

Factors Influencing the Postgraduate Training Choices of Medical Interns and Junior Medical Officers at the Georgetown Public Hospital Corporation Guyana

Y Hendricks, AO Amata

ABSTRACT

Objective: The aim of our study was to determine the specialty preferences and the reasons for those choices among medical interns and junior medical doctors at the Georgetown Public Hospital Corporation (GPHC), Guyana.

Methods: A cross-sectional study of recent medical graduates at GPHC using anonymous self-administered questionnaires.

Results: Of the study population of 66, 60 filled questionnaires were returned (response rate of 91.5%). Females comprised 60% of respondents and 98% of respondents were interested in postgraduate medical education (PGME). Paediatrics was the most popular programme (25% of respondents) followed by internal medicine (21%) and the main reason among respondents for choice of training programme was personal interest (69%). Gender differences occurred in paediatrics and ophthalmology where females were predominant and in orthopaedics and anaesthesia where males were predominant.

Conclusion: To ensure an adequate and balanced medical specialists workforce for the future, information on medical graduates perceptions and preferences of PGME and the factors influencing their choices is important to policy planners and medical educators and efforts must be made to correct any maldistributions noted.

Keywords: Career choices, Guyana, medical interns, postgraduate medical education, specialty preference

From: Department of Anaesthesia, Georgetown Public Hospital Corporation.

Correspondence: Dr AO Amata, Department of Anaesthesia, Georgetown Public hospital Corporation, East and Middle Streets, Georgetown, Guyana. E-mail: aoamata@yahoo.com.

INTRODUCTION

Delivery of optimal medical care has become increasingly complex, often requiring the input and collaboration of various medical specialists. Guyana is a tropical developing country located on the northern coast of South America and bordered by Venezuela, Suriname and Brazil. With a population of about 740 000 inhabitants and a total area of 215 000 sq.km. Guyana is the only English-speaking country in South America and has close links to Anglophone Caribbean being a former British colony (1). Healthcare delivery in Guyana has often been plagued by insufficient numbers of doctors and majority of the limited medical specialists are foreigners (1, 2). In a bid to address this deficiency, the Government of Guyana embarked on an aggressive programme to train more medical doctors. To supplement the inadequate number of medical graduates from the sole local medical school, the Government entered a bilateral agreement with Cuba to facilitate the training of more Guyanese medical doctors in Cuba.

Prior to 2006, there was no recognized postgraduate medical education (PGME) or residency-training programme in Guyana (2). To become a medical specialist, one had to go overseas for training. Anticipating the increasing numbers of medical graduates and the benefits of local postgraduate training, the Ministry of Health and Ministry of Education decided to introduce local postgraduate specialty training accredited by the University of Guyana. The first programme was the Diploma programme in surgery with its initial intake in May 2006 (2), followed closely by Diploma programmes in anaesthesia and orthopaedics and then Masters Degrees (M Med) programmes in emergency medicine, paediatrics, obstetrics and gynaecology and Internal Medicine. Entry requirements to all the programmes are similar and include completion of medical training in an approved institution and satisfactory completion of an Internship year and at least one year post-internship medical practice experience (2, 3).

In Guyana, there is a mandatory one-year rotational internship and upon completion of the internship, the doctor can then apply for a position to work as a government medical officer (GMO) or in private practice. A GMO is a physician who has completed one year of internship and is then licensed to practice medicine without supervision. The doctor is not a specialist and as such practices general medicine or works in a specific hospital clinical department under the supervision of specialists. Majority of the doctors in Guyana are GMOs (3).

Understanding medical students and junior doctors' career choices has been of interest to healthcare planners and educators in order to adequately and appropriately plan for the healthcare workforce needs of the population. Existing extensive literature on the subject demonstrates significant variations in medical students and junior doctors future specialty preferences and also the factors that influence such choices in different parts of the world (4–10). Much of the studies have been done in the developed western world. Little is known about Guyanese junior doctors' perceptions about postgraduate training and factors that influence their specialty choices. This information is important because of the twin concurrent occurrence of the availability of a large batch of recent medical graduates and the commencement of PGME in Guyana. To meet current and future workforce needs in the health sector, educators and policy makers need to be aware of the factors and conditions that influence doctors in making career choices.

We did this study to ascertain if interns and junior GMOs (first year post-internship) employed at GPHC are interested in PGME and if so, what factors influence their choice of specialty training and future career.

METHODS

We conducted a cross-sectional questionnaire survey anonymously among the medical interns and first year GMOs who were employed in GPHC between 2009 and 2010 to identify their specialty preferences and the factors that influence their choices. The study population comprised all interns and first year GMOs.

The Institution *via* the Office of the Director of Medical and Professional Services approved the study and all participants gave an informed consent. A sample questionnaire was formulated from items and materials previously utilized in the literature and a pilot study was conducted with eight interns to determine its suitability. The questionnaire sought respondents' demographic information, interest in PGME, their preferred specialty, and if this was not feasible, the next preferred choice, when these choices were made and the reasons for their choices.

