

Tracking Medical Graduates in Jamaica and The Bahamas

T McCartney¹, MG Lee², R Roberts³, C SinQuee³

ABSTRACT

Objective: To determine the availability of employment and retention for the increased number of medical graduates in Jamaica and The Bahamas.

Methods: The availability of internships and junior medical posts for graduates of The University of the West Indies in Jamaica and The Bahamas over the five-year period of 2012 to 2016 was reviewed.

Results: There were 947 medical graduates between 2012 and 2016 in Jamaica; 69.4% of them were female. The number of graduates increased annually. The majority of graduates were Jamaicans; non-Jamaicans comprised 18.2%. All Jamaican graduates obtained internship posts in the public hospitals and at the University Hospital of the West Indies, Jamaica, with a phased increase of approximately 20% in the posts available over the period. The public hospitals employed 75% of the graduates. There were 172 non-Jamaican graduates, the majority of whom were from Trinidad and Tobago, who did not seek employment in Jamaica. In The Bahamas, there were 132 graduates, all of whom obtained internship posts in public hospitals. Of the 2259 applicants, 664 were accepted to postgraduate programmes in Jamaica and The Bahamas between 2012 and 2016. Seventy per cent of all graduates were working in the English-speaking Caribbean, with the majority in Jamaica.

Conclusion: The number of medical graduates trained increased, with a predominance of females. All graduates obtained employment in Jamaica and The Bahamas, mainly in public institutions. Although there was 70% retention of graduates, there is an urgent need to increase the number of postgraduate posts and accredited training institutions in the Caribbean.

Keywords: Employment, Jamaica, medical graduates, The Bahamas

Tras los graduados de medicina en Jamaica y las Bahamas

T McCartney¹, MG Lee², R Roberts³, C SinQuee³

RESUMEN

Objetivo: Determinar la disponibilidad de empleo y la retención para el número creciente de graduados de medicina en Jamaica y las Bahamas.

Métodos: Se revisó la disponibilidad de pasantías y puestos médicos para recién graduados de la Universidad de West Indies en Jamaica y las Bahamas durante el período de cinco años de 2012 a 2016.

From: ¹Faculty of Medical Sciences, The University of the West Indies, Mona, Jamaica, West Indies, ²Department of Medicine, The University of the West Indies, Mona, Jamaica, West Indies and ³The School of Clinical Medicine and Research, The University of the West Indies, The Bahamas, West Indies.

Correspondence: Professor MG Lee, Department of Medicine, The University of the West Indies, Mona, Kingston 7, Jamaica, West Indies. Email: michael.lee@uwimona.edu.jm

Resultados: *Hubo 947 graduados de medicina entre 2012 y 2016 en Jamaica, de los cuales el 69.4% eran mujeres. El número de graduados aumentó anualmente. La mayoría de los graduados eran jamaicanos; los no jamaicanos comprendían el 18.2%. Todos los graduados jamaicanos obtuvieron puestos de pasantía en los hospitales públicos y en el Hospital Universitario de UWI, Jamaica, con un aumento gradual de aproximadamente 20% de los puestos disponibles durante el período. Los hospitales públicos emplearon el 75% de los graduados. Hubo 172 graduados no jamaicanos, la mayoría de los cuales eran de Trinidad y Tobago, y no buscaban empleo en Jamaica. En las Bahamas, hubo 132 graduados, todos los cuales obtuvieron puestos de pasantía en hospitales públicos. De los 2259 solicitantes, 664 fueron aceptados en los programas de postgrado en Jamaica y las Bahamas entre 2012 y 2016. El setenta por ciento de todos los graduados trabajaban en el Caribe de habla inglesa, mayormente en Jamaica.*

Conclusión: *El número de graduados médicos entrenados aumentó, con predominio de las mujeres. Todos los graduados obtuvieron empleo en Jamaica y las Bahamas, principalmente en instituciones públicas. Aunque hubo 70% de retención de graduados, hay una necesidad urgente de aumentar el número de puestos de posgrado y formación acreditada en las instituciones del Caribe.*

Palabras clave: Empleo, graduados, Jamaica, médico, las Bahamas

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INTRODUCTION

Health is important as an issue of human equity and as a precursor to poverty reduction and human development (1). The global community is in the midst of a growing response to health crises in developing countries (2). Many national health systems are weak, unresponsive and inequitable (3). All types of health personnel are needed to deliver health interventions from public health to clinical services and from primary to tertiary care (2). Health systems cannot function well without an adequate number of doctors to participate in clinical and public health work, management, education and policy-making. Attention has now focussed on education and retention of medical doctors in developing countries and the Caribbean, as an increase in the supply of doctors will help to meet some of the unmet health needs (1). Over recent decades, many developing countries have lost a proportion of their doctors and nurses because of migration, underproduction and worker attrition (2). The population of Jamaica has increased over the past two decades, and the population is living longer with a significant increase in non-communicable diseases which creates a burden to the health sector. Also, trauma and violence continue to be a major problem in the society with the resulting need for an increase in the number of health personnel.

