Fair shares in health care? Ethnic and socioeconomic influences on recording of preventive care in selected inner London general practices

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Abstract

Objective—To describe the association of ethnic and socioeconomic status with recording of preventive care information by selected general practitioners.

Design—Random selection of people aged 20–64 registered with 43 general practitioners. Ethnic and social characteristics of stratified samples were determined at interview in the subject's home. Recording of preventive information was ascertained from general practitioners' medical records.

Setting—Inner London borough of Tower Hamlets.

Subjects—505 out of 739 people confirmed as resident at their home address (190 white, 86 black, 112 Bangladeshi, 105 Chinese or Vietnamese, 12 other).

Main outcome measures—Socioeconomic characteristics, consultation with general practitioner, and recorded preventive activities for ethnic groups.

Results—Minority ethnic groups were considerably more disadvantaged than white people and five times more likely to be overcrowded (31% v 6%), three times less likely to own their own home (11% v 37%), twice as likely to be in social classes IV and V (54% v 28%) and less likely to be employed (34% v 63%). There were no significant differences between white, black, Bangladeshi, and Chinese or Vietnamese subjects in recording of smoking, blood pressure, alcohol consumption, weight, and height in the general practitioners' medical records. White women were more likely to have a record of mammography (46% v 20%; $P=0.03$) and of cervical smears than women in minority ethnic groups.

Conclusion—Despite major socioeconomic inequity, equitable recording of preventive activity for the major causes of death for white, black and Bangladeshi populations is possible. Chinese and Vietnamese people had lower levels of recording and consultation. Mammography and, to a lesser extent, cervical cytology are inequitably recorded and require additional support at practice level.

Introduction

General practitioner services are the predominant vehicle for delivery of preventive care in the United Kingdom, a role highlighted by the Health of the Nation initiative. The need for equitable provision for all ethnic groups has also been emphasised.^{1,2} People from the Indian subcontinent or black Africans and Caribbeans are subject to increased cardiovascular risks.^{3,4} Uptake of preventive services for cervical and breast cancer is low among women from the Indian subcontinent,^{5,6} and minority groups often experience difficulties in access to appropriate services for

prevention.^{7,8} The association between minority ethnic status and socioeconomic conditions is well documented,⁹ and it has been difficult to separate the influence of these factors in the use of health services. Issues of sampling have received particular attention.^{10–12}

White, Bangladeshi, and black Caribbean or African ethnic groups currently constitute 64%, 23%, and 7% of the population in the inner London borough of Tower Hamlets,¹³ one of the most deprived in England and Wales.¹⁴ Male unemployment is 16% (7% nationally), social classes IV and V constitute 29% of the adult population (18% nationally) and 27% of households are overcrowded (5% nationally).¹⁵ Standardised mortality ratios for the major causes of death¹⁵ and the prevalence of smoking and obesity¹⁶ are all substantially higher than the national average. Primary care services have remained underdeveloped,¹⁷ and, as in other deprived areas, preventive coverage is low.¹⁸ Cervical cytology uptake was 66% (80% nationally), and first round breast screening 45% (70% nationally). The family health services and district health authority strategy for change¹⁹ has included health advocates for ethnic minorities and support for the healthy eastenders project, which aims to implement preventive care of proved efficacy in local primary services.²⁰ The current study aimed to document the ethnic and socioeconomic characteristics of a random sample of adults aged 20–64 registered with selected general practitioners in Tower Hamlets and to describe the association of these characteristics with preventive activity recorded in the general practitioners' medical records.

Method

Ethics committee approval was obtained, and the study was carried out between August 1993 and July 1994. A sample of 500 subjects (200 white, 100 black, 100 Bangladeshi, and 100 Chinese or Vietnamese) provided an 80% power to detect differences of 10% between ethnic groups in the recording of preventive items, significant at the 5% level. As Chinese or Vietnamese made up only 2% of the local population, an initial sample of 8600 was necessary to yield, after exclusions and refusals, sufficient numbers in this group.

