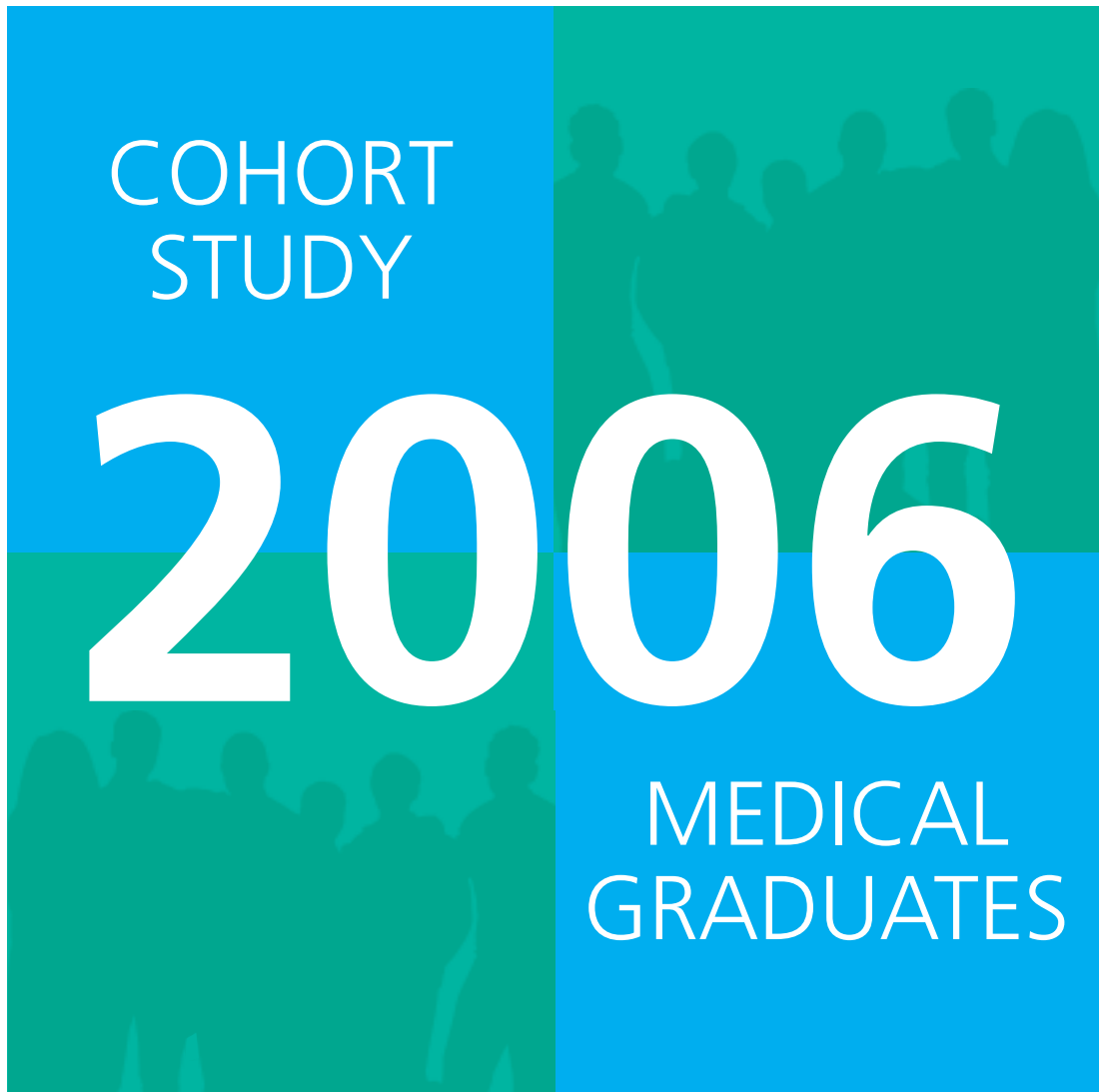


# First Report

June 2007





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## Summary

- The BMA cohort study of 2006 medical graduates is a 10-year longitudinal study of the career paths of 435 doctors. This is the first report and provides baseline information on interest in medicine, career choice and future career progress.
- A central aim of the cohort study is to reflect the future profile of the medical workforce and track their career development over a 10 year period. Almost three in five respondents are female and two in five are male. The majority of respondents are of white ethnic origin and are UK-born. The average age is 27 years. The majority of cohort doctors are single and very few have children.
- A fifth of the cohort have at least one medically qualified parent and those from non-white ethnic backgrounds are more likely to come from a medical background. Four in five respondents have non-medically qualified parents and these are more likely to be working in professional and managerial occupations.
- The average age when cohort members made the decision to become a doctor is 14 years and the most popular reason for choosing to study medicine is because they thought it would be an 'interesting career', followed by the 'desire to work with and help people'.
- Almost a quarter of the cohort had obtained a higher or professional qualification before entering medical school and 15 per cent of the cohort have been in full-time permanent employment before entering medical school.
- Cohort doctors were asked about the main influences on their choice of medical school and most reported 'location' as a key influence, followed by the 'reputation' and the 'prospectus' of the medical school.
- Most of the cohort report graduating from medical school with some form of student debt. The average amount of reported student debt is £20,798 and those with some form of student debt envisage that it will take an average of 11 years to pay it off.
- While the majority of cohort doctors report a strong desire to practise medicine, at graduation, more than one in 10 cohort doctors report a lukewarm or weak desire to practise medicine. The desire to practise medicine has declined somewhat since entry to medical school, particularly among females.
- At graduation, general practice is the most popular specialty choice among cohort doctors, followed by general medicine and surgery. While females are more likely to indicate a preference towards general practice, among male cohort doctors, similar numbers express a preference towards both general practice and surgery.
- Around three in five cohort doctors aspire to the consultant grade and 14 per cent aspire to become a GP principal. Almost a fifth of cohort doctors are undecided as to their ultimate career goal. Male cohort doctors are more likely to aspire to the consultant grade, compared with female cohort doctors who are more likely to plan a career as a non-principal GP.
- 'Hours of work and working conditions' is seen as being an important factor influencing career choice by almost three-quarters of the cohort, followed by 'a sense of vocation', 'domestic circumstances' and 'personal appraisal of their own skills and aptitude'.
- At graduation, a third of cohort doctors indicate a desire to train flexibly. Almost half of female cohort doctors desire some degree of flexible training, compared with males. Key reasons given for the desire to train flexibly include family commitments, work-life balance and the pursuit of non-medical work/interests.
- At graduation, less than a fifth of the cohort are confident that they will automatically get a job, once they have completed their training and less than 10 per cent are confident that they will get a job in their chosen specialty. Two – thirds of cohort doctors envisage working outside of the NHS at some point in their career, mainly as part of their medical career.
- At graduation, three in five cohort doctors plan to practise medicine outside the UK, either temporarily or permanently. This is consistent according to gender and many cohort doctors who intend to practise medicine outside the UK, intend to do so either at the completion of their foundation training or early in their specialty training.

# 1 Introduction

The UK medical profession is currently going through a period of significant change and development. Long held assumptions about the UK health system and the role of the doctor are being challenged. The culture and ethos of the NHS is changing, partly due to private sector competition and this affects the traditional role of the doctor. Increasingly, doctors are being drawn into the direct management of services and into debates about rationing and the appropriateness of treatments. The continued feminisation of the medical workforce is a further issue which must be addressed by those involved in medical workforce planning.

Central to the training of recent UK medical graduates is the reform of postgraduate medical education and training introduced by Modernising Medical Careers (MMC). MMC has created the two-year Foundation Programme that will, for the first time, require doctors to demonstrate their abilities and competence against set standards. All UK medical graduates will be required to undertake a two-year Foundation Programme, before progressing to specialty or GP training. MMC is a completely new way of training doctors and will fundamentally impact on the future career paths of UK doctors.

