



Graduates' perceptions of the role and availability of career guidance at medical school

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Received: 2 January 2021 / Accepted: 5 March 2021 / Published online: 5 April 2021
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Abstract

Background Very limited research has investigated the extent or the impact of career guidance provided to medical students.

Aims We aimed to explore the perceptions of recent graduates of Irish medical schools of the availability, accessibility and utility of both formal and informal career advice resources during their university experience.

Methods The study population was junior doctors in their first postgraduate year. Both an online questionnaire, distributed nationally, and a focus group were conducted to explore the topic via mixed-methods research methodology. Findings were synthesised, with quantitative and qualitative analysis applied as appropriate.

Results Graduates of all medical schools within Ireland were invited to participate in the survey. Questionnaire responses were received from 117 junior doctors enrolled in intern networks across the country, from a potential population of 580 (response rate 20.2%). Five interns participated in the focus group discussion. The existence of a formal career advice programme at medical school was reported by 10.3% of questionnaire participants (12/117). Fifty-three per cent (62/117) did not recall any career advice sessions being organised by their university. Only 7.7% (9/117) perceived that adequate career advice had been available at medical school. Focus group participants reiterated a lack of career guidance but highlighted the importance of authentic clinical exposure to a specialty to complement guidance programmes.

Conclusions Career guidance at medical school is sparse, and recent graduates feel this should be improved upon.

Keywords Career guidance · Curriculum · Medical career planning · Medical education · Medical students

Introduction

The presumed end goal for the vast majority of medical students is to forge a successful career in one of the many medical disciplines in existence upon graduation. Such an aspiration demands a significant degree of career planning, be this conducted at undergraduate or postgraduate level. Career planning is not always a straightforward process and in fact has been ascribed a 'chaos theory' explaining the state of uncertainty, ambiguity and struggle for understanding that may be associated with it [1]. Evidence suggests that many students 'enter medical school without a clear [insight]' into the particulars of life within specific specialties, and must consequently attempt to absorb and synthesise this sort of

information alongside achieving their academic goals [2]. This has been identified as a challenging task by some authors, who have proposed in a North American context that more guidance and assistance to help students 'navigate the difficult decision of choosing a specialty' would be of benefit [2].

Career guidance has not traditionally been a formal part of medical school curricula stipulations, and, as such, is variable. Limited research to date has explored this. Early evidence from the USA has shown that university career guidance programmes may increase student satisfaction [3]. Although medical training in Ireland and the UK does not demand that students have decided upon a final specialty by the time of graduation, at least one UK study has nonetheless confirmed that 'bespoke careers advice' would be valued by medical students [4]. With high numbers of medical students in international settings reporting stress attributed to 'anxiety about the future' [5, 6], efforts to ameliorate this appear worthwhile.

We aimed to investigate the availability, accessibility and utility of career guidance programmes or resources at Irish medical schools, from the perspectives of recent graduates.

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Methods

Population

Interns working in Irish hospitals formed the study population. Within the Irish system, ‘internship’ is a junior doctor’s first postgraduate year and consists of working within a variety of specialties in a team setting. Intern posts for the study population were allocated based on a ranking system following final university examinations. Recent graduates were chosen to gain a contemporary insight and to minimise recall bias.

Part 1

A customised questionnaire was designed, with attention to Association for Medical Education in Europe (AMEE) guidelines [7], by the authors, with content and wording of questions reviewed by five peers. It was circulated as the second part of a larger questionnaire exploring overall influences on specialty choice. The questionnaire consisted of 4 multiple-choice style questions enquiring as to interns’ recollections of the extent and utility of career guidance available at their medical school, along with their perception of its adequacy. An additional free-text box was available for unstructured feedback. The questionnaire was created using Google Forms™. A hyperlink to access and complete the questionnaire, along with a study information leaflet, was emailed by the intern coordinator to interns enrolled in six national networks (Dublin/Northeast, Dublin/Southeast, West/Northwest, Midwest, South and one half of the Dublin/Midlands network). A nationwide population was targeted so as to ensure that feedback was sought from graduates of multiple different universities. A follow-up e-mail was circulated 2–4 weeks after the initial e-mail in an effort to optimise response rate. Questionnaire data responses were collected, collated and analysed.