The questionnaires were then distributed to all medical interns and junior GMOs at GPHC to be completed anonymously and returned. Participation was voluntary. The data was entered into an Epi Info 7 database and analysed. Participants' specialty choices were analysed as percentages. We used descriptive statistics to quantify the categorical variables. P-value < 0.05 was considered statistically significant.

RESULTS

Of the 66 eligible participants, 60 returned completed questionnaires giving a response rate of 91%. Participants' characteristics are shown in Table 1.

Table 1. Respondents demographics (n = 60)

Characteristics	Number of respondents n (%)
Gender	Male: 24 (40)
	Female: 36 (60)
Marital status	Single: 30 (50)
	Married: 14 (23.3)
	Single with significant other: 16 (26.7)
Position	Intern: 38 (63.3)
	GMO: 22 (36.7)
Age	20 – 24 year: 15 (25)
	25 – 30 year: 36 (60)
	30 – 34 year: 7 (11.7)
	34 year: 2 (3.3)

Thirty-eight (63.3%) of the respondents graduated from the University of Guyana medical school, 19 (32.7%) from a Cuban medical school and three (5%) from the offshore American International School of Medicine.

Of the 60 participants, 58 (96.7%) were interested in pursuing a postgraduate education and only two (3.3%) were not interested. The reasons given by the two respondents not interested in PGME were that one was content with being a general physician and the other thought that specializing was too time consuming. The numbers of respondents who were interested in the various postgraduate training programmes are shown in Table 2.

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Table 2. Specialty preference among interns and GMOs.

Specialty	First choice (n = 60)			Second choice (n = 60)
	Male	Female	Total (%)	
Paediatrics	1	13	14 (24.6)	10 (17.9)
Internal medicine	6	6	12 (21.1)	7 (12.5)
Surgery	5	4	9 (15.8)	9 (16)
Obstetrics and gynaecology	3	5	8 (14)	8 (14.3)
Anaesthesia	3	1	4 (7)	4 (7.1)
Emergency medicine	2	2	4 (7)	4 (7.1)
Orthopaedics	3	1	4 (7)	4 (7.1)
Ophthalmology	0	2	2 (3.5)	0 (0)
ENT	0	0	0 (0)	3 (5.4)
Public health	0	0	0 (0)	2 (3.6)
Other (oncology, neonatology, <i>etc</i>)	0	0	0 (0)	5 (8.9)

The reasons given for their preferred specialty PGME programme are shown on Table 3.

Table 3. Reasons for specialty preference

Reason for preference	n (%)
Personal interest	40 (69)
Influence of a role model or mentor	6 (10.3)
Length of time for specialization	6 (10.3)
High income potential/financial reward	2 (3.4)
Hours of work /working conditions	2 (3.4)
Other	2 (3.4)

Role of gender

There was no gender bias in respondents in Internal Medicine, Emergency Medicine and surgery.

Significant gender differences occurred in paediatrics (93% female), orthopedics (75% male), ophthalmology (100% female) and anaesthesia (75% male).

When was decision on specialization made?

Twenty one (36.2%) of the participants decided on areas of PGME specialization during medical school, while 18 (31%) made their decision prior to medical school and 15 (25.9%) made theirs during internship and the remaining four (6.9%) after internship.

DISCUSSION

The majority of our respondents expressed an interest in pursuing postgraduate education with only two opting not to pursue further studies. This is reassuring considering that PGME is not mandatory in Guyana as medical doctors can practice independently after satisfactory completion of internship. Presently majority of the practicing doctors in Guyana are GMOs (1–3).

Several of the studies on future careers and PGME preferences were conducted on medical students on the assumption that such decisions are usually made before graduation. Our study however does not support such a supposition as about one-third (33%) of our respondents made their specialty choice during or after their internship. In Nigeria, about 13% of interns were still undecided about specialty choice (4). A recent United Kingdom (UK) study indicated that 15% of final year medical students were still undecided about specialty choice and 95% did not think they should make specialty decisions in medical school (Luther) In Nepal, 39% of final year medical students and 26% of interns were still undecided about specialty preference(6). Similarly, Harris *et al* (7) in their study of Australian medical graduates indicated that only 37%

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had chosen a specialty at the end of the first year after graduation and that 20% had yet to choose a specialty even after three years of graduation. Large national surveys from the United Kingdom (8) and Japan (9) also buttress our finding that a significant proportion of doctors make their career choices after graduation. There is a greater probability that a career choice made earlier in one's training or career is more likely to be changed in future than one made later (6). This is well illustrated by the longitudinal UK study that showed that the eventual career destination of doctors were more likely to match with the specialties chosen three years after graduation than at one year after graduation. About half of the doctors who chose a specialty one year after graduation were working in a different specialty ten years after graduation compared to a quarter of those who chose a specialty three years after graduation (8). Another reason why we chose to survey recent graduates rather than medical students was due to our peculiar situation where an increasing number of our junior doctors come from overseas especially from Cuba and also the fact that a significant proportion of our local medical students usually go abroad immediately after graduation.

