The European Journal of General Practice

ISSN: 1381-4788 (Print) 1751-1402 (Online) Journal homepage: https://www.tandfonline.com/loi/igen20

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To cite this article: Hazel K. Sinclair, Lewis D. Ritchie & Amanda J. Lee (2006) A future career in general practice? A longitudinal study of medical students and pre-registration house officers, The European Journal of General Practice, 12:3, 120-127, DOI: 10.1080/13814780600780833

To link to this article: https://doi.org/10.1080/13814780600780833

Published online: 20 Mar 2010.

European Journal of General Practice. 2006; 12: 120–127

Taylor & Francis
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ORIGINAL ARTICLE

A future career in general practice? A longitudinal study of medical students and pre-registration house officers

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Abstract

Objective: To monitor the future career preferences of medical students throughout their undergraduate years and into their postgraduate career, and to evaluate which factors may influence career choice intentions, and when this happens, over time. *Design:* Longitudinal study. *Methods:* Questionnaire to all Aberdeen, United Kingdom, Medical School entrants in 1996, and five annual follow-ups (four undergraduate, one postgraduate). *Results:* Response rates: year 1, 100%; year 2, 78%; year 3, 70%; year 4, 64%; year 5, 65%; pre-registration house officer (PRHO), 60%. Throughout the study, females were more positive about a career in general practice. General practice was the first choice for 13% of students in year 1; year 2, 9%; year 3, 22%; year 4, 24%; year 5, 27%; PRHO, 29%. Those choosing general practice were more likely than those choosing other specialties to be female, have their family home in Scotland, rate their academic abilities lower and their non-academic abilities as average, and have decided on their future career earlier. Reasons for general practice included: working in and being part of a community; continuity of patient contact; variety of illnesses and people encountered; undergraduate teaching experiences; dislike of or disillusionment with hospital medicine; and an increasing awareness of part-time opportunities.

Conclusion: As medical undergraduates progressed through the curriculum and became PRHOs, general practice became more popular as a career choice, particularly with females. This may be partly explained by the increased exposure to general practitioners and patients in the new community-based teaching programme and the increasing awareness of lifestyle advantages with the particular benefits of more regular hours and working part time.

Key words: *Career choice, general practice, longitudinal study, medical students, pre-registration house officers, undergraduate medical education, workforce*

Introduction

There is currently a widely perceived recruitment and retention crisis in United Kingdom (UK) general practice at a postgraduate level (1–3), and a disinclination for undergraduates to cite general practice as an intended career (4,5). In Goldacre et al.'s surveys of UK qualified doctors at the end of their pre-registration house officer (PRHO) year, 26% chose general practice in 1993, falling to 20% in 1996 (6). Figures for the Aberdeen Medical School mirrored the national trend, with 26% in 1993 and 19% in 1996 choosing general practice (6).

Previous studies have surveyed at a single point in time (7,8) and others have looked before and after an intervention, for example, a general practice attachment (5). To gain an improved understanding of the reasons behind, and the evolution of, career aspirations, future research needs to have a longitudinal design (8) spanning from entry to postgraduate training, to identify the reasons behind medical career (dis)inclinations in the face of inevitable workforce requirements.

In response to *Tomorrow's Doctors* (9), the Medical School at the University of Aberdeen introduced its new curriculum for first-year students in 1995. This includes a new integrated Community Course, which now spans the first 3 years of the undergraduate curriculum and covers a broad spectrum of care in the community. It involves 17 half-day, patient-centred tutorials delivered by tutors based

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(Received 4 July 2005; accepted 6 April 2006)

ISSN 1381-4788 print/ISSN 1751-1402 online
DOI: 10.1080/13814780600780833

in general practice and four half-day clinical sessions when students visit patients in their own homes. The community theme is then developed through a 5-week clinical rotation in the fourth year and an optional 7-week general practice attachment in the final year.

