								
	Mag/News	TV	Radio	GPL	GP	Prac N	P	OHP	F/R
Scotland	2 (16)	3 (12)	9 (—)	5 (5)	1 (37)	6 (3)	7 (2)	8 (1)	3 (12)
Northern	2 (13)	5 (5)	9 (—)	6 (4)	1 (52)	3 (8)	7 (3)	8 (2)	4 (6)
Yorkshire	2 (17)	4 (7)	9 (—)	7 (1)	1 (54)	7 (1)	5 (4)	6 (3)	3 (8)
N Western	2 (23)	3 (14)	7 (4)	8 (2)	1 (42)	6 (6)	9 (1)	4 (9)	4 (9)
Mersey	3 (15)	2 (20)	4 (12)	9 (4)	1 (50)	6 (10)	7 (7)	8 (5)	4 (12)
Trent	2 (16)	3 (10)	6 (3)	8 (2)	1 (54)	8 (2)	6 (3)	5 (5)	4 (4)
W Midlands	2 (19)	3 (14)	7 (1)	5 (5)	1 (43)	7 (1)	5 (5)	7 (1)	4 (7)
S Western	2 (11)	3 (9)	9 (—)	4 (4)	1 (65)	6 (2)	6 (2)	5 (3)	8 (1)
Wales	4 (14)	2 (16)	8 (6)	5 (9)	1 (67)	8 (6)	6 (8)	6 (8)	3 (15)
Wessex	6 (5)	8 (1)	9 (—)	5 (17)	1 (70)	2 (48)	3 (39)	4 (23)	7 (2)
Oxfordshire	2 (25)	3 (21)	9 (—)	6 (2)	1 (32)	4 (3)	6 (2)	4 (3)	6 (2)
E Anglia	2 (12)	3 (9)	6 (1)	7 (1)	1 (63)	9 (—)	7 (1)	4 (5)	5 (4)
N W Thames	2 (23)	3 (9)	7 (3)	3 (9)	1 (42)	9 (—)	5 (6)	7 (3)	6 (5)
N E Thames	5 (13)	4 (14)	9 (7)	6 (10)	1 (55)	8 (8)	2 (18)	7 (9)	2 (18)
S W Thames	3 (19)	2 (24)	5 (9)	6 (3)	1 (27)	6 (3)	8 (2)	8 (2)	4 (10)
S E Thames	3 (13)	2 (30)	5 (5)	7 (3)	1 (35)	8 (2)	8 (2)	6 (4)	4 (7)

Legend:

Mags/News Magazines and Newspapers
 TV Television
 GPL Leaflets in GP waiting room
 Prac N Practice nurse/health visitor/midwife

P Pharmacist
 OHP Other health professional
 F/R Friends and relatives

finding is that doctors categorise medical problems according to sex thus leaving women who also suffer from conditions such as coronary heart disease and lung cancer vulnerable. Alternatively women may fail to articulate their needs and to provide the doctor with 'all the necessary information'. Relationships between the GP and the patient in the UK will be discussed later in the briefing.

Social Class

From Figure 1 it can be seen that in the OHE survey people from all social classes use several different sources to obtain their health information. But more members of social class AB⁴ are likely to use a wider variety of sources of information than members of social classes C1, C2 and DE. This may mean that social class AB are more conscious of health issues. However, it is interesting to note that a substantially higher proportion of members of social class AB obtain health information from newspapers and magazines than from the GP. All sources of written information included in the survey were considered more useful by social group AB. It should be questioned whether social group AB obtain more information from newspapers and magazines than from the GP than other social groups because they consult less frequently or whether because they have access to more sources of written information than other social groups they have less need to obtain health information from their GP.

Geography, by Regional Health Authority

In Scotland, Wales and the 14 Regional Health Authorities in England the most important sources of health information roughly approximates the following rank order:

1. General Practitioner
2. Magazines and Newspapers
3. Television
4. Friends and relatives
- 5,6,7,8. Practice nurses, health visitors and midwives, pharmacists, leaflets in the GP surgery, other health professionals
9. Radio

Given the differences between the regional health authorities, Scotland and Wales in terms of unemployment rates, social demography and rates of usage of NHS resources, particularly GP consultations and number of prescriptions per head of population, it is surprising that there is such a consistency regarding the most important sources of information. Such variations that do exist do not correlate well with the number of prescription items dispensed and the number of GP consultations per head of population by Regional Health Authority. It might have been expected that those regions which consider health information provided by health professionals to be of greatest importance to have the highest GP consultation rates and consequently the highest prescription rates, but the relationship was not found.