Little growth in medical training occurred during the 1980s in several countries, but many medical schools have been expanding enrolment of medical students over the past decade (1). Strategies to meet current and future challenges in human resources are urgently needed that not only focus on the training of individuals but also take into account the work environment and worker mobility (2).

In Jamaica, The University of the West Indies (UWI), Mona, has been training medical graduates for 70 years since its inception in 1948. In Nassau, The Bahamas, a clinical training programme for the final two years of the medical undergraduate programme began in 1997, and this programme has been linked with the Mona campus in Jamaica since 2007. The main medical degree offered by the UWI is the Bachelor of Medicine, Bachelor of Surgery (MBBS) programme, which is a five-year undergraduate programme. The career path of UWI graduates, in most instances, is in primary care and general practice, which meets a major part of the healthcare needs of the Caribbean region. Upon successful completion of the MBBS degree programme and a certified internship, the physician is eligible for full registration and licence by the respective country's Medical Council. The intake of students and, consequently, the number of graduates have increased over the past decade. This decision was taken by the Faculty of Medical Sciences

(FMS) and the UWI, Mona, after a review of the large and increasing number of very well-qualified applicants and the expanding local health facilities for undergraduate training.

This has led to concerns by staff and students about the availability of internship posts and postgraduate training as well as post-registration positions in the health system (4).

We reviewed the availability of employment posts and placement of internship, junior medical and post-registration graduates in Jamaica and The Bahamas following their graduation from the UWI over the five-year period of 2012 to 2016.

SUBJECTS AND METHODS

All medical students registered at the FMS, UWI, Mona, Jamaica and Nassau, The Bahamas, who passed the final examination of the MBBS undergraduate medical programme between 2012 and 2016 were included in the study.

The total number of students graduated from the MBBS programme during each of these five years and the country of origin of these graduates were obtained from the records of the Dean’s Office of the FMS and the UWI. Graduates registered and working in Jamaica were confirmed at the Medical Council of Jamaica. All medical graduates in Jamaica and The Bahamas must be provisionally registered prior to starting work as an intern and then subsequently annually with their respective Medical Councils.

The employment and status of each intern, senior house officer and resident were obtained from the Regional Health Authorities in Jamaica and the University Hospital of the West Indies (UHWI) for graduates working in Jamaica for the five-year period under study.

The postgraduate offices of the FMS and UWI supplied the lists of graduates who applied for and those who were accepted to postgraduate programmes at the UWI, Mona, Jamaica and Nassau, The Bahamas, over the five years of 2012–16. The 2012 graduates were eligible for graduate studies at UWI Mona, Jamaica, commencing in 2014, as entry into the Doctor of Medicine (DM) post-graduate programme required one year after completion of internship before being eligible for postgraduate studies. Entries to the DM programme from 2012 to 2016 were reviewed to determine the number of graduates accepted for specialist training.

Data regarding graduates in The Bahamas were obtained through the office of the Director of the

UWI School of Clinical Medicine and Research, The Bahamas.

RESULTS

A total of 947 medical students graduated from the FMS, UWI, Mona, Jamaica, between 2012 and 2016, 69.4% of whom were female and 30.6% male. The number of graduates increased annually from 133 in 2012 to 259 in 2015 and 216 in 2016 (Table 1). The majority of students were Jamaicans; non-Jamaicans comprised an average of 18.2% (range: 15.8–20.3%) of the total number of graduates. Most of the non-Jamaican graduates were from Trinidad and Tobago, with the rest from Barbados, Botswana, Cayman Islands, United States of America (USA), St Lucia, Bermuda, St Vincent, The Bahamas and St Kitts and Nevis.

Table 1: Internship employment of medical graduates in Jamaica, 2012–16

	2012	2013	2014	2015	2016
Jamaicans	110	113	151	213	168
Jamaicans employed outside	2	1	7*	8	2
Non-Jamaicans	21	29	37	45	40
Total	133	143	195	266	210

* unknown

All Jamaican graduates were able to obtain internship posts at the public hospitals and at the UHWI. This was accommodated by the hospitals increasing the number of established posts available for internships by approximately 20%. The process of expansion required the hospitals to apply to the accreditation committee for a review of their services and their ability to satisfy an application for additional internship posts. This accreditation process was supported by the Caribbean Association of Medical Councils which, together with the UWI, developed standards for health institutions to be granted posts for provisionally registered interns.

This was followed by accreditation by the Caribbean Association of Medical Councils. In Jamaica, some public hospitals and the UHWI are accredited in order to employ interns and postgraduate trainees.