In this context of medical educational reform, this study aimed to monitor the future career preferences of Aberdeen medical students throughout their undergraduate years and into their postgraduate career, to evaluate which factors may influence career choice intentions, and when this happens, over time. The study began in 1996 with the recruitment of entrants to the Aberdeen MBChB. The annual follow-up of this cohort has allowed us to monitor both reasons for and changes in career preference and the effect of influential factors, for example, experiences at medical school and government recruitment initiatives (10). This paper helps to bridge some of the gaps in the published research literature by reporting findings from six annual follow-ups (five undergraduate and the first postgraduate year).

Method

The Grampian Research Ethics Committee was informed about the study, and they advised that ethical approval was not required.

The study sample was the entire class of students who entered the MBChB undergraduate course of the University of Aberdeen in September 1996. During the five undergraduate years, there were minor changes to the cohort denominator and subjects. Students who joined the class were added to the cohort: graduates joining the class as direct-entry students in September 1997; students rejoining the course in May 1999 after completing an intercalated BSc in Medical Sciences; students required to repeat the year; and students transferring from other universities, in particular, non-UK students from the International Medical College in later years. Conversely, there was attrition due to: withdrawals and transfers from the course; those undertaking an intercalated BSc; and students with insufficient credits who were discontinued or had to repeat the year.

A self-completion questionnaire was developed to survey the students on entry to the undergraduate course. It used both open and closed questions to collect demographic information (gender, age, marital status, location of family home, graduate status, parental or guardian occupation, any other family connections with healthcare professions); reason/s for choosing to study medicine; and preferred career geographical location on graduating. It then listed 46 potential career choice specialities available to MBChB graduates (with an option to specify "other") and asked subjects to rank their top three and bottom three choices for future career specialities, and to give reasons. Finally, respondents were asked for how long they had held their top choice.

After year 1, two further items were added: students were asked to rate their academic and non-academic abilities as a potential doctor, compared with others in their medical class (as above average, average or below average). Minor changes were made to the wording of the undergraduate questionnaire for postgraduate use in October 2001.

At each stage, an information sheet and reply paid-postage envelope accompanied the questionnaire. To minimize bias from a perceived source, these were issued and responses returned via the Medical School Office, avoiding any identification of the Department of General Practice and Primary Care as research sponsor. The questionnaire was distributed to first-, second- and third-year students during routine administration sessions. The form was mailed to participants in their fourth, fifth and first postgraduate year. At each stage, non-respondents were reminded after 2 and 4 wks with a duplicate questionnaire and reply envelope.

SPSS© for Windows 11.5 (11) was used for data storage and analysis. All records and computer data were handled and stored in line with the Data Protection Act 1998 and principles of good research governance. Differences between mean levels of continuous variables were assessed using *t*-tests. Categorical data were described as percentages and associations between two categorical factors compared using the χ^2 test, Fisher's exact test or the McNemar test where appropriate. To take account of multiple comparisons between groups, a more stringent value of $p < 0.01$ was used to denote statistical significance. The qualitative data on reasons for and against general practice were analysed using a categorical approach, whereby codes were assigned to sections of data according to a theme or category (12,13).

Results

Response rates

In 1996, all 172 new entrants completed the questionnaire (100% response). The follow-up response rates were: 77.5% (131/169) in year 2; 70.3% (116/165) in year 3; 64.3% (108/168) in year 4; 65.2% (105/161) in year 5; and 59.5% (100/168) in the PRHO year. Table I gives the proportion of subjects from the original cohort who responded at each follow-up; 66 (38.4%) completed the first and last survey, and 32 (18.6%) provided data at all six time points.

Table I. Characteristics of respondents (%, *n*).