⁴ Social class: AB - Professional, managerial and technical
C1 - Skilled non-manual
C2 - Skilled manual
DE - Semi-skilled & unskilled manual

However, as can be seen from Table 5 one region, Wessex deviates from this broad pattern. The residents of Wessex appear to value information provided by health professionals (including leaflets in the GP surgery) far more highly than information which can be obtained through the media. Given that the sample size used when taken at regional level is fairly small it is possible that some of these differences have occurred by chance, however where the variation is greater than 30 per cent it is unlikely to be a chance occurrence. It is therefore possible that the difference between Wessex and the other regions may be due to some factors unique to Wessex, for example numbers and use of practice nurses, health visitors and midwives.

The GP as a source of information

In the past decade it has been increasingly accepted that the GP has an important role to play as a health educator⁵ (Boulton & Williams, 1983; Tudor Hart, 1981; Taylor, 1982). Approximately three quarters of the population visit their doctor at least once a year and almost everyone visits at least once every five years (Cartwright & Anderson, 1981). GPs are therefore in a position to reach virtually the entire population of registered patients, and thus those least likely to take up health education services on their own initiative. The continuity of care provided by general practice also means that the doctor has the opportunity to build upon, monitor and reinforce health education given previously. This is especially important since health knowledge may be best developed and refined over an extended period of time (Boulton & Williams, 1983). Studies have also shown that the ability to follow-up the patient's behaviour once advice has been given increases the effectiveness of that advice (Russell et al, 1979).

In turn, patients regard GPs as the most respected and trusted source of health information. Health advice offered by a GP is likely therefore to have a greater impact than that provided by other sources (see Box 1). Patients are particularly receptive to such information in the context of the consultation and understandably, they become more avid consumers of any information available on their particular health condition. In the survey by Cartwright and Anderson (1981), 85 per cent of the respondents they interviewed wanted to know as much as possible about what was wrong with them when they were ill and about half wanted to know the actual physiological details as well.

Evidence for the particular value of the consultation as a setting for health education comes from evaluations of mass media campaigns. These suggest that, while the media have an important 'agenda setting' role, on their own they have a rather limited impact on attitudes and behaviour (Boulton & Williams, 1985). The OHE survey data would appear to support this hypothesis. Whilst respondents

⁵ Education, as defined by the Oxford English Dictionary, means "the act or process of educating or being educated; systematic instruction". Education is thus directional. Information, as defined by the Oxford English Dictionary, means "something told; knowledge; items of knowledge; news". Information in this sense is therefore neutral. However, information also means "the act of informing or telling".

considered the media to be an important source of health information, they did not perceive the media coverage of health issues as having a large impact on their uptake of screening services. Lifestyle changes were also limited (see Tables 6 and 7). The survey also asked whether media coverage of health problems had led respondents to purchase more remedies from the pharmacist - only 12 per cent said that it had (the issues of self medication and the role of the pharmacist are considered further in Box 2). Similar results were found when respondents were asked whether media coverage of health problems has led them to visit their GP. These results would suggest that whilst the media fulfils an important role in providing general information it is necessary for there to be a relationship between that information and the personal situation of the individual for there to be a change in behaviour. Alcalay (1983) points out, "active participation of the receiver in an interactive process is much more effective in achieving and maintaining educational objectives ... than is a passive role". GP consultations are by definition interactive and provide an opportunity for educational dialogue and an exchange of ideas between doctor and patient (HESU, 1982).

Given that GPs are ideally placed to influence patients behaviour and that patients place a high value on the advice that they provide, it is disappointing that their impact may be limited. General practice consultations differ in the amount of health information that is communicated to the patient. Some doctors give very little information or explanation to patients during a consultation whilst

others consciously assume the role of health educators and take the opportunity to use the consultation to inform their patients on medical matters. It is probable that the majority of consultations fall somewhere between the two extremes.

Individual physicians differ in the extent to which they provide medical explanations to patients but the amount of information given is not simply linked to the nature of the presenting symptom. The offering of medical information to a patient by a doctor depends to a degree on the social psychology of the particular consultation, that is, the expectations, perceptions, attitudes and communication skills of the participants.