The accreditation review was as a result of the increasing workload on interns and, coupled with the improved supervisory staffing of the public hospitals and the UHWI, resulted in an increase in the number of internship posts available in Jamaica. The number of internship posts had increased in Jamaica between 2012 and 2016 as several hospitals, especially rural ones, were accredited for internship. In order to be accredited, hospitals must have minimum standards and availability

of biochemical, haematological and radiological investigations as well as consultant specialist supervisors. In addition, a recommended standard ratio of 10–12 patients per intern is important, as well as a ratio of each intern being supervised by one consultant and two residents, with accommodation being available on the compound for emergency duty.

The public hospitals employed approximately 75% of the graduates and the UHWI the remaining 25%. An average of 1.7% of Jamaican graduates did not seek employment in Jamaica after graduation. A total of 172 non-Jamaican graduates did not seek internship posts in Jamaica, the majority of whom were from Trinidad and Tobago (102), followed by Botswana (33) and Barbados (18).

In The Bahamas, there were 132 medical graduates between 2012 and 2016, 69% of whom were female. Of these, 125 were Bahamian nationals and 7 non-Bahamian nationals (Table 2). Of these, 128 graduates obtained internship posts in The Bahamas at approved public hospitals, without an increase in posts. Three non-Bahamian graduates returned to their native countries, and one Bahamian graduate elected to do a year in a research unit.

Table 2: Medical graduates in The Bahamas, 2012–16

	2012	2013	2014	2015	2016
Number of graduates	17	30	24	37	24
Bahamian	15	26	24	37	23
Internship	17	27	24	36	24

Between 2012 and 2016, 664 applicants were accepted to the postgraduate DM programme in Jamaica and The Bahamas. However, 2259 applicants from several different UWI graduating classes and from non-UWI institutions applied for postgraduate programmes between 2012 and 2016 in Jamaica and The Bahamas. Most entries were to Family Medicine, Internal Medicine, Obstetrics and Gynaecology, Surgery and surgical sub-specialities, Paediatrics, Emergency Medicine, and Anaesthesia and Intensive Care. Of the 125 Bahamian graduates in this five-year cohort, 33 (26%) entered postgraduate training programmes, four of which were USA residency-based and the remaining 29 were UWI-based.

Seventy per cent (70%) of those who graduated between 2012 and 2015 and all who graduated in 2016 were working in the English-speaking Caribbean, with the majority in Jamaica, Barbados, The Bahamas and Trinidad and Tobago. Of the 125 Bahamian

graduates, 119 (95.2%) remained in The Bahamas and were employed in the public sector health services and six were in the USA (four in residency programmes and two in a research unit).

DISCUSSION

The global community is in the midst of a growing response to health crises in developing countries, especially that of a shortage of medical personnel (2). The quality of doctors and the density of their distribution have been shown to correlate with positive health outcomes (3). All types of health personnel are required to deliver healthcare to the population. Driven by financial limitations, health authorities have been unable to match staff requirements or meet the needs of the population and the health system as a whole. In addition, the quality of the work environment is deteriorating, and educational and training institutions in low-income countries are starved of funds (2). Also, significant shortages of health work force and maldistribution of most health practitioners in rural areas are well documented and pose real challenges to healthcare systems (5). Doctors tend to migrate from medically less well-served areas to better-served areas. This paradoxical flow occurs over a continuum that includes internal migration (often from rural to urban areas) and external migration (from low-income to high-income countries). Both result in adverse outcomes for patients in the areas of origin (6).

In the English-speaking Caribbean countries, the government is the principal provider of all levels of healthcare services to the public, at nominal or no fees. Hence, the government is a major employer of physicians to provide these services in predominantly service-based facilities. The UWI has utilized some of these facilities for clinical training. The number of internship posts in Jamaica was increased between 2012 and 2016 as several hospitals, especially rural ones, were accredited for internship. The majority of posts are in public health institutions and thus funded by the government of Jamaica. This was confirmed by the results of the present study as 75% of posts were in the public hospitals while the remaining 25% were at the UHWI. Also, all graduates in The Bahamas obtained internship posts in the government service. An average of 1.7% of Jamaican graduates did not seek employment in Jamaica after graduation, and it is presumed that they obtained employment either in the Caribbean or elsewhere.

There was a significant female predominance (69.4%) in medical graduates, compared to males (30.6%). This gender difference in part reflects the Jamaican society

in which females overachieve compared to their male counterparts, especially academically. As more females enter the medical profession, the need to understand gender-related differences in speciality preference, geographical location of practice and other characteristics becomes increasingly important. Comparisons between male and female physicians have shown that women tend to prefer urban locations, where they have access to salaried work in institutional settings (7). Current trends in many countries demonstrate that despite increasing numbers of female medical graduates, there remain large gender differences in occupational choices (8). Concerns have also been raised about the potential impact this may have on healthcare provision, with a possible future shortfall in the supply of doctors due to greater part-time working. This may create particular challenges in fields that attract large numbers of women as well as potential reductions in applications to male-dominated fields such as surgery (8).