To ensure the requisite sample size, all 108 general practitioners in Tower Hamlets were invited to participate, as recruitment in comparable areas was known to be low.¹⁷ A random sample of 200 people aged 20–64 years was obtained from the computerised practice register of each participating general practitioner who, from the individual's name²¹ and their knowledge of the person, identified white, black (African, Caribbean, black British, or black other), and Bangladeshi people. They excluded people in

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whom interview was precluded by physical or mental incapacity or where there were concerns for the interviewer's safety. The list was returned to the researcher, who identified Chinese or Vietnamese people by their names.²² People from ethnic groups other than those above were excluded.

This sample was then proportionally stratified by ethnic group to give the numbers estimated by the power calculations. From the medical records, people were excluded if they were known to have left the practice, were on extended absence, had no medical record, or had had no recorded contact with the practice within the preceding three years. Those remaining were sent an explanation of the study in the appropriate language and informed that, unless they declined, an interviewer would call at their home at a specified time.

The questionnaire was translated into Sylheti and Chinese, the main minority languages spoken locally, and retranslated into English by two independent sources. Thirteen interviewers were trained in interview techniques and administration of questionnaires, with checks on consistency of questioning and documentation of response in both minority ethnic languages and the English translation. The ethnic group of interviewers was matched with that of people visited. Details of employment, housing, car ownership, and consultation with the general practitioner within the preceding two weeks were obtained by questionnaire administered by the interviewer in the subject's home. Respondents were asked to classify their own ethnic group from a prompt card using census categories.²³

On the basis of this information, the following variables were used in the analysis: ethnic group (self classified using census categories²³), overcrowding (households with more than one person per habitable room), car ownership (households possessing a car), and those employed (men aged 20-64 and women aged 20-59 currently in paid employment). Social class was classified according to the definitions of the Office of Population Censuses and Surveys.²⁴ Those not currently employed were classified on the basis of their last occupation if ever employed in Britain. Women were classified by their own occupation if ever employed and that of their spouse if never employed.

A single trained researcher reviewed the general practitioner held medical record (both paper and computer) for all subjects in the final sample. Using agreed definitions, the recording of the following items of preventive care within the preceding five years was documented: blood pressure, current smoking status, height, weight, alcohol consumption, family history of ischaemic heart disease, dietary advice, peak flow rate, and, for women, cervical smear (in women with a uterus), mammography (age 50-64 years), and hysterectomy (ever recorded).

Data were analysed using SPSS 4.0 (SPSS Inc, Chicago) and STATA 4.0 (STATA Corporation, College Station, Texas). The standardised normal deviate was used to test differences in proportions and calculate confidence intervals. Multiple logistic regression was

used to derive odds ratios standardised to the age and sex of the white population and to test the effect of multiple variables on binary response variables.

Results

Of the 108 general practitioners in Tower Hamlets, 43 participated in the study, of whom 35 were taking part in the healthy eastenders project.¹⁹ Participants tended to work in larger practices; singlehanded doctors constituted 13/65 (20%) of non-participants and 4/43 (9%) of participants. Two hundred people aged 20-64 were randomly selected from the computerised register of each participating general practitioner; an additional 45 people were sampled in error. Of the 8645 people sampled, 1096 were excluded: 98 because they had moved or died, 348 on physical or mental grounds or because of concerns for safety, 512 because they were from an ethnic group not included in the study, and 138 because ethnic group was not known.