In most interpersonal encounters as the distance between the cultures of the two participants increases mutual understanding tends to decrease (Triandis, 1975) which has obvious consequences for the smoothness of the interaction. Since most doctors are middle class with socio-economic status AB (Gough & Ducker, 1977) it is not surprising that consultations with working class patients (C2 and DE) present more communication problems than consultations with middle class patients (Pendleton & Bochner, 1980). Bain (1977) found that lower social class patients were more likely to misunderstand doctors explanations and instructions than middle class patients.

A study by Pendleton and Bochner (1980) of 79 'naturally occurring' consultations, examined directly the process of information and explanation given in general practice. The dependent variables measured

Box 1 *Screening in general practice*

Two randomised controlled studies published this year set out to assess the effectiveness of general practice based health screening in reducing risk factors for cardiovascular disease (Imperial Cancer Research Fund OXCHECK Study Group, 1994; Family Heart Study Group, 1994). Both studies reported nurse led programmes. Patients were assessed on height, weight, diet, smoking, blood pressure and cholesterol concentrations and were counselled by the nurses about risk factors for cardiovascular disease. After one year, patients were re-examined.

In the study by the Family Heart Study Group reported smoking was lower by four per cent, weight by one kilogramme, systolic pressure by 7mm Hg, diastolic pressure by 3mm Hg, and cholesterol concentrations by 0.1 mmol/l on average. Whether these small reductions could be sustained long term is not known, but even if they were they would only result in a 12 per cent lower risk of coronary heart disease events.

The study by the OXCHECK Study Group also reported disappointing results. They found no difference in smoking prevalence, quit rates or body mass index between the intervention group and the controls. Mean serum total cholesterol was 2.3 per cent lower in the intervention group than in the controls and similar findings were found for blood pressure measurements. The authors concluded that general health checks by nurses are ineffective in helping smokers to stop smoking, but they do help patients to modify their diet and total cholesterol

concentration. With both studies, the public health importance of these changes is largely dependent upon whether they can be sustained in the long term - and a one year follow-up is insufficient for any definite conclusions to be drawn.

Both of these studies involved an intensive programme of screening directed at a broad base of all patients registered in selected general practices aged 35 to 64 (OXCHECK Study Group) and 40 to 59 (Family Heart Study Group). Participants in the studies were randomly selected and there is no indication that they recognised or accepted that they had a health problem which appears to be fundamental in achieving changes in people's lifestyle. Furthermore, neither study specifically targeted high risk groups of patients and it would be inappropriate to judge general practice based screening programmes to be ineffective as a result.

In the light of the OHE survey which indicates that information provided by practice nurses is not highly valued by most of the population, compared with that provided by the GP (the exception being women of child-bearing age), the fact that both of these intervention programmes were nurse led may be a factor in their poor outcomes. This is not to say that the information provided by nurses is any less valid than that offered by GPs but the OHE survey would appear to suggest that the consumer has yet to recognise the full role that nurses can play in the provision of health care.

Table 6 *Has media coverage led you to alter your lifestyle in some way, e.g. diet, to exercise more, to give up smoking?*

Response	Percentage					
	Sex		Social class			
	Male	Female	AB	C1	C2	DE
Yes	31	32	36	33	30	29
No	66	66	63	64	68	68
Don't know	3	2	1	3	1	3

Table 7 *Extent to which media coverage of health problems has affected your attitude towards screening services, e.g. blood pressure, cervical smears, screening for breast cancer?*

Response	Percentage					
	Sex		Social class			
	Male	Female	AB	C1	C2	DE
Made me much more likely to have screening	9	26	17	22	18	15
Made me a little more likely to have screening	17	24	25	23	20	17
Made no difference	69	46	53	52	58	61
Made me less likely to have screening	1	2	2	1	2	3
Don't know	4	3	3	2	2	5

were the length of the consultation and the amount of information given to the patient. The independent variables were the doctor, the sex of the patient and the socio-economic status of the patient, who were classified as belonging to either low, medium or high social class (the doctors provided this information). Information given by the doctor during the consultations (which were videotaped) was broken down into four different types of statements: doctor volunteers information; doctor volunteers an explanation; doctor gives information in response to a question; and doctor gives an explanation in response to a question. The results are given in Table 10. It was found that higher social class patients received more volunteered explanations than do lower social class patients, even when this was adjusted for the type of problems with which they were presenting. It was found that differences between doctors, and therefore between practices, determine differences in the length of consultations and women patients were given more information in answer to their (more frequent) questions.