Percentage of original cohort (*n*)	Year 1 (1996) (*n* = 172) 100.0 (172)	Year 2 (1997) (*n* = 131) 76.2 (131)	Year 3 (1998) (*n* = 116) 62.2 (107)	Year 4 (1999) (*n* = 108) 46.5 (80)	Year 5 (2000) (*n* = 105) 42.4 (73)	PRHO (2001) (*n* = 100) 38.4 (66)
Characteristic						
Gender						
Male	43.0 (74)	41.2 (54)	37.9 (44)	36.1 (39)	41.0 (43)	41.0 (41)
Female	57.0 (98)	58.8 (77)	62.1 (72)	63.9 (69)	59.0 (62)	59.0 (59)
Age (y)						
mean (SD)	18.2 (1.5)	19.2 (1.5)	20.3 (1.9)	21.5 (1.7)	22.7 (1.8)	23.8 (2.0)
Family home						
Scotland	66.9 (115)	67.2 (88)	69.0 (80)	64.8 (70)	61.9 (65)	59.0 (59)
Other UK	24.4 (42)	22.9 (30)	23.3 (27)	25.9 (28)	26.7 (28)	28.0 (28)
Non-UK	8.7 (15)	9.9 (13)	7.8 (9)	9.3 (10)	11.4 (12)	13.0 (13)
University degree						
Yes	5.8 (10)	7.6 (10)	10.3 (12)	25.0 (27)	25.7 (27)	29.0 (29)
No	94.2 (162)	92.4 (121)	89.7 (104)	75.0 (81)	74.3 (78)	71.0 (71)
Parental occupation						
either/both medical	30.4 (52)	31.5 (41)	28.4 (33)	34.3 (37)	30.5 (32)	29.0 (29)
neither medical	69.6 (119)	68.5 (89)	71.6 (83)	65.7 (71)	69.5 (73)	71.0 (71)
Other medical connections						
≥1	50.0 (86)	63.1 (82)	59.5 (69)	56.5 (61)	62.9 (66)	58.0 (58)
None	50.0 (86)	36.9 (48)	40.5 (47)	43.5 (47)	37.1 (39)	42.0 (42)
Academic abilities [a]						
Above average	–	15.4 (20)	15.7 (18)	14.8 (16)	22.9 (24)	23.0 (23)
Average	–	80.0 (104)	74.8 (86)	78.7 (85)	70.5 (74)	72.0 (72)
Below average	–	4.6 (6)	9.6 (11)	6.5 (7)	6.7 (7)	5.0 (5)
Non-academic abilities [a]						
Above average	–	40.8 (53)	40.0 (46)	42.1 (45)	48.6 (51)	40.0 (40)
Average	–	57.7 (75)	60.0 (69)	57.0 (61)	51.4. (54)	58.0 (58)
Below average	–	1.5 (2)	–	0.9 (1)	–	2.0 (2)

[a]Item not included in the 1996, year 1, version of the questionnaire.
The number of responses for each variable varied slightly because of missing data.
PRHO: pre-registration house officer.

Characteristics of respondents

The characteristics of the respondents are given in Table I. Around 60% were female, and over 60% had their family home in Scotland. The proportion of students with a previous degree rose markedly in year 4 due to students rejoining the course after completing an intercalated BSc. Around 30% reported that one or both parents were employed as a healthcare professional. Just over half had at least one other family connection with a healthcare professional. Seventy to 80% rated their academic abilities as average for their medical class, and a further 15 to 23% rated themselves as above average. Fifty to 60% rated their non-academic abilities as a potential doctor as average, and a further 40 to 47% as above class average.

Preferred geographical location and career setting

Over three-quarters of the respondents would prefer to work in the UK on graduating: 81.9% (127/155) in year 1; 75.9% (88/116) in year 2; 75.7% (78/102) in year 3; 78.9% (75/95) in year 4; 83.7% (82/98) in year 5; and 84.3% (70/83) in the first postgraduate year.

Preferred specialities

As detailed in Table II, paediatrics/child health was the most popular speciality, with over a fifth of respondents in years 1 and 2 citing it as their first-choice career; it remained in the top four ranking specialities in subsequent follow-ups. Accident and emergency was the second most popular speciality in year 1, with 14% citing it as their first choice; it then declined in popularity to rank fourth in years 2 and 4, and was not in the top four by year 5. On entry, females were more likely than males to choose paediatrics: 25.5% (25/98) and 12.2% (9/74), respectively. Accident and emergency was more popular with males (17.6% (13)) than females (10.2% (10)).

Table II. First-choice specialities (%, *n*).