Part 2

The second part of the study involved a focus group, with the aims of exploring the questionnaire findings in depth and of prompting thought and encouraging group discussion, potentially uncovering further conscious or sub-conscious viewpoints held by participants. This was arranged locally, at the first author’s place of work, via an e-mail seeking participants and a request made by the intern tutor. A target of 4–6 participants was sought, to produce a focus group of an appropriate size for healthcare research [8, 9]. The focus group was held in a reserved room within the hospital during working hours at a convenient time for participants and was moderated by the researcher. Open questions: ‘what career

advice services were available at your medical school,’ and ‘what was your impression of the career guidance made available to you,’ were used to guide the topic of conversation. Audio recording of the conversation was performed with participants’ consent, and the discussion was subsequently transcribed into a written document. A qualitative approach to interpretation of the transcript was employed, with the authors applying thematic analysis (Braun and Clarke) [10].

Results

Recruitment

The online questionnaire was completed by 117 interns nationally, from a potential population of approximately 580 interns, yielding a response rate of 20.2%. Sixty-four (54.7%) were female. One hundred and sixteen (99.1%) had graduated from an Irish university. Medicine had been studied as a postgraduate degree by 29.9% (35/117).

Five focus group participants were recruited, meeting the target of 4–6 individuals. Gender-concordant pseudonyms were allocated to each member of the focus group (Adam, Robert, Aidan, Megan and Colin). Participants had graduated from two different Irish medical schools.

Career planning

Either a specific or general area of specialisation had been decided upon by 58.97% of questionnaire respondents (69/117). The most frequently cited areas of interest were hospital medicine (23.9%, 28/117), surgery (17%, 20/117), general practice (11.1%, 13/117) and paediatrics (8.5%, 10/117).

Availability of career advice services

Only a small minority of questionnaire respondents (10.3%; 12/117) reported the existence of a structured career advice programme at their medical school (Fig. 1).

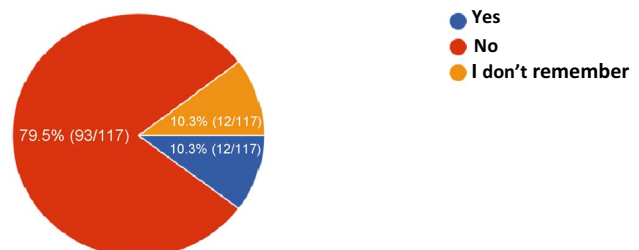


Fig. 1 Questionnaire participants’ responses to the statement: ‘a structured career advice programme was in place at my medical school.’

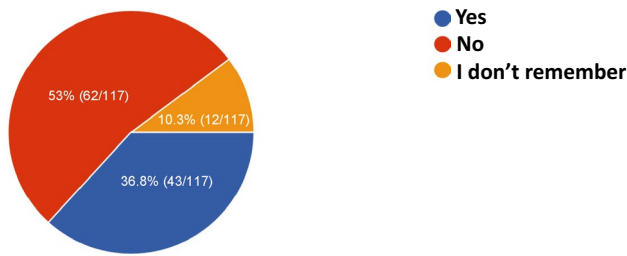


Fig. 2 Questionnaire participants responses to the statement: ‘one or more formal careers advice sessions were arranged by my medical school’

A greater proportion (36.8%, 43/117) of questionnaire respondents recalled at least one careers advice session having been conducted during their time at university (Figure 2).

No focus group participant reported a formal career advice programme having been integrated into the curriculum of their medical school, although they did recall sporadic efforts or initiatives attempting to assist with career planning. Student-led societies were highlighted as a potential source of career guidance endeavours within universities by some participants (Table 1).

Utility of career guidance services

Questionnaire respondents were asked how useful they found career guidance sessions/services, if these were available, during their time at medical school. Sixty-four interns responded. The services were described as ‘useful’ or ‘very useful’ by 32.8% (21/64), whilst 43.8% (28/64) felt ‘neutral’ regarding the utility (Fig. 3).