In the study by Bain (1977) during a one year period 480 consultations were analyzed and the relationship between verbal exchange in doctor-patient consultations and patients' comprehension was assessed. Evidence was found of differences in outcomes for similar presenting illnesses in different social groups. This study showed notable differences between socio-economic groups of patients, regarding their understanding of the diagnosis (in social classes I & II 94 per cent of patients were

correct compared to social classes IV & V who were only 84 per cent correct), drugs prescribed (86 per cent and 48 per cent correct respectively), and advice given by the doctor (83 per cent and 69 per cent respectively). In all aspects of knowledge studied, the upper social groups had better recall of information given than lower social groups. Analysis of audio-tapes of the consultations revealed considerable variation in content and other studies have shown that the amount of information forgotten is a linear function of the amount presented, to be correlated with the patient's medical knowledge, anxiety level, and possibly age, but not with intelligence (Ley, 1979).

The findings of these two reported studies have important implications especially in the light of the current governments stated aims of making the individual more responsible for his or her own health (Health of the Nation, 1992) and involving patients and the public in choices and decision making (Patient's Charter, 1991). In particular, it is difficult to see how a patient can be expected to make a rational decision regarding received health care or altering lifestyle when they are not receiving all the information necessary to make that rational decision.

Illich (1977) suggested that patients have a right to information about what is happening to and being done to their bodies. As Cartwright and Anderson (1981) reported most patients express the desire to receive as much information as possible about their illness. It is also certain that unless potentially ill persons have the necessary information to interpret their bodily sensations accurately their ability to decide whether or not to seek professional help may be impaired. However, information on its own is not sufficient, explanations are also required since many patients find medical information on its own confusing and difficult to remember. Unfortunately, as can be seen from Table 7, explanations are being offered most to those who may need it least, that is, to those whose socio-economic status means they are already likely to be better informed. Doctors should explain more to patients of socio-economic status DE, even if they do not ask for information, in an effort to compensate for their lack of knowledge. This being said, explanations are to a lesser or greater degree being offered to all socio-economic groups and it is perhaps this factor which goes some way to explain why the OHE survey found that information provided by GPs was valued so much more highly than other sources of health information.

In the study by Cartwright and Anderson (1981) it was reported that most GPs felt that their patients were now more knowledgeable about health matters than they had been ten years before and just over half of patients over 25 thought their own knowledge of health matters was greater. Most of those who felt this believed it was because they had had more experience or were older but 16 per cent of all patients thought their knowledge was greater because of television, radio or reading.

If patients are more knowledgeable about their health, it is likely that this will affect their hopes and expectations about a consultation with their GP. Respondents in the OHE survey were asked whether when they last consulted their GP regarding a health

Box 2 Willingness to self medicate

Speaking at the Annual Pharmaceutical Conference in November 1993, Dr Brian Mawhinney, Minister for Health, stated that self medication "encourages people to be more interested in and committed to their own health; [and] it empowers individuals with greater freedom to determine for themselves what medicines they will use." This statement was reiterated by Virginia Bottomley, Secretary of State for Health, at the Financial Times Pharmaceutical Conference in March 1994. Whilst self-medication appears to be an attractive concept, in theory, it does seem to presuppose that the necessary information by which patients can make a decision about which medicines would be appropriate for their particular complaint, assuming that they know from what they are suffering, is readily available.

Increasingly, the public is being encouraged by the government to take responsibility for its own health and thus purchase medicines through pharmacies and other retail outlets rather than visiting a GP and receiving items on prescription. More medicines previously only available on prescription, are becoming available in pharmacies without prescription (that is, they are available for the public to purchase only through pharmacies). However, the OHE survey found that when respondents of all ages were asked if media coverage of health problems had led them to purchase more health remedies from pharmacists, 86 per cent said no. Interestingly, although women are usually the purchasers of family health remedies, there was no substantial difference between the sexes.

In order for people to self-medicate they need information to make a diagnosis of their health problem, to identify an appropriate medicine to purchase for their complaint, to know how to use the medicine and of possible side effects or contraindications. It is usually believed that the individual best placed to provide this information is the pharmacist and Virginia Bottomley (Financial Times Pharmaceutical Conference, 1994) has stated that self-medication "makes the most of the wealth of professional expertise which is on hand in over 10,000 community pharmacies in England". Unfortunately, in practice, pharmacists do not appear to be recognised by the public as fulfilling this role.