Rank	Year 1 (1996) ($n=167$)	Year 2 (1997) ($n=127$)	Year 3 (1998) ($n=115$)	Year 4 (1999) ($n=105$)	Year 5 (2000) ($n=104$)	PRHO (2001) ($n=98$)
1	Paediatrics/child health 20.4 (34)	Paediatrics/child health 21.3 (27)	**General practice 21.7 (25)**	**General practice 23.8 (25)**	**General practice 26.9 (28)**	**General practice 28.6 (28)**
2	Accident and emergency 13.8 (23)	**General practice 9.4 (12)**	Paediatrics/child health 12.2 (14)	Paediatrics/child health 13.3 (14)	Paediatrics/child health 10.6 (11)	Anaesthesia/ intensive care 10.2 (10)
3	**General practice 12.6 (21)**	Obstetrics and gynaecology 8.7 (11)	Orthopaedic surgery 9.6 (11)	Obstetrics and gynaecology 12.4 (13)	General surgery 7.7 (8)	General medicine 8.2 (8)
4	General surgery 6.0 (10)	Accident and emergency 7.1 (9)	Psychiatry/mental health 5.2 (6) Sports/orthopaedic medicine 5.2 (6)	Accident and emergency 7.6 (8)	Psychiatry/mental health 4.8 (5)	Paediatrics/child health 7.1 (7)

PRHO: pre-registration house officer.

General practice was the third most popular speciality in year 1, with one in eight respondents giving it as their first choice. In year 2, it was the second most popular speciality, but the proportion of students with this preference fell to 9%. In all four subsequent follow-ups, general practice was the top choice for over 20% of respondents.

Characteristics of respondents by first-choice speciality: General practice versus other specialities

Comparisons were made between those who chose general practice as their top career speciality and those choosing any other speciality (Table III). At each time point, a much higher proportion of females than males chose general practice than other specialities; this difference reached statistical significance in years 3 ($p<0.001$) and 5 ($p=0.009$). Those choosing general practice were also more likely to have their family home in Scotland, while those choosing other specialities were more likely to have their family home elsewhere in the UK or outside the UK.

At each time point, a higher proportion of those choosing general practice than other specialities rated themselves as below average academic ability compared to others in their medical class. Moreover, by the third year, a higher proportion of those choosing other specialities rated themselves as above average academically. Regarding their non-academic abilities as a potential doctor, at four of the five time points, a higher proportion of those choosing other specialities rated themselves as above average non-academically. At each time point, many respondents had decided on their top speciality within the past year. There were no significant differences between the two groups with regard to age, university degree, parental occupation or other medical connections.

Least-favoured specialities

General practice was the second least-favoured speciality in the first year, with one in eight respondents citing it as their worst career option. During the next four undergraduate years, fewer students were particularly against general practice; however, it then became the third least popular in the PRHO year, with 7.1% (7/98) citing it as their least-favoured speciality.

Complete data set subgroup

Thirty-two subjects provided data at all six time points: 24 females and eight males. General practice was the top choice for three students in year 1 (all female), two in the second year (both female), eight in the third year (all female), 10 in the fourth year (eight female, two male), 11 final-year students (10 female, one male), and 10 PRHOs (nine female, one male).

Respondents to first and last survey subgroup

Sixty-six subjects completed the first and last surveys: 62.1% (41) females and 37.9% (25) males. Respondents were significantly more likely to choose general practice as their top choice in their PRHO year than in their first undergraduate year: 30.8% (20/65) and 6.3% (4/63), respectively ($p<0.001$).

Reasons in favour of general practice

Most of those who chose general practice also provided reason(s). In years 1 to 3, the most

Table III. Characteristics of respondents by first-choice speciality general practice (GP) versus other specialities (%, *n*).