The environment in which recent UK medical graduates will practise is significantly different from previous cohorts. The valuable insights and contribution made to workforce planning gained from the BMA's 10 year study of 1995 medical graduates,<sup>i</sup> led to the call for a new study of medical graduates. This study will enable the BMA to make an authoritative and effective contribution to medical workforce planning for the UK on behalf of the profession. By tracking the careers of young doctors over a 10 year period, information will be collected to enable the assessment of future trends in the UK medical workforce.

The study aims to provide information on the careers of doctors, and particularly to:

- identify doctors who leave medicine as a career, or who choose to work in another country, to assess the magnitude of this loss and the factors which influence it
- identify patterns of workforce participation and specialty choice of doctors who remain in the UK, and the factors which influence them
- investigate career progression, especially those factors which influence variation between doctors.

The cohort study complements existing research by allowing data to be collected over a continuous period, thereby addressing the current lack of information on workforce flows. As the data is linked longitudinally, individual careers can be tracked over time enabling the analysis of differential career development.

The cohort study will provide essential information on the careers, experiences, views and aspirations of the new generation of doctors and be of interest to those involved in medical workforce planning and policy development, and others interested in medical careers.

<sup>i</sup> The BMA cohort study of 1995 graduates is a 10 year longitudinal study of UK medical graduates. Further details can be found at <http://www.bma.org.uk/ap.nsf/Content/Hubcohortstudies>

## 2 Methodology

The study began in May 2006 when an invitation to participate was mailed to final year medical students in the United Kingdom (UK). A response indicating a willingness to participate was received from 557 and these formed the cohort sample. The first questionnaire was mailed in October 2006. The mailing received a response rate of 87 per cent, giving a final cohort size of 435.

The collection of data is conducted primarily through a postal questionnaire sent to the cohort participants every summer. This process is designed to be both continuous and longitudinal. Information is collected on the preceding 12-month period and linked from year to year using a numerical identifier. This design allows for the career paths of the respondents to be tracked over time.

The annual postal questionnaire is combined with focus groups, which are conducted with a random sub-sample of the cohort each year. These allow for questions to be examined in greater depth and also serve as a measure of reliability and validity. They also play a role in determining the direction of future research.

Care is taken to ensure confidentiality at all times. Further details of the project's methodology are provided in appendix A.

### Response

The first questionnaire was mailed to the cohort sample in October 2006 and received a response from 87 per cent, resulting in a final cohort size of 435. A central aim of the cohort study is to reflect the future profile of the medical workforce and track their career development over a 10 year period. Hence, the cohort must be representative of the final year UK medical graduate population, as a whole.

Initial analysis of the data indicated that the cohort are representative in terms of ethnic background and each of the 24 UK medical schools with students graduating in 2006.<sup>ii</sup> However, initial analysis of the cohort indicated a response bias according to gender. The data were weighted to account for this, and to ensure that the cohort were representative of final year medical students in terms of gender. The data are reported here as weighted.

ii Several new UK medical schools did not have students graduating in 2006 and hence were not included in this study. These include University of Keele, University of East Anglia, Peninsula Medical School, Brighton/Sussex Medical School, University of Swansea, Hull/York Medical School.

## 3 Respondent profile

### Age, gender and ethnic background

Table 1 shows that almost three in five respondents are female (58%) and two in five are male (42%). While the majority of respondents are of white ethnic origin, 5 per cent are of Indian ethnic origin, 2 per cent of Pakistani ethnic origin and 2 per cent of Chinese ethnic origin. Table 2 shows that the vast majority of respondents are UK-born. However, 9 per cent of respondents report their country of birth as one outside the European Economic Community (EEC), including Malaysia (7), Hong Kong (7), South Africa (6) and Nigeria (3).

**Table 1 Ethnic origin of respondents by gender**

	Male	Female	Total	%
White	173	233	406	84.6
Black Caribbean	0	1	1	0.2
Black African	0	3	3	0.6
Indian	14	10	24	5.0
Iranian	0	3	3	0.6
Pakistani	5	5	10	2.1
Chinese	5	7	12	2.5
Other	5	16	21	4.4
<b>Total</b>	<b>202</b>	<b>278</b>	<b>480</b>	<b>100.0</b>
No reply	2		2	

**Table 2 Country of birth of respondents by gender**

	Male	Female	Total	%
United Kingdom:				
England	123	199	322	67.2
Scotland	25	25	50	10.4
Wales	10	10	20	4.3
Northern Ireland	21	17	38	7.9
Other EEC country	4	4	8	1.6
Other non EEC country	20	22	42	8.6
<b>Total</b>	<b>203</b>	<b>277</b>	<b>480</b>	<b>100.0</b>
No reply	1	1	2	

## Marital and tenancy status

The age of the respondents ranges from 22 to 47 (average age is 27). This is somewhat older than previous cohorts and reflects the expansion of graduate entry programmes to medicine in recent years in the UK. Table 3 shows that the majority of doctors are single (70%) and very few have children (9/483). Of those cohort doctors who are married or living with a partner, almost a third (39/138) are co-habiting with other doctors.

Half of respondents are tenants, a quarter are homeowners and a fifth are either living with their parents or in hospital accommodation (table 4).

**Table 3 Marital status of respondents**

	Frequency	%
Single	335	70.0
Married	36	7.4
Living with partner	106	22.2
Divorced/separated	2	0.4
<b>Total</b>	<b>479</b>	<b>100.0</b>
No reply	3	

**Table 4 Tenancy status of respondents**

	Frequency	%
Tenant	249	51.9
Homeowner	129	26.9
Living with parents	50	10.5
Living in hospital accommodation	44	9.1
Other	7	1.5
<b>Total</b>	<b>479</b>	<b>100.0</b>
No reply	3	

## Age when began medical school

The average age when respondents began medical school ranges from 17 to 41 years, with the average age at 19.5 years. In terms of fee paying status, the vast majority of respondents were home students (465/482).

## Parental background

Table 5 shows that a fifth of the cohort have at least one medically qualified parent (103/480). Respondents from non-white ethnic backgrounds are more likely to come from a medical background, ie, at least one parent is a doctor (table 6).

Four in five respondents have non-medically qualified parents. Figure 1 shows that in the majority of cases, the parents of these respondents are working in professional and managerial occupations.

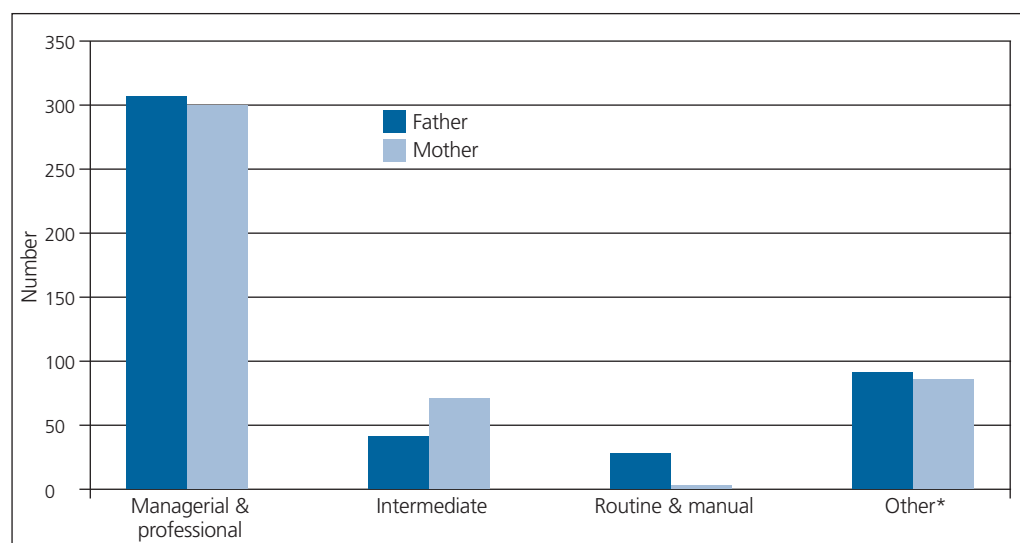
**Table 5 Whether parents are medically qualified**

	Frequency	%
Father only	57	11.8
Mother only	17	3.4
Both	29	6.1
Neither	377	78.6
<b>Total</b>	<b>480</b>	<b>100.0</b>
No reply	2	

**Table 6 Whether parents are medically qualified by ethnic origin (%)**

	White	Non-white
Father only	9.9	21.3
Mother only	3.7	2.7
Both	5.7	8.0
Neither	80.7	68.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
N	404	75

**Figure 1 Occupation of non-medically qualified parents classified according to socio-economic classification<sup>iii</sup>**



\* Other includes retired/deceased, unemployed, housewife and student.