The OHE survey found that fewer people ranked information supplied by pharmacists as either first (see Table 2) or second most important source compared to that supplied by the GP, the media, or friends and relatives. This finding is supported by a recent study of consumer expectations of community pharmaceutical services (DoH, 1991). Although, 66 per cent of consumers believed that it was the pharmacist's job to give general health advice on minor ailments only 45 per cent had ever sought advice from their pharmacist. Of those who had never asked the advice of a pharmacist the majority (78 per cent) said that it was

their doctors job to give health advice and over half (53 per cent) also said that pharmacists would not know enough about their health, clearly valuing the continuity of care provided by the GP.

Not only do consumers seem to not seek information from pharmacists, it is not clear that pharmacists are providing the information which they should. In December 1993 a survey of 50 community pharmacies conducted by Independent Television News, was carried out because of the impending switch from prescription only to pharmacy supply of a number of important medicines. In the survey researchers went anonymously to 50 pharmacies nationwide and asked for Zovirax (a product used in the treatment of cold sores and which had already been switched from prescription only to pharmacy supply). It was reported that most pharmacists failed to ask the questions recommended by the manufacturer, give the recommended warnings (in particular, that the product was ineffective against genital herpes) or give essential advice. In response to the survey by ITN, the President of the Royal Pharmaceutical Society, Mr Nicholas Wood, said "...I am alarmed to hear yet again of a survey claiming to show that pharmacists do not do their job properly. Even though the ITN survey may well be flawed, it seems to show that a section of the membership needs to wake up to what is now expected" (Pharmaceutical Journal, 1993).

The surveys cited above appear to suggest that the pharmacist is neither highly valued as a source of information nor their advice widely sought, if this is the case the role of the pharmacist needs to be clarified. We have to be clear when information provided by the pharmacist is important to the safe and effective use of a medicine. Where advice on usage is not essential, consideration should be given to these medicines becoming available on general sale through all retail outlets, for example supermarkets.

For those medicines which are perceived to require the provision of information on use, there appears to be two realistic alternatives. Either, a way must be found to ensure that not only does the pharmacist actually provide this information but that it is valued by the consumer. Pharmacists have a number of barriers to overcome in their relationship with consumers to achieve this. Or, and this largely removes the individuals responsibility to self-medicate, purchases of such medicines will be driven by the GP. This could mean that the GP will recommend a product for the patient to purchase, necessitating a consultation. In the longer term GPs may seek to establish a pharmacy within their practice over which they will exercise control, which could enable patients to purchase a medicine in the surgery without a GP consultation.

problem they felt that the GP properly listened to their description of the symptoms or not? The response to this question is given in Table 9. As can be seen, the overwhelming majority of people do feel that their GP listens to their problems although, worryingly, over a quarter of women aged between 25 and 34 do not believe this to be the case.

Overall, our survey found that 80 per cent of respondents were very or fairly satisfied with the treatment or advice provided by their GP. Those aged less than 35 years were less likely to be satisfied with their GP (see Table 10). As can be seen from Table 9 women aged 25 to 34 are again the group expressing the least satisfaction with GP services.

Apart from the over 65's and young children this is the group of people with the highest GP consultation rates. However, although 80 per cent does represent a high degree of satisfaction it is in fact a fall of 10 in the last 10 to 15 years (Cartwright & Anderson, 1981⁶). It is possible that increased dissatisfaction in

⁶ Nine-tenths of patients in the study by Cartwright and Anderson described themselves as 'very satisfied' or 'satisfied' with the care they received from their doctor.

⁷ It should be noted that several studies have reported that patients express more dissatisfaction with the information given to them by doctors than with any other aspect of medical care (Waitzkin & Stoekle, 1976).

