What sources of careers information do medical students prefer to use?

A survey of 764 medical undergraduates explored their preferred careers information sources. Students wished to access careers information from a variety of sources but most valued face-to-face interviews with both trained careers counsellors and senior medical colleagues.

The current revision of postgraduate training within the UK under Modernising Medical Careers requires trainees to have made significant career decisions within 18 months of graduation. This challenges the medical educational system to provide effective career guidance that must begin in the undergraduate years. At an early stage in this process students must be able to access sources of relevant careers information. While there is research outlining some of the factors that influence students in career decisions there is little published on the sources students use to obtain supporting information. The aim of this study was to survey students of all five years of one London medical school in order to better understand their preferred sources of careers information and to explore if these preferences differed between students at different stages in the course.

At the time of the study the careers services available to students questioned consisted of a careers fair during the fourth year and the university careers service available for appointments but without structured face-to-face careers guidance specifically for medical students. Therefore the authors wished to use the results of this study to guide the implementation of an appropriately targeted careers service at Barts and The London Queen Mary's School of Medicine and Dentistry. The authors believe the results will also be of interest to other undergraduate medical and foundation schools developing their careers services.

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Method

All students enrolled on the undergraduate medical course at Barts and The London Queen Mary's School of Medicine and Dentistry during the academic year 2005–6 were eligible to participate. A mainly qualitative questionnaire with some quantitative responses was designed with both open and closed questions. Demographic data were collected. Students were asked which of five conventional sources of careers guidance they would use (if available) in their current academic year:

1. Opportunistic and arranged discussions with doctors
2. Web-based career service
3. Face-to-face careers advice from a careers officer
4. Written information
5. Careers fairs.

Participants were asked which additional sources not included in the standard list they would also use and which of all of these was their single preferred source of careers guidance. Finally participants were asked to suggest new and improved ways in which the medical school might help students explore careers options during the undergraduate course. The questionnaire was first piloted on a sample of six volunteer medical students excluded from the full study. Minor changes were made to phrasing as a result.

Questionnaires were distributed in paper format to students in all five year groups during lecture breaks. Questionnaires did not identify individual participants. Ethics approval was granted by the Research Ethics Committee of Havering and Redbridge Primary Care Trust. The anonymised data were entered into an SPSS database (SPSS v14.0, SPSSuk inc., Havant, UK). Descriptive data were derived, including ranges for the demographics. For the quantitative data, differences in responses to questions between groups were analysed using frequency tables and cross-tabulations. The demographic data collected from the study participants were compared to the demographic data held by the medical school for all year groups.

Open responses to questions generating qualitative data were analysed using emerging themes techniques. Two researchers independently identified themes then discussed and agreed any individual differences before providing a list of grouped emergent themes. Sub-themes were listed below the grouped theme main headings. These descriptive data were entered into an MS Excel spreadsheet.

Results

A total of 1298 students from Saint Bartholomew's and The Royal London Queen Mary's School of Medicine and Dentistry were invited to participate in the study and 764 (59%) returned fully completed questionnaires. All the data were collected between February and April 2006. A summary of the student numbers for each year of study enrolled and who participated in the survey is given in *Table 1*.

When defined by ethnic group 286 of the survey respondents described themselves as white British/Irish, 260 as Asian (Indian, Pakistani or Bangladeshi) and 214 were grouped as 'other' (Chinese, black African, black Caribbean, mixed race). This distribution reflects that of the total enrolled students at this school.

When compared to the demographic data held by the medical school relatively more students responded among the third, fourth and fifth years than in the first two years, and a higher proportion of female students than males.