	1996: Y1		1997: Y2		1998: Y3		1999: Y4		2000: Y5		2001: PRHO	
Characteristic	GP (*n* = 21)	Other (*n* = 151)	GP (*n* = 12)	Other (*n* = 115)	GP (*n* = 25)	Other (*n* = 90)	GP (*n* = 25)	Other (*n* = 80)	GP (*n* = 28)	Other (*n* = 76)	GP (*n* = 28)	Other (*n* = 70)
Gender												
male	19.0 (4)	46.4 (70)	25.0 (3)	40.9 (47)	8.0 (2)	45.6 (41)**	20.0 (5)	40.0 (32)	17.9 (5)	48.7 (37)*	25.0 (7)	45.7 (32)
female	81.0 (17)	53.6 (81)	75.0 (9)	59.1 (68)	92.0 (23)	54.4 (49)	80.0 (20)	60.0 (48)	82.1 (23)	51.3 (39)	75.0 (21)	54.3 (38)
Age (y)												
mean (SD)	18.3 (1.9)	18.1 (1.4)	18.9 (1.7)	19.2 (1.5)	19.8 (0.9)	20.44 (2.0)	21.4(1.8)	21.6(1.8)	22.5(1.9)	22.7(1.7)	23.6(1.6)	23.9(2.1)
Family home												
Scotland	76.2 (16)	65.6 (99)	91.7 (11)	65.2 (75)	88.0 (22)	63.3 (57)	76.0 (19)	62.5 (50)	64.3 (18)	60.5 (46)	75.0 (21)	51.4 (36)
other UK	23.8 (5)	24.5 (37)	8.3 (1)	23.5 (27)	12.0 (3)	26.7 (24)	24.0 (6)	25.0 (20)	28.6 (8)	26.3 (20)	21.4 (6)	31.4 (22)
non-UK	–	9.9 (15)	–	11.3 (13)	–	10.0 (9)	–	12.5 (10)	7.1 (2)	13.2 (10)	3.6 (1)	17.1 (12)
University degree												
yes	9.5 (2)	5.3 (8)	8.3 (1)	7.8 (9)	4.0 (1)	12.2 (11)	20.0 (5)	25.0 (20)	25.0 (7)	26.3 (20)	32.1 (9)	25.7 (18)
no	90.5 (19)	94.7 (143)	91.7 (11)	92.2(106)	96.0 (24)	87.8 (79)	80.0 (20)	75.0 (60)	75.0 (21)	73.7 (56)	67.9 (19)	74.3 (52)
Parental occupation												
either/both medical	23.8 (5)	31.3 (47)	16.7 (2)	34.2 (39)	20.0 (5)	31.1 (28)	20.0 (5)	38.8 (31)	32.1 (9)	30.3 (23)	32.1 (9)	28.6 (20)
neither medical	76.2 (16)	68.7 (103)	83.3 (10)	65.8 (75)	80.0 (20)	68.9 (62)	80.0 (20)	61.3 (49)	67.9 (19)	69.7 (53)	67.9 (19)	71.4 (50)
Other medical connections												
≥1	33.3 (7)	52.3 (79)	66.7 (8)	62.3 (71)	48.0 (12)	63.3 (57)	60.0 (15)	55.0 (44)	67.9 (19)	60.5 (46)	57.1 (16)	57.1 (40)
none	66.7 (14)	47.7 (72)	33.3 (4)	37.7 (43)	52.0 (13)	36.7 (33)	40.0 (10)	45.0 (36)	32.1 (9)	39.5 (30)	42.9 (12)	42.9 (42)
Academic abilities [a]												
above average	–	–	25.0 (3)	14.0 (16)	4.0 (1)	19.1 (17)	4.0 (1)	17.5 (14)	21.4 (6)	23.7 (18)	10.7 (3)	25.7 (18)
average	–	–	58.3 (7)	83.3 (95)	84.0 (21)	71.9 (64)	76.0 (19)	80.0 (64)	60.7 (17)	73.7 (56)	78.6 (22)	71.4 (50)
below average	–	–	16.7 (2)	2.6 (3)	12.0 (3)	9.0 (8)	20.0 (5)	2.5 (2)	17.9 (5)	2.6 (2)	10.7 (3)	2.9 (2)
Non-academic abilities[a]												
above average	–	–	16.7 (2)	42.1 (48)	40.0 (10)	40.4 (36)	52.0 (13)	39.2 (31)	46.4 (13)	48.7 (37)	21.4 (6)	45.7 (32)
average	–	–	83.3 (10)	56.1 (64)	60.0 (15)	59.6 (53)	48.0 (12)	59.5 (47)	53.6 (15)	51.3 (39)	75.0 (21)	52.9 (37)
below average	–	–	–	1.8 (2)	–	–	–	1.3 (1)	–	–	3.6 (1)	1.4 (1)
Duration of preferred career choice												
<1 y	38.1 (8)	41.3 (57)	27.3 (3)	41.2 (47)	40.0 (10)	36.0 (32)	40.0 (10)	41.8 (33)	28.6 (8)	32.4 (24)	7.4 (2)	31.9 (22)
1–5 y	61.9 (13)	50.0 (69)	72.7 (8)	51.8 (59)	44.0 (11)	55.1 (49)	44.0 (11)	49.4 (39)	64.3 (18)	60.8 (45)	74.1 (20)	50.7 (35)
>5 y	–	8.7 (12)	–	7.0 (8)	16.0 (4)	9.0 (8)	16.0 (4)	8.9 (7)	7.1 (2)	6.8 (5)	18.5 (5)	17.4 (12)