Part of the mission of the UWI is to provide the physician resource needs of its contributing Caribbean member states as well as the 20 Caribbean Community (CARICOM) regional states. The UWI is a public, not-for-profit institution. For the FMS, the provision of physicians duly trained and licensed to practise and deliver care in the membership countries is the primary indicator of the successful outcomes of graduates. In this regard, the mission has been successful as 70% of graduates were working in the Caribbean. To remain financially viable, the UWI invested in new facilities (9) and increased the intake of students in the FMS between 2012 and 2016. This significantly increased the access of Jamaican and other Caribbean students to medical training (10). This increase was also necessary because of the shortage of doctors in public health facilities in Jamaica and the Caribbean. This increase was criticized by some in part because of the perceived inadequate number of internship posts as well as post-registration posts in Jamaica. The results of the present study have shown that despite the increased number of graduates, all were accommodated in the public health system and at the UHWI. These institutions had been short of interns for many years prior to the increase in the intake of students for training. In addition, the population has increased and is living longer. Also, the burden of chronic illnesses as well as epidemics of several viral illnesses has become prevalent.

Technological advances and income growth will require more specialized training even as needs for basic healthcare increase (3). Positions in postgraduate

medical education programmes are limited in Jamaica and many countries (1). The UWI has been training postgraduate candidates in the DM programme since 1971. All major specialities are available to qualified candidates. However, there are limited spaces for training due to financial constraints, and thus only a minority of medical graduates pursue postgraduate training in the Caribbean. Of those who undertake the postgraduate training programmes at the UWI, the majority remain in the region and establish their specialist practice. In the present study, the number of graduates accepted for postgraduate programmes was relatively low as 664 were accepted for specialist training for the five years studied. However, this represents the number of posts available at the UHWI and other accredited training hospitals as 2259 applied for specialist training. Also, some successful applicants may not start the programme until a hospital post becomes available. There are a limited number of posts available which are financially supported by the regional medical authorities and the UHWI. Because of the limited posts available, many Caribbean medical graduates seeking advanced training travel to the USA and Europe, and most do not return. To retain graduates after internship, many countries are now opening and expanding postgraduate medical education programmes. This trend will be essential to build sustainable, quality physician cadres in all countries and to improve the ranks of medical school faculties (1). The issue of availability of postgraduate training positions is of major concern in the current paradigm of medical education where postgraduate training is the natural career progression for many medical graduates. In high-income countries, it is recognized that the period of undergraduate academic training is insufficient to allow graduates the facility of independent medical practice. Further training in a postgraduate programme is required to ensure the safety and standard of care expected. In the English-speaking Caribbean, the facilities for postgraduate training in Family Practice is limited, and thus a compromise has been agreed to allow further exposure of post-internship doctors to a year of supervised practice in health facilities in the disciplines not done in the internship year. Thus, rotations in Psychiatry, Dermatology, Ophthalmology, Ear Nose and Throat, Accident and Emergency, and Public Health are provided for one year before independent General Practice is undertaken. The challenge is that this may not be available across the Caribbean. Medicine has become increasingly more complex in this new era of the integrated curriculum, accreditation, certification,

accountability, and a more informed and demanding patient population. The traditional General Practice discipline will soon require postgraduate certification, and this may present a challenge for advancing healthcare for the epidemic of the non-communicable diseases in the region. Therefore, there is an urgent need for an increase in the availability of postgraduate training positions and accredited training institutions in Jamaica and The Bahamas.

There were limitations to the present study. The data were obtained from records at the UWI and government agencies and may not be fully accurate. Data regarding graduates who had migrated away from Jamaica were difficult to obtain. Also, data on the number of established posts in the public hospitals were difficult to confirm accurately, as there had been a significant number of contractual appointments at all levels (consultants, residents and senior house officers), and this was not always consistent and may be dependent on the financial status of the Regional Health Authorities. Despite this, the results reflected the status of medical graduates over the five-year study period.

In summary, in Jamaica and The Bahamas, there were 1079 medical graduates between 2012 and 2016, 69% of whom were female. The numbers of medical graduates trained between 2012 and 2016 had increased. There was a significant predominance of female graduates. All graduates were employed for internship in Jamaica and The Bahamas, mainly in public institutions. The number of graduates entering postgraduate programmes was relatively low due to the limited number of posts available. Although there was 70% retention of graduates, there is an urgent need to increase the numbers of postgraduate posts and accredited training institutions in the Caribbean.

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