Table 1. Details of numbers and gender of students in each year for those enrolled and those responding to the survey

Gender		Year 1	Year 2	Year 3	Year 4	Year 5	Intercalating	Total	Overall % males/females
Female	Survey responders	66	62	120	100	97	21	482	61.2%
	Enrolled in year	160	148	136	137	105		748	54.0%
	% response rate	41%	42%	88%	73%	92%		64%	
Male	Survey responders	35	42	71	66	67	17	305	38.8%
	Enrolled in year	129	116	112	122	122		637	46.0%
	% response rate	27%	36%	63%	54%	55%		48%	
Combined	Survey responders	101	104	191	166	164	38	764	
	Enrolled in year	261	252	327	303	269		1298	
	% response rate	39%	41%	58%	55%	61%		59%	

Quantitative results

In response to the question asking which sources of information would be used by students (if available) during that academic year, all five conventional sources were nominated (*Table 2*). Opportunistic and arranged discussions with doctors was selected most frequently (68%) closely followed by a web-based careers service (64%) and a meeting with a face-to-face careers advisor (63%). Written information (43%) and career fairs (42%) were less popular than the other three options. There were no statistically significant differences between the responses of students in different years of study, of different gender, or different ethnic groups.

When asked to select their single most preferred source of careers information the following was reported: face-to-face discussion with a careers counsellor (33%), opportunistic and arranged discussions with doctors (25%), web-based careers service (20%), careers fairs (5%), written information (4%) and 'other' (1%). Twelve per cent (91) of students who returned the questionnaire did not complete this question. There were no statistically significant differences (Pearson χ^2) when analysed by gender or year of study although a higher proportion of intercalating students preferred discussions with doctors (40%) to face-to-face with careers counsellors (34%). There was also evidence of some difference by ethnic group. Although all three groups ranked face-to-face advice from a careers counsellor as first choice, 23% of white British and 25% of 'others' preferred web-based information whereas only 14% of Asian students made this first choice (Pearson χ^2 P=0.013).

Qualitative results

A total of 310 students made suggestions regarding further sources of careers guidance they felt were or would be useful to them. There were five major themes each with sub-themes as follows.

Specific information to help negotiate the existing training system

For example details about the new specialty training Modernising Medical Careers programme, how to write an application and CV, and information on non-clinical career opportunities which are available for doctors.

Greater exposure to clinical specialties within the course

Students gave examples such as more clinical work in the early years, and a wider range of clinical specialties to include those regarded as non-mainstream.

Encouragement to consider career choices from an early stage

A proactive approach to careers within the medical course whereby all students are challenged to consider career choices from as early as year one.

Introduction of new methods of careers guidance

For example senior student mentoring of juniors, discussion groups led by junior doctors or career advisors, email shots of changes to training systems and career opportunities known about at postgraduate level but not disseminated down to undergraduates.

No further help required

There were 24 responses to this category.

Table 2. Career information sources students would use (if available) during that academic year detailed by year of study

	Year 1	Year 2	Year 3	Year 4	Year 5	Intercalate	Total in all years
Career guidance resource	**No (%)**	**No (%)**	**No (%)**	**No (%)**	**No (%)**	**No (%)**	**No (%)**
Opportunistic and arranged discussions with doctors	71 (70%)	70 (68%)	128 (67%)	118 (72%)	110 (67%)	25 (66%)	522 (68%)
Web-based career service	62 (61%)	63 (61%)	130 (68%)	109 (66%)	104 (63%)	22 (58%)	490 (64%)
Face-to-face careers advisor	55 (55%)	62 (60%)	120 (63%)	124 (75%)	100 (61%)	22 (58%)	483 (63%)
Written information	38 (38%)	45 (44%)	99 (52%)	72 (44%)	60 (36%)	12 (32%)	326 (43%)
Careers fairs	35 (35%)	38 (37%)	83 (43%)	89 (54%)	63 (38%)	11 (29%)	319 (42%)

Discussion

This study makes some interesting observations that may well be relevant across undergraduate institutions. First it suggests that a high proportion of students from all years of the course have an active interest in careers guidance and would be keen to use careers information sources during their current academic year. This contrasts to the prevalent patterns of career advice provision which is generally targeted at the later undergraduate years. Second it suggests that students wish to use a variety of sources of information to help them make careers choices. Third preferences for interactive face-to-face careers discussions with doctors and careers advisors over purely factual information sources are consistent across all years and between the sexes. There are possibly minor differences between ethnic groups that require further exploration.