The remaining 7549 comprised 5957 white, 454 black, 913 Bangladeshi, and 225 Chinese or Vietnamese people. Samples stratified by ethnic group were drawn to give 508 white, 231 black, 250 Bangladeshi, and 225 Chinese or Vietnamese subjects. Information obtained from the medical records led to the exclusion of 201 people because they had moved, died, were on extended absence, or had had no contact with the practice in the preceding three years. The interviewers visited the homes of the remaining 1013 subjects at the address on their medical record on up to four occasions. Of these, 274 had moved, were not known at the address, or residence could not be confirmed. Of the 739 people contacted at their address, 234 declined to participate and 505 were interviewed, an overall response rate of 68% (505/739). Response rates did not differ significantly between ethnic groups: 194/306 (63%) of eligible white people participated compared with 89/124 (72%) black, 115/163 (70%) Bangladeshi, and 107/146 (73%) Chinese or Vietnamese people (χ^2 test, $df=3$, $P=0.1$).

Table 1 gives the percentages of men and of people aged under 40 years in the initial stratified sample and in the final sample at interview. Younger men, particularly if white, were less likely to be interviewed because they had moved, residence could not be confirmed, or they declined interview. Thus, in the final sample interviewed, people under 40 constituted 200/303 (66%) of minority ethnic groups and 93/190 (49%) in the white group, and men constituted 131/303 (43%) and 75/190 (39%) respectively. Further comparisons between ethnic groups were standardised for age and sex.

Of the 505 people interviewed, 190 classified themselves as white, 86 black, 112 Bangladeshi, and 105 Chinese or Vietnamese. Two people declined to answer; in two the data were missing; 12 people classified themselves as belonging to an ethnic group other than that assigned by the general practitioner/researcher; and eight classified themselves in ethnic groups not included in the study. Relevant ethnic group was thus recorded on 493 people, of whom the medical records of 481 were available (12 having left the practice during the study).

People in minority ethnic groups, particularly the Bangladeshi group, were significantly worse off than white people in terms of car ownership, home ownership, overcrowding, proportion in social classes IV and V, and employment (χ^2 test, $df=8$, $P<0.001$). Bangladeshi and black people were more likely and Chinese or Vietnamese less likely than white people to report consultation with their general practitioner within the preceding two weeks (table 2). Stepwise regression showed that membership of social classes IV and V and a minority ethnic group were each indepen-

Table 1—Numbers (percentages) of men and people under 40 years in the initial stratified sample and in the final sample interviewed. Values are numbers (percentages)

Ethnic group	Men		People under 40 years		Total sample	
	Initial sample	Final sample	Initial sample	Final sample	Initial sample	Final sample
White	239 (47)	75 (39)	298 (59)	93 (49)	508	190
Black	91 (39)	31 (36)	175 (76)	56 (65)	231	86
Bangladeshi	111 (44)	42 (38)	179 (72)	77 (69)	250	112
Chinese or Vietnamese	113 (50)	58 (55)	150 (67)	67 (64)	225	105

dently related to overcrowding, employment, home ownership, and consultation.

Table 3 shows recording of preventive activity within the preceding five years. It did not differ significantly between white people and those in other ethnic groups for recording of blood pressure, smoking, alcohol consumption, dietary advice, weight, height, or peak flow rate. A trend of lower recording for all minority ethnic groups was apparent for the recording of family history of ischaemic heart disease, cervical cytology, and mammography, but only mammography differed significantly between white and minority ethnic groups (17/37 (46%) *v* 4/20 (20%), χ^2 test, *df*=3, *P*=0.03). People in the Chinese and Vietnamese group were less likely to have preventive care recorded than the white group, but for all but two out of the 10 recorded items (family history and weight) these differences were not significant.

Only age over 40 and female sex were associated with a significantly increased likelihood of recording of each of the preventive activities. With the exception of mammography, no significant associations were found between preventive items recorded and ethnic group, socioeconomic variables, or consultation with the general practitioner.