<sup>iii</sup> The National Statistics Socio-economic Classification (NS-SEC) replaces Social Class based on Occupation and Socio Economic Groups (SEG) from 2001.

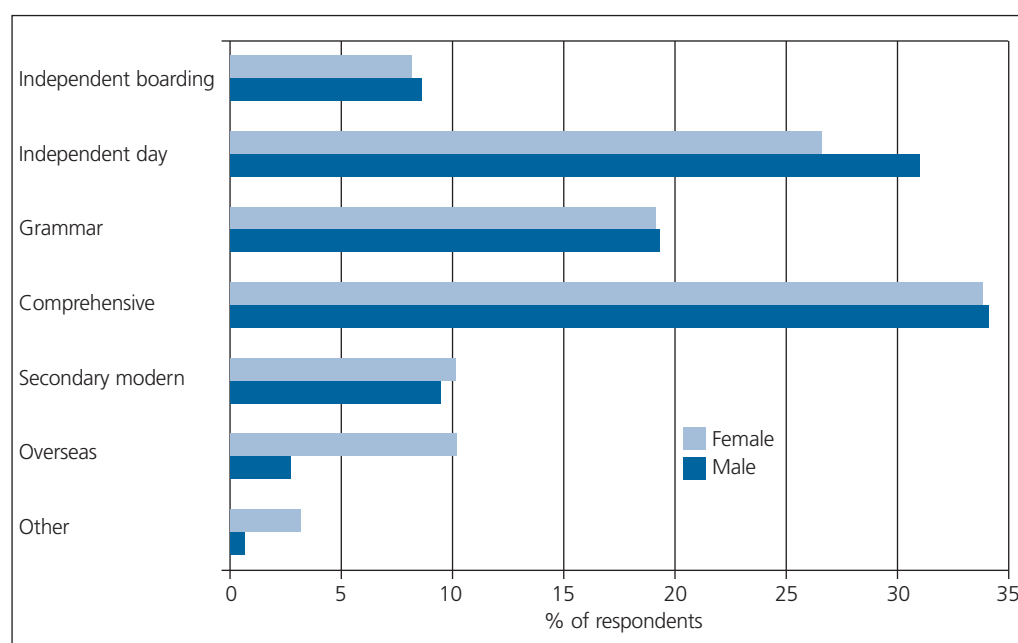
## Educational background

More than a third of cohort doctors completed their secondary education at an independent school (either boarding or as a day student) and a further third of cohort doctors attended a comprehensive school. A fifth of cohort doctors completed their secondary education at a grammar school (table 7). Figure 2 shows that there is very little gender difference in the type of secondary school attended by cohort doctors, although males are more likely to have attended an independent day school.

**Table 7 Type of school attended where completed secondary education**

	Male	Female	Total	%
Independent boarding	17	22	39	8.1
Independent day	64	73	137	28.5
Grammar	39	53	92	19.2
Comprehensive	68	92	160	33.3
Secondary modern	9	14	23	4.8
Overseas	5	14	19	4.0
Other	1	9	10	2.1
<b>Total</b>	<b>203</b>	<b>277</b>	<b>480</b>	<b>100.0</b>
No reply			2	

**Figure 2 Type of school attended where completed secondary education by gender (%)**



## 4 Interest in medicine

The average age when cohort members made the decision to become a doctor is 14 years, but ranges from three years to 34 years. The average age varies slightly according to gender: 15 years for males and 13.7 years for females.

### Motivation to study medicine

Cohort doctors were asked the main reasons why they chose to study medicine. Table 8 shows that three-quarters of cohort doctors chose to study medicine because they thought it would be 'an interesting career'. The 'desire to work with and help people' was a further reason given by two-thirds of the cohort. Given that the average age when respondents made the decision to become a doctor was 14 years, it is perhaps not surprising that being 'good at sciences' is a reason given by three in five cohort doctors for studying medicine.

While the cohort are in agreement on the principal motivations for studying medicine, the relative importance of the reasons given do vary somewhat according to gender (table 9). The most frequently cited reason for studying medicine given by female cohort doctors is the 'desire to work with and help people', followed by 'an interest in a medical career', 'being good at sciences', 'the intellectual challenge' and 'a sense of vocation' of always wanting to be a doctor. In contrast, male cohort doctors view that medicine is 'an interesting career' was the most frequently cited reason for studying medicine, followed by being 'good at sciences', 'a desire to work with and help people', the 'intellectual challenge' and 'job security'.

**Table 8 Main reasons for the decision to study medicine (ranked)**

	Frequency	%
Interesting career	368	76.3
Wished to work/help people	327	67.8
Good at sciences	301	62.4
Intellectual challenge	262	54.4
Job security	192	39.8
Always wanted to be a doctor	148	30.7
Status	100	20.7
Financially rewarding	93	19.3
Influenced by friends & relatives	88	18.3
Personal experience of illness/hospitals	71	14.7
Could not think of anything else	34	7.1
Advised at school	31	6.4
Other	32	6.6

Note: multiple response question

**Table 9 Main reasons for the decision to study medicine by gender (ranked)**

	Males	Females
Wished to work/help people	3	1
Interesting career	1	2
Good at sciences	2	3
Intellectual challenge	4	4
Always wanted to be a doctor	8	5
Job security	5	6
Personal experience of illness/hospitals	10	7
Influenced by friends & relatives	9	8
Status	6	9
Financially rewarding	7	10
Advised at school	12	11
Could not think of anything else	11	12

### Qualifications and employment prior to entering medical school

Almost a quarter of the cohort had obtained a higher or professional qualification before entering medical school. This varies somewhat according to gender, with 24 per cent of female cohort doctors entering medical school with a higher qualification, compared with 22 per cent of male cohort doctors (table 10). Higher qualifications include Bachelor of Arts degree, Bachelor of Science degree and MA degree.

Table 11 shows that 15 per cent of the cohort have been in full-time permanent employment before entering medical school. This also varies according to gender, with almost a fifth of male cohort doctors having been employed full-time before entering medical school, compared with 13 per cent of female cohort doctors. The types of previous employment range from medically related occupations such as nurse, midwife, dentist, pharmacist and clinical research scientist to non-medically related occupations such as financial analyst, builder, waitress, software engineer, police officer, lifeguard and professional footballer.

**Table 10 Whether obtained higher qualifications before entering medical school by gender**

	Male	Female	Total	%
Yes	46	67	113	23.4
No	158	211	369	76.6
<b>Total</b>	<b>204</b>	<b>278</b>	<b>482</b>	<b>100.0</b>

**Table 11 Whether have been in full-time permanent employment before entering medical school by gender**

	Male	Female	Total	%
Yes	38	36	74	15.4
No	166	242	408	84.6
<b>Total</b>	<b>204</b>	<b>278</b>	<b>482</b>	<b>100.0</b>

## Choice of medical school

The cohort comprise graduates from each of the UK medical schools (see table A1). Cohort doctors were asked about the main influences on their choice of medical school. Table 12 shows that around three-quarters of cohort doctors reported 'location' as a key influence on their choice of medical school and around half of cohort doctors were influenced by the 'reputation' of the medical school. While both male and female cohort doctors agree on the top three influences on their choice of medical school, females were more likely to be influenced by their 'own grades at school' and males were more likely to have been influenced by 'friends and colleagues' (table 13). Other reasons include 'previous experience of the university' or that it was the 'only placed offered to them'.