Adequacy of career guidance services

Questionnaire respondents were asked to state their level of agreement with the statement, ‘I think there was adequate career advice available during my years at medical school’. Only 7.7% of respondents (9/117) felt that this was the case (Fig. 4).

Adequacy of career guidance

Focus group participants were asked whether there should be more career advice services available. Participants seemed somewhat surprised by the question; it did not seem something they had thought about previously. They generally expressed an opinion that further university-level career guidance could be of benefit, although the additional importance of exposure to particular specialties on clinical placement was stressed by one (Table 2).

Vision for future career guidance initiatives

The potential structure of content of future career advice programmes was explored with focus group participants, with some input from free-text feedback from questionnaire respondents. Participants were not entirely sure as to the optimal style of career advice services. Group ‘career talks’ were viewed as potentially beneficial, or to ‘have a bearing’ (Megan). Formal talks were viewed as potentially biased, however, with speakers perceived as likely to ‘big up their own specialty,’ (Megan) or to feel ‘bound to give the sunny-side up version,’ (questionnaire respondent). Participants expressed the need for discussion of potential career avenues ‘one-on-one’ with specialists in the field in question, with the associated ‘privacy’ potentially allowing an ‘honestly refreshing viewpoint...warts and all,’(questionnaire respondent) to be given.

In addition to organised sessions, authentic exposure to a specialty was valued, ‘you can’t really understand being in a situation from someone talking to you alone...you need to see how it works,’ (Adam). Hospital rotations were seen too as a way of enlightening students to the array of specialties available: ‘I didn’t even know what specialties existed pre [first clinical year]...you’d learn things as topics but you didn’t know where they belonged or who dealt with what,’ (Robert). Interns felt that offering students choices of clinical placements to be undertaken at medical school would be

Table 1 Quotes by focus group participants regarding career guidance initiatives at university

Participant (pseudonym)	Opinion
Robert	‘Yeah, I think there were, like, about two evenings and things...I didn’t research it to be honest.’
Adam	‘You’d have to actively seek it out [where I studied].’
Megan	‘There was a range of talks from a few different specialties in final med...within the curriculum...but [they were] more about life advice than specialty-specific.’
Colin	‘Most [career guidance] was probably organised outside the college...for example by MedSoc [a student-run society for medical students].’ *It should be noted that student-run societies often recruit clinicians, including university faculty, to assist with career guidance endeavours, and may be supported by the university
Megan	‘Yes I think what would have influenced us most from that point of view were career nights put on by student societies...’

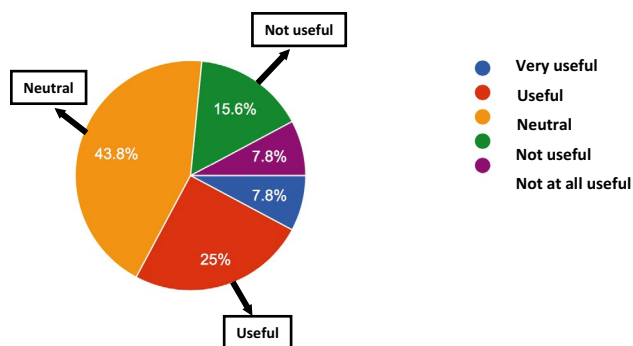


Fig. 3 Usefulness of career guidance services or sessions

worthwhile, particularly for placements of longer durations. One respondent highlighted how she ‘was on a specialised neurology rotation for three weeks on medicine [despite having] no particularly great interest in that...[yet] probably other students would have loved that attachment,’ (Megan).

The availability of information, or lack thereof, on training in a particular specialty emerged independently as a recognised issue in questionnaire responses. One respondent outlined the need for, ‘training programmes [to] be fully elaborated so they are understood from an early year in medical school...a lot of it comes down to who you know or the research you do yourself to find out these things at present.’ Focus group participants unanimously reiterated this: ‘Yes absolutely...at the moment you just figure that out as you go along’ (Richard), ‘yes, and although you’re not applying for a while, you are expected to be building a CV towards [those applications] and you should know what boxes you need to tick,’ (Aidan).