[a]Item not included in the 1996, year 1, version of the questionnaire.

P values from χ^2 test with cells combined where appropriate: * $p \leq 0.01$, ** $p \leq 0.001$.

Y: year; PRHO: pre-registration house officer.

Table IV. Least-favoured specialities (%, *n*).

Rank	Year 1 (1996) ($n=167$)	Year 2 (1997) ($n=127$)	Year 3 (1998) ($n=115$)	Year 4 (1999) ($n=105$)	Year 5 (2000) ($n=104$)	PRHO (2001) ($n=98$)
1	Armed forces medicine 12.4 (19)	Medicine for the elderly 10.9 (14) Academic research 10.9 (14)	Academic research 12.1 (14)	General surgery 9.5 (10) Academic research 9.5 (10)	General surgery 12.5 (13) Academic research 12.5 (13)	General surgery 19.4 (19)
2	**General practice 11.8 (18)**		Armed forces medicine 11.2 (13)			Obstetrics and gynaecology 9.2 (9)
3	Medicine for the elderly 11.1 (17) Plastic surgery 11.1 (17)	Armed forces medicine 10.2 (13)	Psychiatry/mental health 8.6 (10)	Psychiatry/mental health 8.6 (9)	Obstetrics and gynaecology 9.6 (10)	General practice 7.1 (7)
4		Research 9.4 (12)	Clinical biochemistry 6.0 (4)	Ear, nose and throat 6.7 (7)	Psychiatry/mental health 5.8 (6)	Academic research 6.1 (6)
		General practice 5.5 (7)	**General practice 1.7 (2)**	**General practice 1.0 (1)**	**General practice 1.9 (2)**	

common theme related to the people encountered in the community setting. The opportunity to get to know patients as people, the wider family context, the long-term continuity of care and long-standing doctor–patient relationship remained very strong positive factors in all subsequent follow-ups. The variety of people and medical conditions encountered in general practice was cited in year 1 and became an increasingly strong theme in later years, with an awakening awareness of the opportunity to be a general practitioner (GP) and also diversify into a chosen speciality.

Some noted that they had particularly enjoyed their practical experience of general practice. This ranged from their time on work placements before entering university, the early undergraduate teaching on the Community Course, and an increasing number highlighted their general practice attachments in later undergraduate years.

> "Really enjoy the Community Course and like the wide variety of patients" (survey year: Y2; student no. 120; female; location of family home: N. Ireland).

> "I used to think it would be very boring but after 4th year attachment, I changed my mind–-wide variety of cases, more relaxed, continuing relationships with patients" (Y5, 35, female, Scotland).

Some compared their experiences of primary and secondary care and preferred community medicine, while some particularly disliked or had become disillusioned with hospital medicine.

> "Community-based work, better atmosphere to hospitals, first line of medical care, more variety" (Y3, 152, female, N. Ireland).