Discussion

The study was designed to show whether recording of preventive care was documented equitably in whole practice populations, including minority ethnic groups, in a substantial number of selected local practices. It did not assess differences between geographical areas or types of practice, and the results are not at variance with the studies of structural inequity, exemplified by the "inverse care law."²⁵

Most of the doctors who participated had been involved in local initiatives to improve delivery of preventive services,²⁰ worked in larger practices, and had fewer Bangladeshi patients aged 20-64 (11% compared with an estimated 20%) than those who declined to participate. At present, reliable information on clinical care in general practice largely depends on selection of particular practices and their populations.^{26 27}

Younger white men were less likely to participate, but as non-respondents and younger age groups have lower recording of preventive information,²⁸ this would tend to increase the likelihood of finding differences between white and other ethnic groups. Bias as a result of non-response does not seem to have decreased preventive recording in the white study

Table 2—Socioeconomic variables and consultations with general practitioners. Values are numbers (percentages); odds ratios standardised to age and sex of white population (95% confidence interval) are also given

	Non-white				
	White (n=190)	Black (n=86)	Bangladeshi (n=112)	Chinese or Vietnamese (n=105)	All (n=303)
Car owner	129 (68)	29 (34)	47 (42)	70 (67)	146 (48)
Odds ratio	1.0	0.2 (0.1 to 0.4)	0.3 (0.2 to 0.5)	0.8 (0.5 to 1.5)	0.4 (0.3 to 0.6)**
Home owner	71 (37)	5 (6)	6 (5)	22 (21)	33 (11)
Odds ratio	1.0	0.5 (0.3 to 1.0)	0.1 (0.0 to 0.2)	0.5 (0.3 to 0.8)	0.3 (0.2 to 0.5)**
Overcrowding	11 (6)	10 (12)	62 (55)	22 (21)	94 (31)
Odds ratio	1.0	2.0 (0.8 to 5.1)	21.3 (10.2 to 43.8)	4.4 (2.0 to 9.5)	7.7 (3.7 to 14.2)**
Social class IV or V	48/173 (28)	23/74 (31)	54/75 (72)	33/54 (61)	110/203 (54)
Odds ratio	1.0	1.5 (0.8 to 2.6)	8.1 (4.3 to 15.2)	5.8 (2.9 to 11.5)	3.8 (2.4 to 6.0)**
Employed	111/176 (63)	36/85 (42)	38/110 (34)	28/104 (27)	102/299 (34)
Odds ratio	1.0	0.6 (0.3 to 1.0)	0.1 (0.1 to 0.2)	0.2 (0.1 to 0.3)	0.2 (0.2 to 0.4)**
Consulted GP within last two weeks	28 (15)	21 (24)	34 (30)	14 (13)	69 (23)
Odds ratio	1.0	1.8 (1.0 to 3.3)	2.5 (1.5 to 4.3)	0.8 (0.4 to 1.4)	1.6 (1.0 to 2.5)*

P*<0.05; *P*<0.001.

Table 3—Recorded preventive activities. Values are numbers (percentages); odds ratios standardised to age and sex of white population (95% confidence intervals) are also given