**Table 12 Main influences on your choice of medical school (ranked)**

	Frequency	%
Location	352	73.0
Reputation	274	56.8
Prospectus/type of course available	100	20.7
Grades	59	12.2
Influenced by parents	56	11.6
Influenced by friends/colleagues	55	11.4
Atmosphere of medical school/environment	37	7.7
Graduate entry	26	5.4
Other	54	11.2

Note: multiple response question

**Table 13 Main influences on your choice of medical school by gender (ranked)**

	Males	Females
Location	1	1
Reputation	2	2
Prospectus	3	3
Grades	6	4
Influenced by parents	5	5
Influenced by friends/colleagues	4	6
Atmosphere of medical school/ environment	7	7
Graduate entry	8	8

## Graduate entry to medical school

A fifth of the cohort entered medical school as graduate students and this is fairly evenly distributed according to gender: 21 per cent of female cohort members entered medical school as graduate students, compared with 19 per cent of males (table 14). Of these (n=97), two in five (35/88) were on a Graduate Entry Medicine (GEM) course.<sup>iv</sup> The proportion of cohort doctors entering medical school as graduate students is over-representative of the graduate population as a whole and reflects the continued expansion of graduate entry programmes to medicine in the UK.

**Table 14 Whether entered medical school as a graduate student by gender**

	Male	Female	Total	%
Yes	38	59	97	20.2
No	165	218	383	79.8
<b>Total</b>	<b>203</b>	<b>277</b>	<b>480</b>	<b>100.0</b>
No reply	1	1	2	

## Intercalation

Two in five cohort members obtained an intercalated degree during their undergraduate course (table 15). Almost half of male cohort doctors (45%) obtained an intercalated degree during their undergraduate course, compared with around a third (37%) of females. Intercalated degrees obtained include Bachelor of Arts degree, Bachelor of Science degree and BMedSci.

**Table 15 Whether obtained an intercalated degree during undergraduate course by gender**

	Male	Female	Total	%
Yes	91	101	192	40.3
No	110	175	285	59.7
<b>Total</b>	<b>201</b>	<b>276</b>	<b>477</b>	<b>100.0</b>
No reply	3	2	5	

## Student debt

Most of the cohort report graduating from medical school with some form of student debt (425/477) and this is fairly consistent according to gender (90% males and 88% females). Cohort members with medically qualified parents are less likely to have graduated from medical school with any student debt (table 16). The average amount of reported student debt is £20,798 but ranges from £500 to £80,000. This is slightly below the average student debt of £21,755 for those graduating in 2006, as reported in the BMA's survey of medical student finances.<sup>1</sup> Cohort doctors with some form of student debt envisage that it will take an average of 11 years to pay off their current student debt.

<sup>iv</sup> Graduate Entry Medicine (GEM) is a four-year, fast-track programme designed to offer an accessible route into medicine for graduates with a degree in any discipline.

**Table 16 Whether graduated from medical school with any student debt by parental background (%)**

	Medically qualified parents	Non-medically qualified parents	Total (%)
Yes	78.6	91.4	88.8
No	21.4	8.6	11.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
N	103	374	477

### Role models and mentoring

Most of the cohort (420/479) regard a role model or mentor as being important to successful medical training and this perception is consistently reported by both males and females (table 17). Around a third of cohort doctors (179/482) have currently got a mentor.

**Table 17 Degree of importance of a role model or mentor to successful medical training by gender**

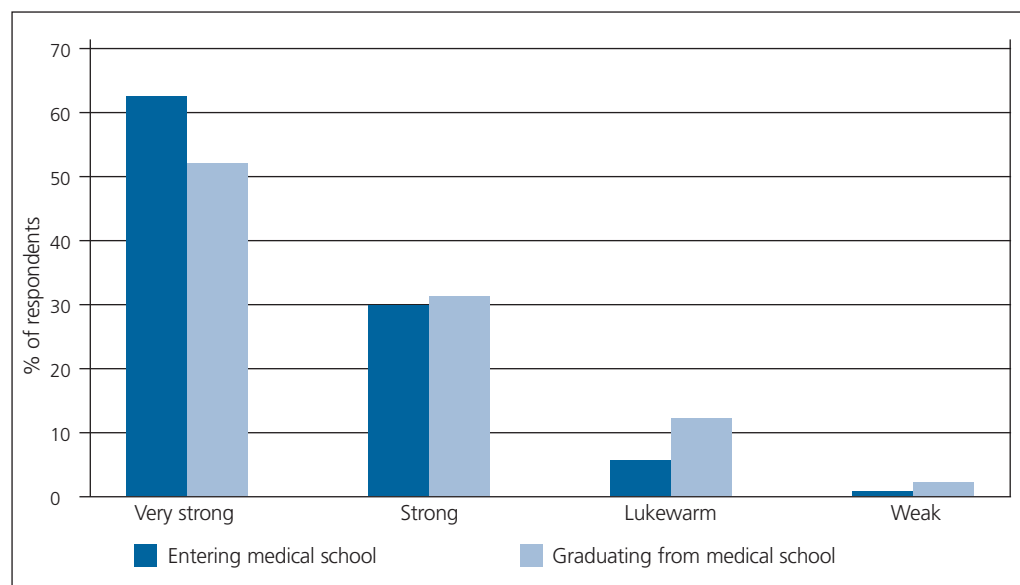
	Male	Female	Total	%
Very important	96	118	214	44.7
Somewhat important	78	128	206	43.0
Not at all important	27	19	46	9.6
Not sure	1	12	13	2.7
<b>Total</b>	<b>202</b>	<b>277</b>	<b>479</b>	<b>100.0</b>
No reply	1	2	3	

### Desire to practise medicine

Cohort doctors were asked to rate their desire to practise medicine when they entered medical school and again when they graduated from medical school. Figure 3 shows the change in desire to practise medicine before and after medical school. While the majority of cohort doctors report a strong desire to practise medicine, on entry to medical school, 7 per cent of the cohort indicated that their desire to practise medicine was either lukewarm or weak. On graduation, the desire to practise medicine has declined somewhat and 15 per cent of the cohort indicate a lukewarm or weak desire to practise medicine.

On entering medical school, female cohort doctors were more likely to have a weak or lukewarm desire to practise medicine compared with males. However, there is no gender difference in those cohort doctors who express a lukewarm or weak desire at graduation, with 15 per cent of both groups reporting this (table 18). The desire to practise medicine is weaker among cohort doctors with medically qualified parents, at both entry to medical school and upon graduation (table 19).

**Figure 3 Desire to practise medicine when entering and graduating from medical school (%)**



**Table 18 Desire to practise medicine on entering and graduating from medical school by gender (%)**

	Entering medical school		Graduating from medical school	
	Males	Females	Males	Females
Very strong	58.8	66.4	47.3	57.2
Strong	35.8	26.4	37.9	28.1
Lukewarm	4.9	6.5	11.3	12.9
Weak	0.5	0.7	3.4	1.8

**Table 19 Desire to practise medicine on entering and graduating from medical school by parental background (%)**

	Entering medical school		Graduating from medical school	
	Medically qualified parents	Non-medically qualified parents	Medically qualified parents	Non-medically qualified parents
Very strong	60.8	63.7	50.0	54.1
Strong	29.4	30.8	31.4	32.4
Lukewarm	7.8	5.3	14.7	11.7
Weak	2.0	0.3	3.9	1.9