Discussion

Structured career guidance has not traditionally formed a part of medical school curricula, and its potential role has been poorly explored in the literature to date. The findings

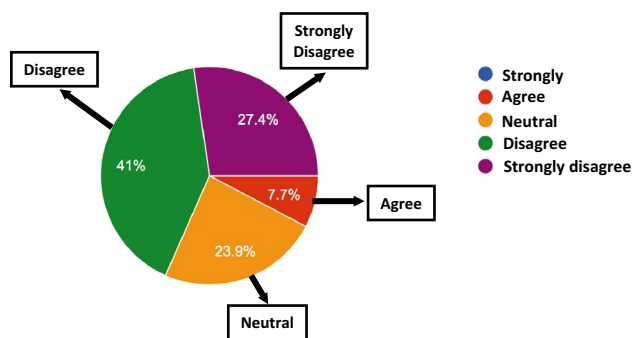


Fig. 4 Agreement with the statement ‘I think there was adequate career advice available during my years at medical school’

of this study reveal that formal careers advice programmes have been uncommon at Irish medical schools, and whilst some career guidance sessions take place, these are *ad hoc* and frequently arranged by student bodies. Based on scanty international literature, it seems these findings may be replicated in other jurisdictions.

Although the structure of Irish and UK postgraduate medical training involves a mandatory (1–2 year) intern or foundation period, meaning that a final specialty choice need not be made in medical school, the recent graduates studied indicated a desire to be engaged in some degree of career planning whilst at university. Furthermore, it is important to consider the needs of unique groups within universities. International medical students may be aiming for a postgraduate career in a system that demands earlier career-related decisions. Graduate-entry medical students, who are often aged in their late 20s or beyond during medical school [11, 12], may consequently feel pressure to graduate with an established career plan according to one of our focus group participants. For these reasons, it is desirable that sufficient career guidance is available to students.

Only 7.7% of questionnaire respondents agreed that ‘there was adequate career advice available during my years at medical school’. This does not appear to be unique to Ireland. The final report of the UK Tooke Inquiry into Modernizing Medical Careers in 2007 reported the panel to have been ‘struck by the inconsistency and dearth of information on career opportunities made available to medical students and doctors in training’ [13]. A 2014 study of medical students in Korea revealed strong student demand for a career programme [14]. In 2017, the lack of reliably available structured career guidance in medical schools was acknowledged in Canada, prompting the publication of Canadian national guidelines on provision of career advice to medical students [2], which have been incorporated into accreditation standards.

Our data suggest that most recent graduates imagine more guidance in this area would be potentially beneficial to medical students. Evidence in the literature supports this. The University of Michigan reported a significant increase in student satisfaction following the introduction of a career development programme [3]. ‘Lack of advice on...postgraduate systems’ has been seen as a main subjective deficiency in medical students’ education [15], and a ‘career coaching’ programme in Korea has been shown to increase student’s feelings of preparedness and decisiveness regarding career choice [16]. Receiving subjectively helpful career guidance at medical school was positively correlated with higher scores on a Preparedness for Hospital Practice survey in one trans-national study [15]. A German pilot study of an innovative guidance programme comprising interactive panel discussions with representatives from various medical specialties (‘FacharztDuell’)

Table 2 Focus group participant views on the need for greater career guidance services at medical schools

Participant (pseudonym)	Opinion
Robert	'Hmm, I don't know, maybe...yes I suppose there should when you think about it'
Colin	'Yeah perhaps...but then, I think there's only so much they can tell you...because you really have to live it (spend time in the specialty) to know [what it's like].'
Megan	"I think it's really easy for me because I know [what specialty I'd like to pursue]...there are definitely people who would benefit from it."

was viewed positively by medical students, 77% of whom viewed it as a 'decision support' [17]. As well as students, evaluators have also described career-guidance as much-needed area of developmental support [18]. None of these studies have been designed to evaluate the ultimate effect of career guidance programmes on specialty choice, nor satisfaction with, or stability of, specialty choice, and this is an area in which longitudinal studies may be very informative.