	Non-white				
	White (n=187)	Black (n=85)	Bangladeshi (n=107)	Chinese or Vietnamese (n=102)	All (n=294)
Blood pressure	163 (87)	72 (85)	99 (92)	73 (71)	244 (83)
Odds ratio	1.0	0.9 (0.4 to 1.9)	2.1 (0.9 to 5.1)	0.5 (0.3 to 1.0)	0.9 (0.5 to 1.5)
Smoking	143 (76)	64 (75)	85 (79)	64 (63)	213 (72)
Odds ratio	1.0	1.0 (0.5 to 1.8)	1.3 (0.7 to 2.3)	0.6 (0.3 to 1.0)	0.9 (0.6 to 1.4)
Alcohol	125 (67)	59 (69)	76 (71)	57 (56)	192 (65)
Odds ratio	1.0	1.2 (0.7 to 2.2)	1.4 (0.8 to 2.3)	0.7 (0.4 to 1.2)	1.0 (0.7 to 1.6)
Family history	87 (46)	34 (40)	41 (38)	33 (32)	108 (37)
Odds ratio	1.0	0.8 (0.5 to 1.3)	0.8 (0.5 to 1.2)	0.6 (0.4 to 0.9)	0.7 (0.5 to 1.0)
Dietary advice	45 (24)	20 (23)	26 (24)	18 (18)	64 (22)
Odds ratio	1.0	1.1 (0.6 to 2.0)	1.2 (0.7 to 2.1)	0.8 (0.4 to 1.5)	1.0 (0.6 to 1.6)
Weight	141 (75)	64 (75)	87 (81)	58 (57)	209 (71)
Odds ratio	1.0	1.1 (0.6 to 2.0)	1.5 (0.9 to 2.9)	0.6 (0.3 to 0.9)	0.9 (0.6 to 1.4)
Height	129 (69)	57 (67)	76 (71)	57 (56)	190 (65)
Odds ratio	1.0	1.0 (0.6 to 1.7)	1.2 (0.7 to 2.1)	0.7 (0.4 to 1.1)	0.9 (0.6 to 1.4)
Peak flow rate	33 (18)	21 (25)	19 (18)	24 (23)	64 (22)
Odds ratio	1.0	1.2 (0.6 to 2.2)	0.8 (0.4 to 1.4)	1.0 (0.6 to 1.9)	1.0 (0.6 to 1.5)
Cervical smear	92/104 (88)	42/51 (82)	56/65 (86)	36/44 (82)	228/264 (86)
Odds ratio	1.0	0.6 (0.2 to 1.5)	0.7 (0.3 to 1.9)	0.6 (0.2 to 1.5)	0.6 (0.3 to 1.3)
Mammography	17/37 (46)	2/9 (22)	1/6 (17)	1/5 (20)	4/20 (20)
Odds ratio	1.0	0.3 (0.1 to 1.4)	0.2 (0.0 to 1.8)	0.2 (0.0 to 2.3)	0.2 (0.1 to 0.8)*

**P*=0.03.

Key messages

- Major socioeconomic inequalities exist between ethnic groups in disadvantaged communities
- Despite these socioeconomic disparities, selected general practitioners equitably deliver preventive services for the major causes of premature death
- Recording of mammography and cervical cytology were important exceptions and these programmes require additional support at practice level

population or increased it among minority ethnic groups.

The study population experienced major socioeconomic inequity by ethnic group. In contrast, there was no substantive difference by ethnic or socioeconomic group in recording of preventive care for the major causes of death by selected general practitioners serving half the population in this inner London borough. However, ascertainment of risk is only a first step. Both white and minority ethnic groups in this borough are at high risk of premature death from preventable causes. Major obstacles remain to the delivery of appropriate preventive programmes promoting behavioural change,²⁹ and language, cultural, and additional material constraints of minority ethnic groups need to be addressed.

Mammography and possibly cervical cytology were the main exceptions to equitable recording of preventive care. Mammography was inequitably provided and was the only activity not supported by active recruitment or follow-up of non-respondents by general practice staff. Local programmes are now attempting to improve uptake of breast and cervical screening.³⁰

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General practitioners' views on over the counter sales by community pharmacists

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More over the counter medications have been made available recently. We carried out a survey of general practitioners' views on various drugs being dispensed by community pharmacists without a prescription to determine whether these views have changed since 1990.¹

Subjects, methods, and results

Details of 1301 general practices were obtained from eight family health service authorities throughout

England. All 250 fundholding practices were included in the study together with a random sample of 250 urban and 350 rural non-fundholding practices to permit comparisons between fundholding (mainly rural) and rural non-fundholding general practices and between urban and rural non-fundholding practices. The larger number of rural non-fundholding practices were included so as to increase the statistical power of the study.

In November 1994 a questionnaire was dispatched to one randomly selected doctor from each practice. It sought information on basic characteristics of the practice and the responding general practitioner. The section in Spencer and Edwards' questionnaire which was used to elicit general practitioners' attitudes to the provision of specific drugs by pharmacists in 14 clinical scenarios was reproduced.¹

The overall response rate was 61% (515/850)—69%