Table 8 Mean length of consultation and mean number of health related statements given by the doctor in each of the experimental conditions

Variables	Social class of male patients			Social class of female patients		
	Low	Medium	High	Low	Medium	High
Number of patients	15	6	13	5	14	26
Mean length of consultation in minutes	5.4	4.8	6.7	5.0	7.0	7.6
Mean number of volunteered information units per consultation	1.5	1.5	3.1	1.8	2.8	3.2
Mean number of volunteered explanations per consultation	1.3	1.3	2.1	0.4	1.2	2.1
Mean number of information units in response to a question per consultation	0.7	0.7	1.1	0.8	1.9	3.2
Mean number of explanations in response to a question per consultation	0.3	1.2	0.5	0.2	0.6	1.4
Total health related statements per consultation	3.8	4.6	6.8	3.2	6.5	9.9

Source: Pendleton & Bochner, 1980

some way relates to the type of health problem they are presenting with, particularly women aged 25 to 34, or perhaps it is a sign of increasing consumer awareness and a resulting loss of status for professional groups. Whatever the reason, it is important to recognise that there is a clear relationship between satisfaction with a medical consultation and compliance with advice given.

Patients' satisfactions with the consultation (Francis et al, 1969), satisfaction with communications (Kincey et al, 1975; Ley et al, 1976); Ley, 1979) and general satisfaction with medical care received (Haynes et al, 1979) all correlate with patients' compliance with advice. Satisfied patients are more likely to comply. Various studies have indicated a relationship between the understanding of medical advice which both improves patient recall of advice and increases patient satisfaction with the consultation thereby leading to improved compliance with medical advice (see Figure 2).

Table 9 Question – When you last visited your GP for a health problem do you think that he/she properly listened to your description of symptoms or not?

Response	Percentages						
	Age						
	15-20	21-24	25-34	35-44	45-54	55-64	65+
MEN							
Yes	68	82	69	85	79	75	82
No	20	13	22	10	15	14	12
Don't know	13	5	8	4	6	11	5
WOMEN							
Yes	71	74	70	82	81	85	75
No	23	18	27	15	14	12	18
Don't know	6	7	3	3	5	3	7

Table 10 Question – How satisfied were you with the treatment and/or advice given by your GP?

Response	Percentages						
	Age						
	15-20	21-24	25-34	35-44	45-54	55-64	65+
MEN							
Very satisfied	23	56	45	53	55	56	71
Fairly satisfied	39	23	35	36	33	24	16
Neither satisfied nor dissatisfied	13	5	6	2	1	7	5
Not satisfied	16	17	9	7	3	6	5
Don't know	8	–	5	2	7	7	3
WOMEN							
Very satisfied	46	57	42	57	67	68	61
Fairly satisfied	31	18	31	24	12	17	22
Neither satisfied nor dissatisfied	5	10	2	5	6	3	1
Not satisfied	15	11	25	11	10	12	12
Don't know	3	3	1	3	4	–	4

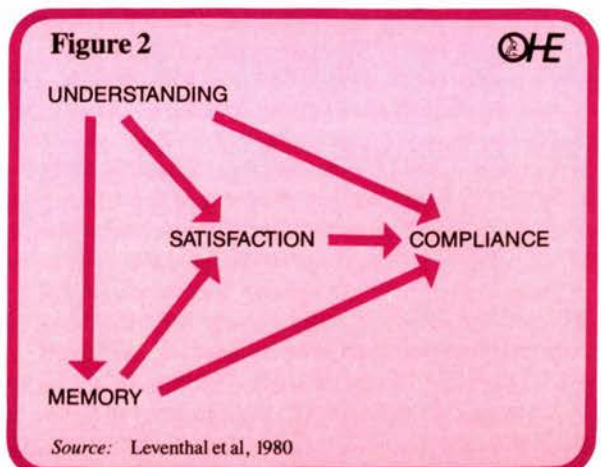
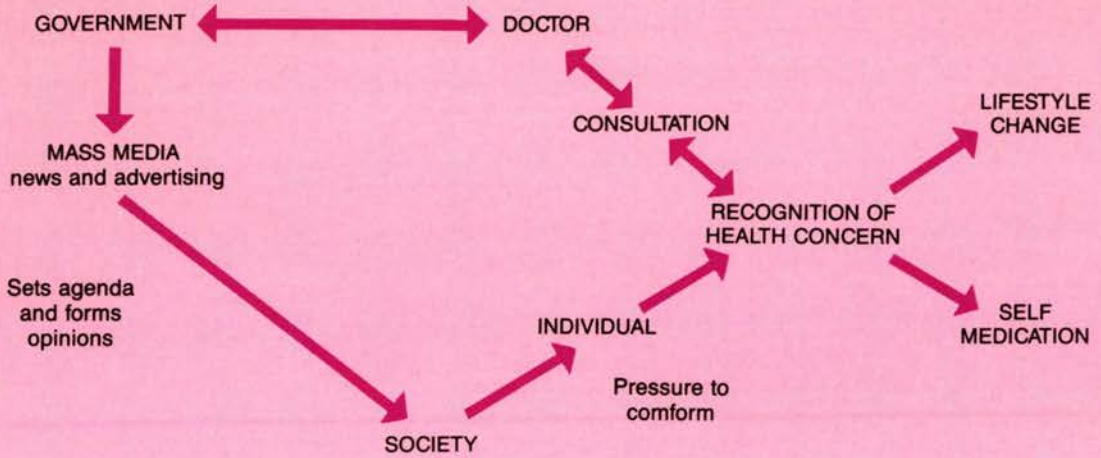