The most useful features of a career guidance programme as envisaged by our respondents would be clear explanations and advice on training pathways and exposure to the day-to-day working reality of a specialty. Verbal explanation of particular specialities was seen as potentially useful, but sessions allowing one-on-one conversations with specialists were seen as having advantages over lecture-style talks directed at an audience alone.

The 'on-the-job' exposure cited as necessary for a true insight into specialist areas may be included in the current format of rotations, but a need for flexibility in choice of these was expressed by respondents.

Although not raised by our participants, the potential to incorporate mentorship programmes into clinical placements merits thought. Mentorship schemes, a feature of some career guidance initiatives, have been shown in a large systematic review to be both beneficial to students' career advancement and to be lacking throughout Europe [19]. No studies to date have compared different career advice programmes head-to-head, and there is limited data overall in this area. As such, the most beneficial features and optimal structure of a career advice programme remain to be established. It is, however, an area gaining a greater focus of attention within the medical education literature, and we can be hopeful that some of these questions will be answered in time.

We acknowledge a number of limitations to this study. The response rate overall was low at 20.2%, leaving results open to nonresponse bias. It is possible that self-selected questionnaire respondents had particularly strong views on the topic, potentially leading to a negativity bias. We do feel, however, that in this type of mixed qualitative research, the experience and perception of each individual participant is important, and the results remain relevant. It is also quite likely, in our opinion, that responses of a small number of students to direct questions/statements with binary responses, such as, 'A structured career advice programme was in place

at my medical school,' (yes or no) would be 'correct', i.e. reflect the practice within the university. Nonetheless, further studies aiming to achieve a majority response rate and incorporate input from curricula designers are desirable. We chose recent graduates as we felt their exposure to the workforce gave them an insight and perspective into their university experience with regard to career planning but felt they had qualified recently enough as to have clear recall of their student days. It is, however, possible that some curricula changes have been implemented since the respondents' graduation. Survey participants were not asked to name their alma mater, as the aim was not to evaluate or compare medical schools, and there was a concern that incorporation of such a question might raise ethical issues. Consequently, although we are confident that the survey was distributed to graduates of all Irish medical schools, we cannot determine if responses were equally distributed amongst them. One hospital was excluded on the basis of inability to apply for ethical review. Whilst this was unfortunate, another large teaching hospital within the same network, with a population of interns largely representing graduates of the same university as the excluded hospital, did participate.

Focus group participants had all graduated from one of two different universities, and the focus group gender ratio was weighted towards male participants. This was the evolution of convenience sampling. We do note that the cohort did not include graduates of all Irish universities, nor reflect the gender ratio within medical schools in the Western world. We acknowledge the need for further studies to capture wider populations, to create a truly representative sample and ensure that other potential perspectives are captured. The cross-sectional study design was appropriate to address the research questions; however, future longitudinal studies may provide a more in-depth insight into the influence of potential career programmes.

Conclusions

Much interesting data pertaining to the experience of recent medical school graduates in Ireland with regard to career guidance emerged from this study. Graduates' viewpoints concerning the role and form of career guidance programmes are likely relevant in an international context. As

a result of our findings, we feel that career guidance programmes should be integrated into medical schools where lacking, both in Ireland and internationally, in response to an exceedingly low number of respondents feeling that the current status was adequate. This could be considered on a pilot basis initially. A formal review of existing curricula and co-curricular activities within individual medical schools may be useful in informing the structure of such a programme, by identifying particular areas of need. Based on the findings of this study, such programmes should include the opportunity for students to have one-on-one conversations with clinicians practising particular specialties and should impart clear information on the structure of postgraduate training schemes. In the absence of a strong evidence base, stringent evaluation of career guidance programmes will be necessary to determine the optimal format and structure.

Declarations

Ethical approval The study was screened by the ethics committee of University College London and proceeded to review and approval by the Intern Network Executive of Ireland. An application was then made to each individual participating intern network. Three of the participating hospitals/networks required further review by the local hospital ethics committee; this was applied for and granted in each case. It was not possible to pursue the requested approval with one teaching hospital in the state due to the requirement for a named member of consultant staff to be listed on the application, as such a person was not affiliated with the research.

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