> "You see patients throughout their lives rather than for 3–4 days while in hospital, and you see them as part of a family unit rather than an individual, and you keep a hand in *all* areas of medicine" (PRHO, 69, female, England).

> "Feeling disillusioned at the moment with hospitals" (Y4, 24, male, Scotland).

> "Hospital appears too research and career orientated" (Y4, 107, male, Scotland).

There was also an increasing awareness of lifestyle advantages to working in general practice. The opportunity to work part time or more regular hours and so have time for their own family and interests became increasingly appreciated by females, especially in later years. Half of those who commented in the fifth year and as PRHOs highlighted these lifestyle benefits. Other perceived advantages were fewer exams and the general practice career structure.

Reasons against general practice

Most respondents who cited general practice as their least-favourite future career also provided reason(s). At each time point, there was a perception that general practice was dull, routine, and lacked variety and challenge.

> "Seeing the same kind of patients day in and day out, very rarely an exciting and challenging case, and no opportunity to excel" (Y3, 155, female, Scotland).

Some felt it would be a waste of their medical degree since there was a lack of serious illness and most patients consulted unnecessarily with trivial conditions.

> "5 years of study and a high proportion of patients aren't really seriously ill. In hospital, the minimally ill are 'weeded out' and the patients truly need our help" (Y2, 22, female, Scotland).

Discussion

This cohort study has shown that females were more likely to favour a career in general practice. With time and increased exposure to community-based teaching, general practice became more popular. It was the top career choice for almost a quarter of fourth-year students and for 29% of PRHOs. Those wishing to become GPs were more likely than those choosing other specialities to be female, have their family home in Scotland, rate their academic abilities lower and their non-academic abilities as average, and have decided on their future career earlier.

Common themes for favouring general practice were: working within and being part of a community; getting to know patients as people; continuity of patient contact; the variety of illnesses and people encountered; experiences during undergraduate teaching; a dislike of or disillusionment with hospital medicine; and an increasing awareness of lifestyle advantages, especially opportunities to work part time. Those against a general practice career felt it was: dull and routine; compared to hospital medicine, it lacked variety, challenge and really seriously ill patients; and was seen by some as a waste of their undergraduate medical degree.

This was a small-scale study which involved a cohort from a single medical school; however, earlier general practice career choice data indicate that graduates from the Aberdeen Medical School do not differ from the population of UK medical graduates (6). We achieved an excellent initial response rate, and response then fell progressively to 60% by the end of the study; however, examination of the demographic data in Table I showed little variation across the years outside that detailed earlier in the methods. There is a paucity of longitudinal data on students' attitudes towards general practice (8), and the timing of the study allowed us to report on students as they experienced our new Community Course teaching, which is delivered in the community by GPs. Other undergraduate studies were administered during a general practice attachment (5) or by known GPs (8), while our questionnaire issue and response was through the auspices of the medical school, thus minimizing bias from a perceived source.

Our findings confirmed those of Field and Lennox at Leicester Medical School (4), with only one in eight first-year students planning a career in general practice. Earlier surveys of Aberdeen qualified doctors at the end of their PRHO year showed that 26% chose general practice in 1993, and this had fallen to 19% in 1996 (6). However, since the introduction of the new curriculum in Aberdeen, we found a reversal in this negative trend, with 29% of PRHOs choosing general practice as their top speciality. This is in line with Henderson et al.'s study of first- and final-year students in two London medical schools (8), which found that students end their undergraduate years with a more positive attitude towards general practice than reported in other recent work. Since we know that students tend to rely on their experience of specialities to guide them (14), our encouraging trend could be partly explained by positive experiences of primary care (and/or less favourable experiences of secondary care) during undergraduate teaching.

Concurring with others, we found that females were much more likely to favour a career in general practice (5–8). Throughout the study, they were particularly attracted by the work setting (7), continuity of patient care, and the variety of people and conditions. There was an ever-increasing awareness of lifestyle advantages of general practice (5), with the particular benefits of working part time (7). This opportunity to work part time could explain the higher preference of females for general practice throughout the study and their increasing preference with age as, traditionally, they tend to undertake a greater role as carers within their own family, while others had become disillusioned with hospital medicine (5,7).