## 5 Career in medicine

### Career path

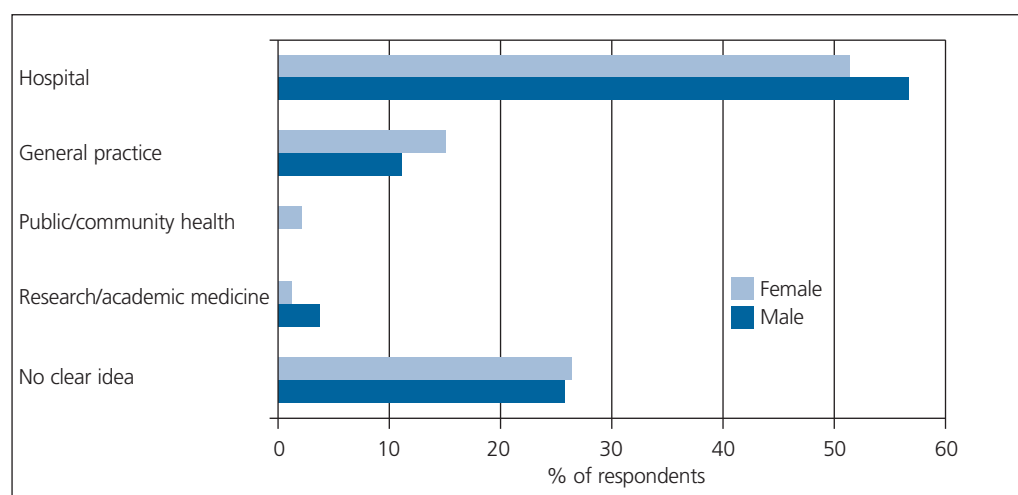
Table 20 shows the preferred career path chosen by cohort doctors on entry to medical school. Around half of cohort doctors indicate a preference for hospital medicine and 13 per cent a preference for general practice. However, a quarter of cohort doctors had no clear idea as to their preferred career path on entry to medical school.

Preferred career choice options are fairly consistent according to gender, although male cohort doctors are more likely to indicate a preference towards hospital medicine and females towards general practice (figure 4). Male cohort doctors are also more likely to indicate a preference towards research/academic medicine.

**Table 20 Preferred career path on entry to medical school**

	Frequency	%
Hospital	258	53.5
General practice	64	13.4
Public health/community health	5	1.0
Research /academic medicine	12	2.4
No clear idea	122	25.2
Other	21	4.3
<b>Total</b>	<b>482</b>	<b>100.0</b>

**Figure 4 Preferred career path by gender (%)**



## Specialty choice

The cohort were asked about their long-term career specialty choices and table 21 shows the first choice career option by specialty of cohort doctors at graduation. The most popular specialty choice among cohort doctors is general practice (27%), followed by general medicine (19%) and surgery (14%). Table 22 shows that general practice is a popular branch of practice among cohort doctors, ranking highly as first, second and third specialty choice for the long-term career specialty choice. Among the hospital specialties, general medicine, ranked highly across preferences. Paediatrics, emergency medicine and anaesthetics ranked highly as second and third long-term career specialty choice of cohort doctors.

**Table 21 Current first choice of specialty at graduation**

	Frequency	%
Surgery	67	14.0
General medicine (& medical oncology)	89	18.6
Psychiatry	15	3.1
Obstetrics & gynaecology	25	5.2
Paediatrics	36	7.5
Anaesthetics	34	7.1
Radiology (& clinical oncology)	9	1.9
Pathology	1	0.2
Geriatrics	3	0.6
Emergency medicine	20	4.2
Research	6	1.3
Hospital in general	20	4.2
General practice	130	27.1
Public health medicine	6	1.3
Other hospital specialty	14	2.9
Career outside medicine	4	0.8
<b>Total</b>	<b>479</b>	<b>100.0</b>
No reply	3	

**Table 22 Current choice of specialty at graduation (ranked according to preference)**

	1st choice	2nd choice	3rd choice
General practice	1	2	2
General medicine (& medical oncology)	2	1	1
Surgery	3	6	9
Paediatrics	4	4	5
Anaesthetics	5	5	6
Obstetrics & gynaecology	6	8	8
Hospital in general	7	7	3
Emergency medicine (A&E)	8	3	4
Psychiatry	9	11	7
Other hospital specialty	10	9	14
Radiology (& clinical oncology)	11	14	13
Public health medicine	12	13	10
Research	13	10	12
Career outside medicine	14	15	11
Geriatrics	15	12	15
Pathology	16	16	16

Specialty choice varies somewhat according to gender (table 23). Almost a third of female cohort doctors indicate a preference towards a career in general practice, compared with a fifth of males. Within hospital medicine, male cohort doctors are more likely to favour a career in surgery, anaesthetics or emergency medicine. Female cohort doctors are more likely to favour the hospital specialties of general medicine, obstetrics and gynaecology, or paediatrics. Male cohort doctors are more likely to indicate a preference towards a research career.

**Table 23 Current first choice of specialty at graduation according to gender (%)**

	Male	Female	Total
Surgery	22.9	7.3	14.0
General medicine (& medical oncology)	14.6	21.5	18.6
Psychiatry	3.4	2.9	3.1
Obstetrics & gynaecology	2.0	7.7	5.2
Paediatrics	3.9	10.2	7.5
Anaesthetics	10.7	4.4	7.1
Radiology (& clinical oncology)	1.5	2.2	1.9
Pathology	0.0	0.4	0.2
Geriatrics	0.0	1.1	0.6
Emergency medicine (A&E)	5.9	2.9	4.2
Research	2.0	0.7	1.3
Hospital in general	4.4	4.0	4.2
General practice	22.9	30.3	27.1
Public health medicine	2.0	0.7	1.3
Other hospital specialty	3.9	2.2	2.9
Career outside medicine	0.0	1.5	0.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

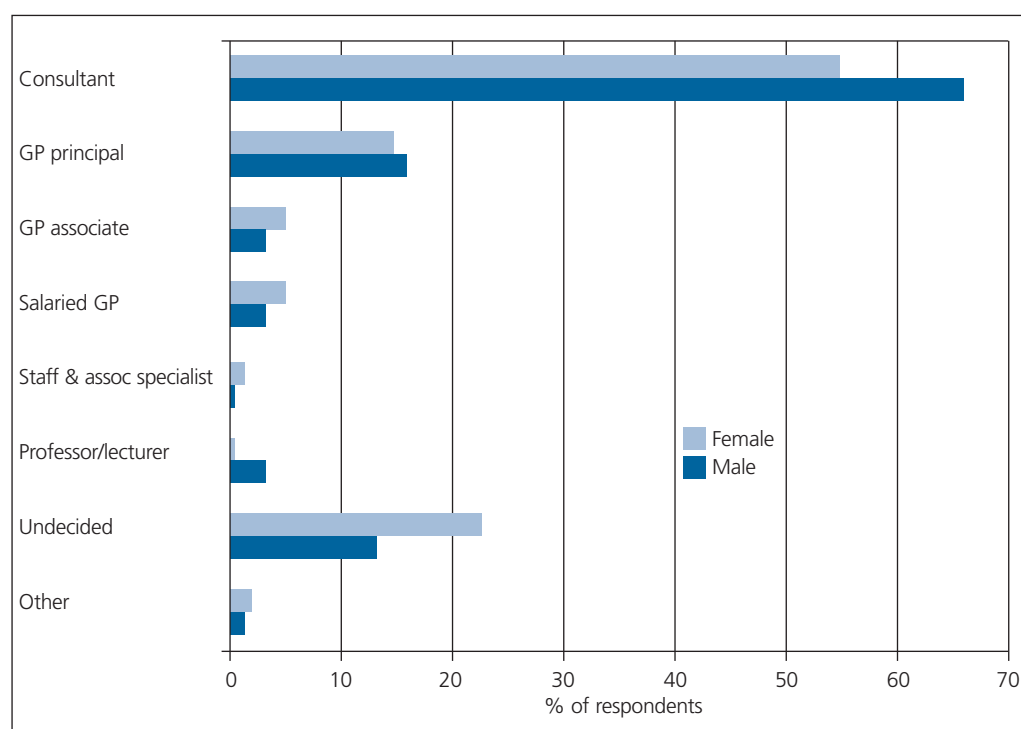
## Career goals

Table 24 shows the ultimate career goals of cohort doctors at graduation from medical school. Around three in five cohort doctors aspire to the consultant grade and 14 per cent aspire to become a GP principal. Almost a fifth of cohort doctors are undecided as to their ultimate career goal. Figure 5 shows that male cohort doctors (65%) are more likely to aspire to the consultant grade, compared with female cohort doctors (54%). Female cohort doctors are more likely to plan a career as a non-principal GP (7.6%), compared with male cohort doctors (3.5%). Further, female cohort doctors (22%) are more likely to be undecided about their ultimate career goal, compared with males (13%).