In many surveys especially those from resource-poor developing countries like ours, such as Sudan (10), Nigeria (4, 11), Nepal (6), Malawi (12), Kenya (13) and Malaysia (14), the major specialties of surgery and internal medicine were often seen as the most popular and most attractive postgraduate specialties mainly because of the prestige and the anticipated financial rewards. However, in this study the predominant preference was paediatrics and interestingly, financial reward was quite low on the factors influencing choice. The main motivation was personal interest. Such findings are similar to observations in the western developed nations of the USA (14), Canada (15), Australia (7) and UK (16) where there has been a trend of declining interests in specialties like surgery and increasing interest in lifestyle-friendly specialties.

We have some possible explanations why paediatrics may have been the most popular PGME choice. One is the fact that female doctors generally tend to prefer paediatrics (13, 17). The other reason may have to do with the qualification obtained at the end of the PGME. The first set of PGME programmes at GPHC were surgery, anaesthesia and orthopaedics. These were started as two year Diploma programmes and the graduates were not appointable as full specialists or consultants but as registrars. The later programmes that were introduced were Masters of Medicine (M.Med) four year programmes that made the graduates specialists and consultants.

These included paediatrics, emergency medicine, obstetrics and gynaecology and medicine. Doctors may prefer specialties that can guarantee them specialist status on completion of training (6). There is a current move to upgrade all the specialty training programmes at GPHC to the master's level.

Our study highlights a current trend similar to that of several other studies that indicate that females have now surpassed males in numerical strength both as medical students and also as junior doctors (17, 18). This 'feminization' of the medical workplace has implications because gender has been shown to influence choice of PGME and careers (14–16). Women tend to prefer specialties that provide a flexible training programme or a favourable work life balance or controllable lifestyle work schedule due mainly to their domestic and social commitments (18, 19). In our study the number of female respondents was 60% as compared to 40% of their male counterparts and half of the respondents were married or had significant others.

Remarkably but quite worryingly, the so called service or diagnostic specialties such as radiology and pathology were not chosen as first or even second choices by our respondents.

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These are considered “controllable lifestyle” specialties that provide a favourable work-life balance (14, 19) and should therefore be more attractive to junior doctors especially those with domestic and family responsibilities. Some possible reasons in our peculiar situation why they may not be as attractive to our junior doctors include factors such as exposure and ‘visibility’. While there is an obvious shortage of specialists in radiology and in pathology, more so than in other specialties, both specialties do not have PGME programmes locally available or even planned for the near future. In addition, medical graduates do not ‘rotate’ as interns or GMOs through these specialties and therefore do not get adequate exposure to the service and its specialists. During medical school, pathology is taught in the earlier years as part of ‘basic sciences’ and not appropriately integrated into clinical training and radiology has very little scope in the curriculum. A factor that was mentioned in the Sri Lankan study (20) as the most important determinant influencing choice, although not captured in our study, was the opportunity for direct patient contact. Pathology and radiology have relatively limited patient contact compared to the other specialties like surgery or internal medicine. These factors make the specialties ‘unattractive’ to young doctors. On the other hand, anaesthesia is also considered a service specialty like radiology and pathology but it has some interest among junior doctors comparable to emergency medicine and orthopaedics in our study. Some of the reasons for this are that anaesthesia was one of the earliest PGME programmes established at GPHC, it has a significant content in the medical curriculum, and medical students have dedicated clinical posting time. Importantly too, anaesthesia is one of the compulsory rotations undertaken during the internship period. All these factors make anaesthesia ‘visible’ and attractive to medical students and young doctors.

A specialty that has been frequently addressed in the literature is general practice or family medicine. Most surveys from developing countries have emphasized the importance and relevance of General Practice (GP) in resource-limited environment (6, 10, 20, 21). Unfortunately this specialty has always been among the least sought after by medical students and junior doctors (6, 10, 20–22). Reasons adduced for this include poor recognition and respect, not considered as ‘specialists’, and lack of exposure to good GP models and facilities. This is in contrast to the developed western world where it is well established and highly sought after (5). None of our respondents chose GP presumably partly because it was not one of the PGME programmes at GPHC and also because of its low profile and lack of awareness in the community as they are often indistinguishable from GMOs who also practice as GPs. Fortunately, a family medicine programme is finally being established at GPHC with the first intake to begin in September 2015.

Limitations. There are many limitations to our study. This was a one-off cross-sectional study. A strength of the study was its high response rate of 91% but the total number of participants was small. Our questionnaire was formulated from review of previous literature and though we carried out a pilot study, to improve its acceptability and suitability, it has not been well-validated. Some of the factors or conditions may not be totally applicable to our environment.

Selecting a specialty is a complex undertaking involving a blend of several variables or factors. Our simplistic questionnaire may not have been able to appropriately capture all these variables.

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Respondents' choices may have been influenced by their actual working or prevailing situation at the time of the survey, which may not be reflective of the normal stable situation or future conditions.

CONCLUSION

Junior doctors at GPHC are very interested in PGME, however the established specialties of paediatrics, surgery, internal medicine and obstetrics and gynaecology are still the main areas of interest. To minimize the risk of specialists shortage and maldistribution, efforts should be made to encourage greater acceptance of the less popular specialties.

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