Most students qualify with a limited idea of the range of career opportunities they may pursue, and many are unclear on why they embarked on their career (15). Once a speciality is selected, 40% of male and over 50% of female graduates later change their choice, some more than once (16). We found that many students had decided on their top speciality within the past year. Many changes must be made of necessity. In 1993, only 26% of medical graduates preferred to enter general practice, and even peak figures in 1983 of 45% (17) barely approached realistic levels for workforce requirements.

As well as being the top-choice speciality in later years, general practice was the second least-favoured speciality by new undergraduates and the third least-favoured by PRHOs. It was perceived by some students and PRHOs as lacking in variety, interest and serious illness. Opportunities in the undergraduate curriculum for contact with GPs and patients in the general practice setting should be maximized to help to turn around these perceptions of general practice.

Conclusion

Since the introduction of the new integrated community-based teaching as part of the Aberdeen MBChB curriculum, there has been a reversal in the trend for declining numbers to choose a career in general practice. As medical undergraduates progressed through the curriculum and became PRHOs, general practice became more popular as a career choice, particularly with females. This may be partly explained by the increased exposure to general practitioners and patients in the new community-based teaching programme and the increasing awareness of lifestyle advantages, with the particular benefits of more regular hours and part-time opportunities. The results of the current study should be used to help inform medical education and careers advice at both the undergraduate and postgraduate levels. For example, medical schools should be encouraged to have a balanced, experiential community-based curriculum in an effort to promote a career in general practice among even more medical graduates, especially males.

Acknowledgements

We are grateful to: the University of Aberdeen and the Scottish Council for Postgraduate Medical and Dental Education (North/North East Deanery) for funding this project; Dr Digby Thomas for input to the study design; and the students/pre-registration house officers who participated in the study.

References

1. Royal College of General Practitioners. The primary care workforce – a descriptive analysis. London: RCGP; 1997.
2. British Medical Association. General Medical Services Committee annual report. London: BMA; 1998.
3. Leese B, Young R. Disappearing GPs: is there a crisis in recruitment and retention of general practitioners in England? Debates in primary care 3. Manchester: National Primary Care Research and Development Centre, University of Manchester; 1999.
4. Field D, Lennox A. Gender in medicine: the views of first and fifth year medical students. Med Educ 1996;30:246–52.
5. Morrison JM, Murray TS. Career preferences of medical students: influence of a new four-week attachment in general practice. Br J Gen Pract 1996;46:721–5.
6. Goldacre MJ, Davidson JM, Lambert TW. Career choices at the end of the pre-registration year of doctors who qualified in the United Kingdom in 1996. Med Educ 1997;33:882–9.
7. Baldwin P, Dodd M, Buckle EG, Macpherson SG. Medical careers: reasons for choosing a particular specialty. Health Bull 1998;56:498–503.
8. Henderson E, Berlin A, Fuller J. Attitudes of medical students towards general practice and general practitioners. Br J Gen Pract 2002;52:359–63.
9. General Medical Council. Tomorrow's doctors: recommendations on undergraduate medical education. London: GMC; 1993.
10. Department of Health. Government can deliver pledge to recruit more doctors. Press release 98/337, 14 August 1998.
11. SPSS. SPSS for Windows 11.5 [computer software]. Chicago, IL: SPSS Inc; 2002.
12. Marshall C, Rossman GB. Designing qualitative research. Newbury Park: Sage Publications; 1998.
13. Strauss A, Corbin J. Basics of qualitative research. Newbury Park: Sage Publications; 1999.
14. Allen I. Doctors and their careers. London: Policy Studies Institute; 1988.
15. Richards P. Learning medicine 1997. London: BMJ; 1996.
16. Allen I. Doctors and their careers: a new generation. London: Policy Studies Institute; 1994.
17. Lambert TW, Goldacre MJ, Edwards C, Parkhouse J. Career preferences of doctors who qualified in the United Kingdom in 1993 compared with those of doctors qualifying in 1974, 1977, 1980 and 1983. Br Med J 1996;313:19–24.