**Table 24 Ultimate career goal**

	Frequency	%
Consultant	283	58.6
GP principal	69	14.4
GP associate	14	2.8
Salaried GP	14	2.9
Staff grade/associate specialist	4	0.9
Professor/Lecturer	6	1.3
Undecided	87	18.0
Other	5	1.1
<b>Total</b>	<b>482</b>	<b>100.0</b>

**Figure 5 Ultimate career goal according to gender (%)**



### Influence on career choice

Figure 6 illustrates the degree of influence of various factors on their choice of career. 'Hours of work and working conditions' is seen as being an important factor by almost three-quarters (72%) of the cohort. Two thirds of the cohort report that 'a sense of vocation', their 'domestic circumstances' and 'personal appraisal of their own skills and aptitude' were also important factors in their choice of career.

**Figure 6 Degree of influence of factors in making career choice (%)**

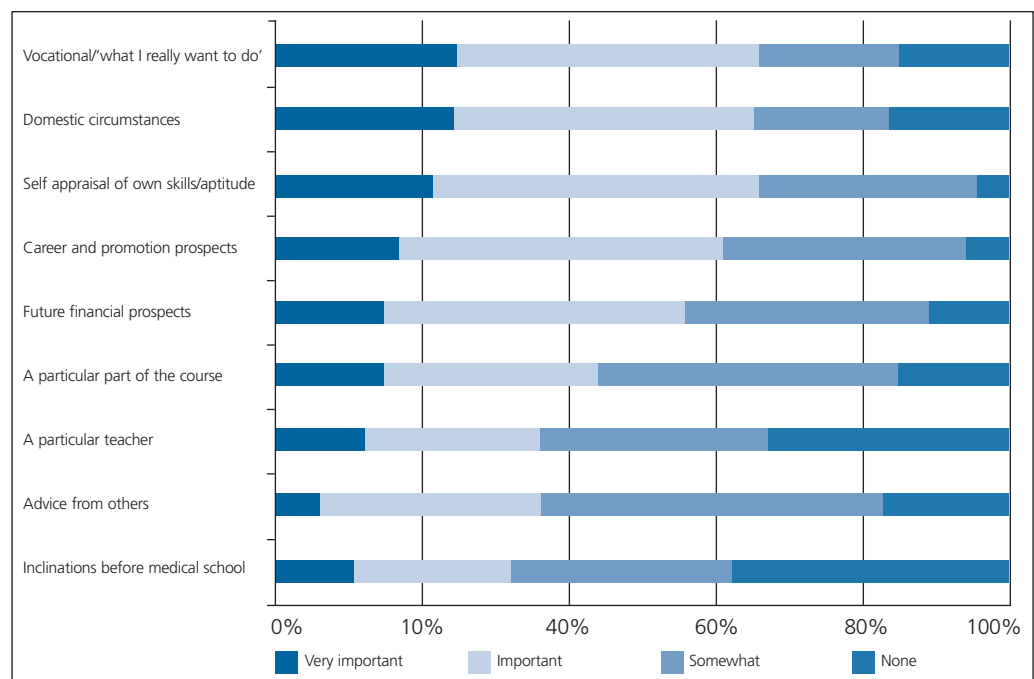


Table 25 shows that influencing factors vary somewhat according to gender. 'Career and promotion prospects', 'self appraisal of own skills and aptitude' and 'hours of work and working conditions' are the three most influential factors in making career choices for male cohort doctors. 'Hours of work and working conditions' is also an important factor influencing the career choice of female cohort doctors, followed by 'domestic circumstances' and 'a sense of vocation'.

**Table 25 Degree of influence of factors in making career choice (ranked)**

	Male	Female
Career & promotion prospects	1	5
Self appraisal of own skills/aptitude	2	4
Hours of work & working conditions	3	1
Vocational/'what I really want to do'	4	3
Future financial prospects	5	6
Domestic circumstances	6	2
A particular part of the course	7	7
A particular teacher	8	9
Advice from others	9	8
Inclinations before medical school	10	10

### Intended working patterns

Most cohort doctors anticipate working full time for the majority of their working career (table 26). However, this varies according to gender. While most males (96%) and females (79%) anticipate working full time for the majority of their career, a fifth of females anticipate working on a part-time basis for the majority of their career, compared with only 4 per cent of male cohort doctors.

**Table 26 General pattern of work anticipated for the majority of your working career**

	Frequency	%
Working full-time	409	85.7
Working part-time	68	14.3
<b>Total</b>	<b>477</b>	<b>100.0</b>
No reply	5	

Flexible training is increasingly an issue for the medical workforce. At graduation, a third of cohort doctors indicate a desire to train flexibly (table 27). Almost half (48%) of female cohort doctors desire some degree of flexible training, compared with males (15%). However, around a quarter of both male and female cohort doctors are undecided. Key reasons given for the desire to train flexibly include family commitments, work-life balance and the pursuit of non-medical work/interests. The following verbatim comments illustrate these reasons:

*I want to see my children when they are young. I want to raise them myself. I want to have time to play with them, cook with them and help them with their homework.*

*I want to be a mother, as well as a doctor.*

*I want the ability to have a life outside medicine. Life is too short to work all the time!*

*I would like the opportunity to investigate further career options and develop the potential to work in the private sector.*

**Table 27 Whether you would like to undertake all or part of your training on a flexible basis by gender**

	Male	Female	Total	%
Yes	30	132	162	33.8
No	126	64	190	39.7
Undecided	47	80	127	26.5
<b>Total</b>	<b>203</b>	<b>276</b>	<b>479</b>	<b>100.0</b>
No reply	1	2	3	

Two-thirds of cohort doctors intend or expect to take a career break during their medical career (table 28). While two-thirds (81%) of female cohort doctors anticipate a career break, half (50%) of males also intend to take a career break. The main reason for taking a career break is to have children. Other reasons include, wanting to travel, pursue other business interests, undertake voluntary/charity work and to work abroad.

**Table 28 Whether you intend/expect to have a career break during your career by gender**

	Male	Female	Total	%
Yes	103	219	322	67.8
No	101	52	153	32.2
<b>Total</b>	<b>204</b>	<b>271</b>	<b>475</b>	<b>100.0</b>
No reply		7	7	

## 6 Future Career Progress

### Portfolio careers

Table 29 shows that almost three-quarters (64%) of the cohort have considered a portfolio career, which may incorporate teaching, research or management into their medical career. While around half (56%) of male cohort doctors have considered pursuing a portfolio career, this is a consideration for three-quarters (74%) of female cohort doctors.

**Table 29 Whether you have considered a portfolio career according to gender**

	Male	Female	Total	%
Yes	151	155	306	63.8
No	53	121	174	36.3
<b>Total</b>	<b>204</b>	<b>276</b>	<b>480</b>	<b>100.0</b>
No reply		2	2	

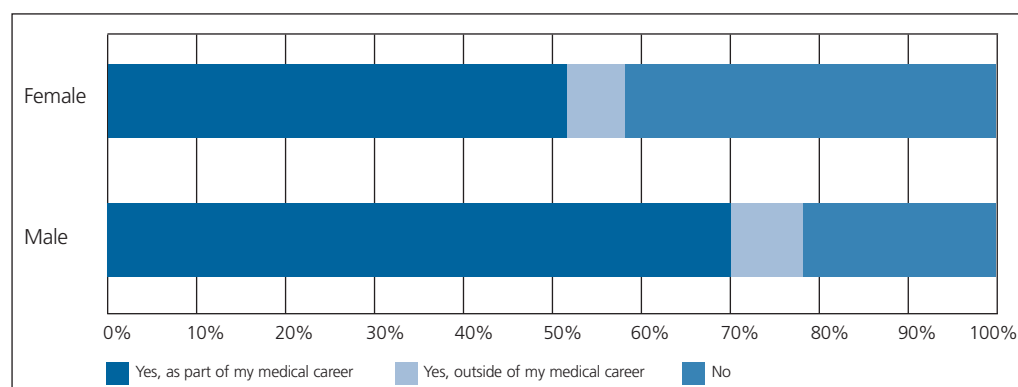
### Working outside the NHS

Two-thirds of cohort doctors envisage working outside the NHS at some point in their career, mainly as part of their medical career (table 30). While only a third of cohort doctors see themselves working only within the NHS during their medical career, this is more likely to be the view of females (43%) compared with male cohort doctors (23%) (figure 7).