Figure 3 *The role of health information in changing the lifestyle of the individual*



Conclusion

Health workers often despair of getting the public to comply with health advice. It has been suggested that this is in part due to an over-reliance on brief doctor-patient consultations as the sole agent of change (Thompson, 1984). The doctor's recommendations are only one factor in health behaviour and unless the patient perceives the relevance to his/her life immediate behavioral change is unlikely. However, some physicians are discouraged by this lack of response and so believe that their responsibility ends there. Other factors which impinge on individual behaviour are social pressures which are more easily changed by public advertising and media campaigns. Major changes are taking place in health behaviour as a consequence of these social forces.

One of the most detailed studies ever carried out on the health and lifestyle of the British population was carried out in 1984 and 1985 (HALS 1) to examine how people's behaviour and the circumstances in which they live affect their physical and mental health. Over 9000 adults were questioned about major aspects of their lifestyle, including diet and exercise, smoking and alcohol consumption; they assessed their own state of health and reported past and present illnesses. Soon after a nurse carried out physical measurements such as height, weight, blood pressure and lung function. In 1991 and 1992 the

survey was repeated (HALS 2). Of the original sample, 5,352 were traced and resurveyed to find out how their health and lifestyle had changed in the last seven years. These two surveys show how people change over time. In the area of diet there are some particularly marked changes. It was found that over seven years there was a marked fall in the consumption of high fat foods, and butter and margarine had been largely replaced by polyunsaturated and low fat spreads. It is interesting to note that whilst dietary changes are notoriously difficult to bring about, commercial interests backed by advertising have succeeded in massively increasing sales of butter substitutes by referring to supposed health advantages. The original message about polyunsaturated fats was a complicated one, yet it has been transmitted and appears to have led to changes in a population's eating behaviour or at least what they purchase at the supermarket. The modest increases in bran and fibre consumption, and the reduction in the number of people taking sugar in their tea or coffee found in HALS 2 are other examples of changes which go beyond mere food fads and which alter national patterns of consumption in a long-term way.

What can be concluded from these findings is that health behaviour of the public can be changed long term by sustained and extensive information

Box 3 *Conveying information effectively: points for future research*

- The relative importance of the roles played by GPs and other primary care workers, hospital based health workers, health educators and the media in achieving the targets set out in the government document 'The Health of the Nation';
- The effectiveness of general practice health promotion programmes directed at high risk individuals;
- Policy and resource implications of conclusion that GPs are the most effective educators;
- The impact that messages produced by advertisers and health promotion campaigners (for example, tobacco advertising and anti-smoking campaigns) have on the attitudes and lifestyle of the individual;
- Whether policies encouraging self-medication and promoting the role of pharmacists as informers are well founded;
- The role industry (food and medicines) has played and should play in educating the public in health and lifestyle issues.

campaigns which recruit people as participators in health maintaining activities (see Box 3). Results do not occur immediately, nor do all people change as intended but nevertheless considerable changes occur. However, media and government backed public health campaigns only increase awareness and help to formulate public opinion. To change an individual's lifestyle it is necessary for the individual to understand the health message and to accept the relevance for their own lives (although financial incentives such as increased taxation on cigarettes can have a similar effect). The GP, in the role of health educator, is well placed to positively develop and build upon the lifestyle information which has been received by the patient from a variety of sources (see Figure 3). Since health knowledge and lifestyle changes appear to occur over time the continuity of care provided by the GP permits the monitoring of the patients health and increases the effectiveness of health advice given.

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