Information gathering is an important step in careers exploration by students and the appropriate provision of such information is a crucial role for those offering careers guidance (NHS, 2005). This study suggests that students are hungry for such information and wish to seek it from different sources. The most popular of these remains a desire for face-to-face careers consultations both with career counsellors and also with doctors. While many universities fund a careers guidance service it is not always so proactive and comprehensive to provide face-to-face individual advice sessions for all enrolled students. Also medical students have different needs to those a generic university careers counsellor might be able to provide, as there is such a complexity of careers paths and specialities. One suggestion for innovation from the participants in this study is that trained counsellors could facilitate group discussions that may be a more efficient method of offering generic and specific advice to a larger proportion of students, many of whom will have issues to address common to the larger cohort. What is less often provided is the facilitation of sessions with medical specialists and GPs specifically to discuss career options and this is a potential area for development by medical schools.

All such options are still relatively resource inefficient and rely on those providing information to be well informed in what is a rapidly changing postgraduate world. Web-based information resources offer a new and potentially advantageous approach to information provision. A university or medical school may quality assure the information posted on its own site. Information may be rapidly updated as the postgraduate training context changes. Web links offer the possibility of sharing resources across schools where there is much commonality of information need. Such an approach has already been taken in the USA (Association of American Medical Colleges, 2007) and in the UK with postgraduate careers advice sites (such as www.careerfocus.bmj.com). The apparent reluctance of Asian students to select this preference for careers information requires further exploration. A first preference for face-to-face contact does not necessarily imply a lack of interest in web-based resources. The range of information sources used (*Table 2*) is independent of ethnicity suggesting that Asian students do use web-based information as part of their menu of options but perhaps less so as their first choice preference.

To the authors' knowledge there is no other similar published work among UK undergraduates examining preferences for careers information but there is a study examining career information preferences among newly qualified doctors (Stern, 2005). That study suggested little enthusiasm for the benefits of face-to-face discussions with clinical tutors or careers advisors and a greater preference for IT-based information. A high percentage of the participants had made career decisions before and during the early stages of the study and all would have ready access to medical colleagues for ad-hoc careers advice that may have reduced the perceived importance of a formal interview.

One of the more important reminders from the survey is the recognition that students themselves have useful ideas to contribute to the provision of information sources. The concepts of facilitated group discussions and mentoring schemes all merit further exploration. Students also recommend the inclusion within the course of greater clinical exposure and to a wider range of both clinical and importantly non-clinical specialties. The concept of the careers 'taster' incorporated into the foundation programme (Department of Health, 2005) may serve a similar purpose if given greater emphasis in the undergraduate programme. The elective and student selected courses are already integrated into most medical school programmes. However, while this form of undergraduate experience is judged useful in determining career choices by undergraduates (Mihalynuk et al, 2006), the impact on lasting career decisions may be transitory (Morrison and Murray, 1996). Providing exposure alone without supplementary structured career input may not be sufficient if this is to be used effectively at undergraduate level.

This study has limitations that the authors recognize. It was conducted among students of a single London-based medical school. Just over half of all students registered participated in the study. Nevertheless the authors feel the sample was reasonably representative demographically of the school. These results are now being used to inform the development of the school's own careers service but the authors suggest that the issues raised here deserve consideration by all those involved in the provision of undergraduate and early postgraduate years medical careers information. **BJHM**

KEY POINTS

- Medical students wish to use a variety of sources of careers information but have distinct preferences.
- Students preferences are for information gathered from face-to-face interviews with career counsellors and doctors, opportunistic advice from doctors, supplemented by web-based information.
- Students from across the undergraduate year groups had similar preferences.

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