**Table 30 Whether you envisage working outside of the NHS at any point in your career**

	Frequency	%
Yes, as part of my medical career	283	59.3
Yes, outside of my medical career	32	6.7
No	162	34.0
<b>Total</b>	<b>477</b>	<b>100.0</b>
No reply	5	

**Figure 7 Whether you envisage working outside of the NHS at any point in your career by gender (%)**



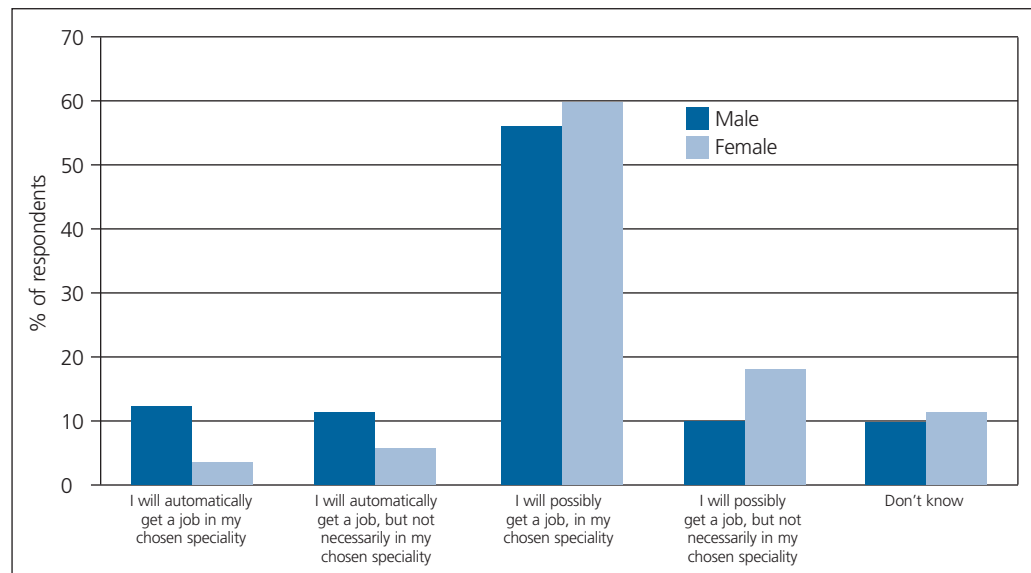
### Securing a post upon completion of training

At graduation, less than a fifth of the cohort are confident that they will automatically get a job, once they have completed their training and less than 10 per cent are confident that they will get a job in their chosen specialty (table 31). Male cohort doctors are slightly more confident about their future job opportunities – a quarter of males are confident of automatically getting a job once they have completed their training, compared with 11 per cent of females (figure 8).

**Table 31 To what extent to you envisage getting a job in your chosen specialty once you have completed your training**

	Frequency	%
I will automatically get a job in my chosen specialty	37	7.7
I will automatically get a job, but not necessarily in my chosen specialty	40	8.4
I will possibly get a job in my chosen specialty	277	57.9
I will possibly get a job, but not necessarily in my chosen specialty	69	14.4
Don't know	55	11.5
<b>Total</b>	<b>478</b>	<b>100.0</b>
No reply	4	

**Figure 8 To what extent do you envisage getting a job in your chosen specialty once you have completed your training by gender (%)**



### Factors impacting on a medical career

Cohort doctors were asked to rank the relative impact of five factors (specialty, work-life balance, location, career choice/flexibility and job security) to their own career. Two in five cohort doctors ranked 'specialty' as the most important factor, followed by more than a third who ranked 'work-life balance' as the most important factor. 'Location' was ranked as the most important factor by one in 10 cohort doctors. 'Job security' was ranked as the least important factor by two in five cohort doctors. Figure 9 illustrates the relative importance of these five factors.

**Figure 9 Relative importance of factors to medical career (%)**

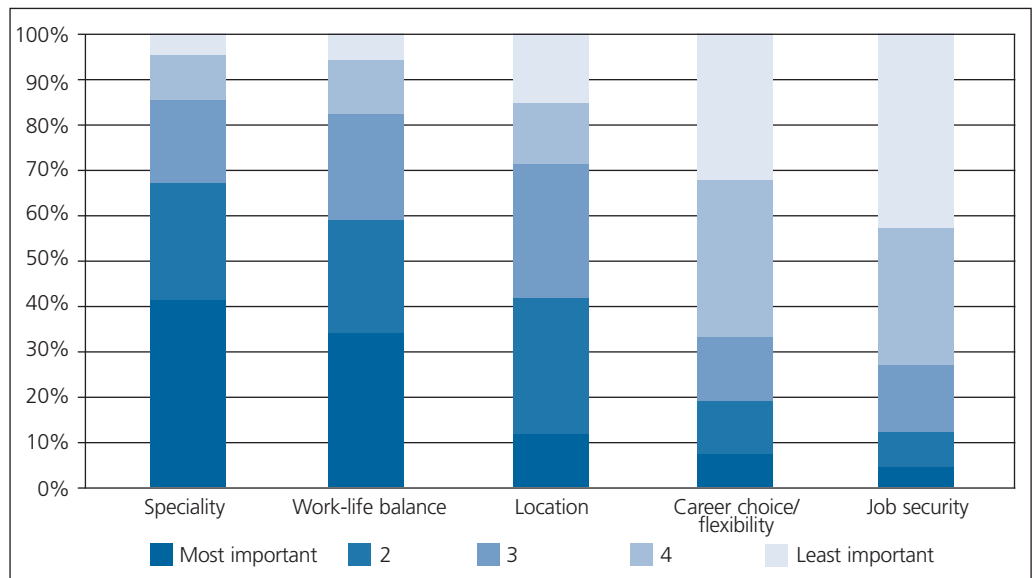
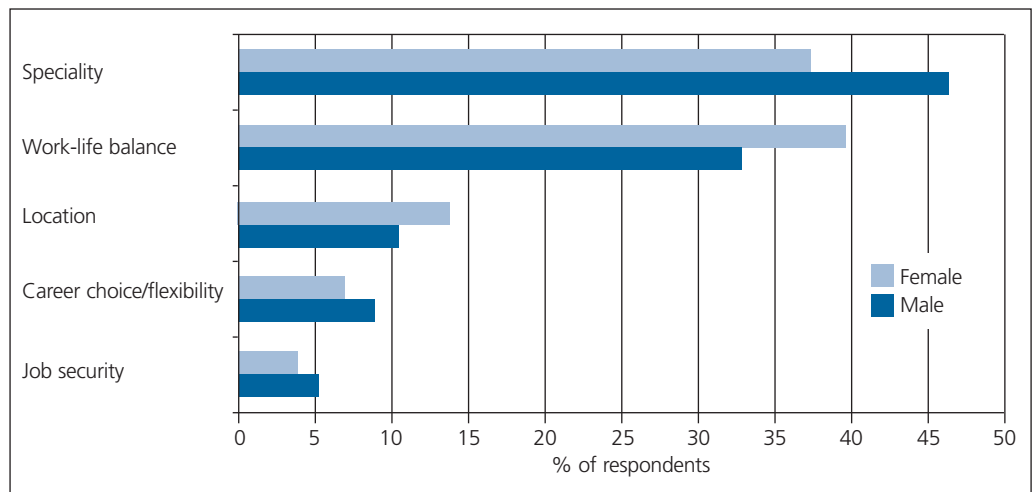


Figure 10 illustrates the most important factor according to gender and shows that almost half of males (47%) ranked 'specialty' as the most important factor to their medical career, compared with a third (37%) of females. On the other hand, two in five (40%) females ranked work-life balance as the most important factor, compared with 33 per cent of males.

**Figure 10 Most important factors to medical career by gender (%)**



### Intentions to practise medicine outside the UK

At graduation, three in five (296/461) cohort doctors plan to practise medicine outside the UK, either temporarily or permanently (table 32). This is consistent according to gender: 62 per cent of males and 58 per cent of females. Many cohort doctors who intend to practise medicine outside the UK, intend to do so either at the completion of their foundation training or early in their specialty training. The main reasons given for intending to practise medicine include 'increase life experience', 'opportunities to travel', 'broaden medical experience' and 'charity/volunteer work'. Destination countries include Australia, New Zealand, Africa, Canada and the US.

**Table 32 Intention to practise medicine outside the UK, either temporarily or permanently in the future**

	Frequency	%
Yes, temporarily	266	55.3
Yes, permanently	30	6.2
No present plans	185	38.5
<b>Total</b>	<b>481</b>	<b>100.0</b>
No reply	1	

## 7 Discussion

The environment within which the 2006 cohort doctors will train and work is very different from that of previous cohorts. The introduction of Modernising Medical Careers (MMC) and the problems surrounding the Medical Training Application System (MTAS) will impact considerably on cohort doctors as they work their way through medical training reforms.

Against this background, morale and motivation will continue to be key in the recruitment and retention of doctors in the UK medical workforce. It is of concern that at graduation, more than one in 10 cohort doctors report a lukewarm or weak desire to practise medicine. The desire to practise medicine has declined somewhat since entry to medical school, particularly among females.

### Career path

At graduation, general practice is the most popular specialty choice among cohort doctors, followed by general medicine and surgery. While females are more likely to indicate a preference towards general practice, among male cohort doctors, similar numbers express a preference towards both general practice and surgery. Similarly, male cohort doctors are more likely to aspire to the consultant grade, compared with female cohort doctors who are more likely to plan a career as a non-principal GP. Almost three-quarters of the cohort have considered a portfolio career, which may incorporate teaching, research or management into their medical careers. Two-thirds of cohort doctors envisage working outside of the NHS at some point in their career, mainly as part of their medical career.

There is a need to look at new ways of training with the planned reconfiguration of the NHS. Recent research<sup>2</sup> shows that there is concern about the impact of wider NHS reforms on the career development of doctors in training. As the lines between primary care and secondary care in the NHS become less marked, this must be reflected in the way doctors are trained.<sup>3</sup>

### Flexible training

At graduation, one in five cohort doctors anticipate working for the majority of their career on a part-time basis. Furthermore, a third of cohort doctors indicate a desire to train flexibly at some point in their training. Although females are more likely to indicate a desire to train flexibly, both males and females desire some degree of flexible training for reasons including family commitments, work-life balance and the pursuit of non-medical work/interests.

Improving access to flexible training is a vital step in ensuring the future stability of the medical workforce<sup>4</sup>. There needs to be not only room, but also proper funding and support for flexible training in the new MMC. Improving access to flexible training is a vital step in ensuring the future stability of the medical workforce.

## Future career prospects

At graduation, less than a fifth of cohort doctors are confident that they will automatically get a job, once they have completed their training and even fewer are confident that they will get a job in their chosen specialty. This perception may stem from the uncertainties inherent in the MMC reforms, particularly the more recent problems regarding MTAS, which have created unprecedented pessimism about future employment possibilities.<sup>v</sup>

From the outset, it appears that cohort doctors are unsure of their future job prospects. Recent research confirms this perception and showed that young doctors fear that current reforms are damaging the NHS, without considering the legacy for future generations of patients and doctors. Many agree that Government reforms are having negative effects on both services and the morale of doctors.<sup>5</sup>

The medical workforce will continue to change in response to NHS system reforms and wider demographic changes. The 'feminisation' of the workforce paired with increased importance placed on work-life balance and flexible working patterns in society as a whole, will increase the demand for family friendly training and working patterns by the medical workforce. Increased plurality of provision, competition in healthcare provision and the shift in the balance of care from traditional hospital settings to the community will increasingly require doctors to work in different ways and in different settings.

Doctors must be supported throughout these changes and the importance of adopting a more flexible approach to the training and career progression of doctors must be reinforced. Increasingly, doctors are choosing to work outside the traditional training and career structures and the ideas of greater diversity, portfolio careers or different career stages are increasingly important. These changes must be accompanied by better career advice and development opportunities.

<sup>v</sup> While the impact of MMC and the recent MTAS crisis may have influenced the responses of cohort doctors, most completed responses had been received before the situation reached crisis point in February/March 2007.

# Appendix 1

## Methodology

The selection of the cohort was a two-stage process. In March 2006, a letter was sent to all UK medical schools requesting contact information for their final year medical students. While some medical schools provided this, others requested that any contact with their students be made through the medical school. In May 2006, a letter detailing the nature of the study and inviting students to express their willingness to participate in the study, was mailed to all of those final year medical students for whom contact details had been provided or distributed via the medical schools themselves.

Responses were received from 581 final year medical students after the initial mailing. Medical students were asked to respond with their contact details and demographic details including gender and ethnic origin.

As the study is to follow the cohort doctors through their careers, it was essential to ensure that those selected had successfully graduated. Successful graduation, and name of university from which they graduated was confirmed via the General Medical Council (GMC), as all graduating doctors must be registered with the GMC to practise medicine in the UK. Where a respondent had not registered with the GMC, they were excluded from the sample.

Contact details provided by respondents were also checked. Where these details were not complete, further information was requested where possible, from the respondents. If this was not provided, the respondent was excluded from the sample. Where the contact details indicated that a doctor was an overseas national, the respondent was also excluded from the sample.

The final sample consisted of 557 medical students who had graduated in 2006. A welcome pack including further details of the study and the first questionnaire was sent to these students during October/November 2006 at the contact addresses provided. A reminder letter was sent to outstanding respondents in December 2006 and this was followed up with reminder telephone calls during January and February 2007.

In total 435 completed questionnaires were received, providing a response rate of 87 per cent. The final sample included graduates from each of the UK medical schools. Females were over-represented in the final sample, hence the data has been weighted to ensure the data is representative of final year medical graduates according to gender. The distribution of the sample according to medical school and gender is shown in table A1.

**Table A1 Sample according to medical school and gender**

Medical school	Male	Female	Total
Aberdeen	9	14	23
Belfast	13	15	28
Birmingham	16	2	18
Bristol	3	6	9
Cambridge	4	2	6
Cardiff	10	18	28
Dundee	1	11	12
Edinburgh	10	5	15
Glasgow	17	10	27
Leeds	5	6	11
Liverpool	7	9	16
Leicester	1	1	2
Barts & The London, Queen Mary	1	1	2
Imperial College	1	0	1
Royal Free & University College Medical School	16	25	41
Kings College	19	26	45
St Georges	14	21	35
Manchester	4	14	18
Newcastle upon Tyne	19	42	61
Nottingham	13	10	23
Oxford	4	11	15
Sheffield	7	9	16
Southampton	7	9	16
Warwick	3	11	14
<b>Total</b>	<b>204</b>	<b>278</b>	<b>482</b>

## References

- 1 Health Policy and Economic Research Unit (2006) *Survey of medical students' finances, 2005-2006*. London: British Medical Association.
- 2 *Postgraduate Medical Journal Today* Monday 15 January, 2007.
- 3 'Urgent need for new ways of training doctors, BMA says' (BMA Press release, Monday 15 January 2007).
- 4 BMA Junior Doctors Forum (2006) *Report of Flexible Training Forum 2005*. London: British Medical Association.
- 5 Health Policy and Economic Research Unit (2006) *Doctors' perceptions on how the NHS will look in 10 years time*. London: British Medical Association. <http://www.bma.org.uk/ap.nsf/Content/nhs10yrstime>





