Orthopaedic Curriculum Development in Guyana

Deepa Bose

Guyana is a small country situated on the northern coast of South America. It was a British colony until 1966, and is the only English-speaking country in the continent. Culturally and historically it has more in common with the West Indies, and is a member of the Caribbean Community (Caricom). It has a population of approximately 780,000, mostly concentrated along the coast, although there are settlements in the interior of the country, linked to mining and forestry.

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It is often referred to as the Land of Six Peoples because of the diverse ethnicity of its population; Europeans (mostly British), Africans, Indians, Chinese, descendants of Portuguese indentured labourers and native Amerindians. The word Guyana is derived from an Amerindian word meaning land of many waters.

It is rather unfortunate that the few people outside the Caribbean who have heard of Guyana associate it with the mass suicide of Jonestown, involving members of an obscure cult called the Peoples Temple Agricultural Project, who had migrated from the USA. In fact, Guyana has many remarkable features, not least of which is its untouched Amazonian rainforest, complete with unique flora and fauna not found elsewhere. It also boasts Kaiteur Falls, the largest single drop waterfall in the world at 226 metres, and St George's Cathedral in the capital city of Georgetown, a wooden building reaching a height of 43.5 metres and constructed from a local hardwood called greenheart, prized for its durability and resistance to rot.

Kaiteur Falls

Guyana currently has approximately 2.1 doctors per 10,000 people (compared to 2.8 per 1,000 people in the UK). Prior to the establishment of the School of Medicine in the University of Guyana in 1985, Guyanese who wished to study medicine did so abroad, in countries such as the UK, India, the Soviet Union and Cuba. The Guyana Public Hospital Corporation (GHPC), the large referral and teaching hospital in Georgetown, established a two year Diploma programme in Orthopaedics and Traumatology in 2009. Whilst this was a huge step forward, the specialists it produced were not necessarily prepared for independent practice without further training. Despite this, the programme was quite successful, producing ten graduates who are still working in the specialty in Guyana.

I am Guyanese by birth, and since my involvement with World Orthopaedic Concern UK (WOC UK), I have had a desire to give something back to the country by offering assistance in orthopaedic training and education. In December 2016 WOC UK and the Institute of Health Science Education at GPHC signed a memorandum of understanding (MOU) concerning curriculum and faculty development for a new four year postgraduate Master's degree (MMed) programme in Orthopaedics and Traumatology.

Our first task was to devise a curriculum which would be submitted to the University of Guyana for approval. I proposed to the British Orthopaedic Association Training Standards Committee that we could use the UK Trauma & Orthopaedic Curriculum as a template. Professor Philip Turner, current President of the BOA, kindly agreed to this. The current British curriculum was duly adapted to suit Guyanese requirements. In this endeavour I received enormous help from Dr Khan, a Senior Orthopaedic Surgeon at GPHC, and Lisa Hadfield-Law, Educational Advisor to the BOA.

The knowledge and professional behaviours components of the curriculum remained largely intact, but the operative skills component was adapted to reflect local needs. The principle changes lay in the assessment tools to be used. The Procedure Based Assessments (PBAs) and Case Based Discussions (CBDs) from the British system were included, in addition to a Global Rating Form based on the six elements of the American College of Surgeons evaluation scheme; patient care, medical knowledge, practice-based learning and improvement, systems-based practice, professionalism and interpersonal and communication skills.

Another difference from the UK curriculum is that residents are expected to complete an academic research project over the course of the four years, similar to a dissertation.

Open Kuntscher nailing of a femur in Guyana

Signing the MOU in December 2016

Resident: _____ Rotation: _____

Faculty: _____ Date: _____

Please circle the option that most closely reflects the resident's performance.

Unsatisfactory = Several behaviors performed poorly or missed (ratings 1, 2, or 3)
Satisfactory = Most behaviors performed acceptably (ratings 4, 5, or 6); satisfactory performance is described below
Superior = All behaviors performed very well (ratings 7, 8, or 9)

	Unsatisfactory	Satisfactory	Superior
Patient Care			
1. Information gathering	1 2 3	4 5 6 Obtains complete & accurate patient histories; performs thorough & appropriate physical exams; obtains enough information to include or exclude likely, significant problems	7 8 9
2. Treatment process	1 2 3	4 5 6 Able to plan and implement both external beam & brachytherapy treatments	7 8 9
3. Patient follow-up	1 2 3	4 5 6 Plans and executes appropriate follow-up plan; coordinates care with other health care providers; responds quickly & appropriately to unexpected follow-up events	7 8 9
Medical Knowledge			
4. Analytic thinking	1 2 3	4 5 6 Uses effective problem solving; demonstrates sound clinical judgment; applies analytic approach to clinical situations	7 8 9
5. Application	1 2 3	4 5 6 Applies clinical and supportive scientific data to the management of clinical problems; understands the rationale for various therapies	7 8 9
Practice-based Learning & Improvement			
6. Ongoing learning	1 2 3	4 5 6 Is able to locate, appraise, & assimilate evidence from scientific studies related to their patients' health problems	7 8 9
7. Improvement	1 2 3	4 5 6 Changes practice behaviors in response to feedback from others & review of own practice & improvement initiatives	7 8 9
Systems-based Practice			
8. Care coordination	1 2 3	4 5 6 Works effectively with other providers, inside & outside department, to provide complete & integrated care; reconciles contradictory recommendations; understands different healthcare delivery systems & medical practices	7 8 9
9. Cost-conscious care	1 2 3	4 5 6 Recommends appropriate use of technologies in different clinical situations	7 8 9
Professionalism			
10. Responsibility	1 2 3	4 5 6 Accepts responsibilities willingly; follows through on tasks carefully and thoroughly; is dependable & industrious; responds to requests in a helpful and prompt manner	7 8 9
11. Patient needs	1 2 3	4 5 6 Considers each patient's unique needs & characteristics regardless of patient culture or socioeconomic status; puts patients' needs above own interests	7 8 9
12. Integrity & ethical behavior	1 2 3	4 5 6 Takes responsibility for actions; admits mistakes; manages conflicts of interest; addresses ethical issues; maintains patient confidentiality	7 8 9
Interpersonal & Communication Skills			
13. Patient & family communication	1 2 3	4 5 6 Establishes rapport; is respectful; explains risks, benefits & alternatives of treatment	7 8 9
14. Medical records	1 2 3	4 5 6 Completes timely, thorough, & understandable medical records	7 8 9

Overall Comments **(please explain any areas of unsatisfactory performance)**

Evaluator Signature _____ Resident Signature _____

The resident and I discussed this evaluation and the resident's overall performance in the program, and ways to improve performance as needed.

Program Director Signature _____ *Date* _____

The Global Rating Form

Several iterations later, we had a curriculum we thought was fit for purpose, and ready for submission to the university. The university board approved this in May 2018, and the first resident started in July 2018.

Guyanese orthopaedic surgeon Dr Ramcharran attending the TOTS course

Many lessons have been learnt along the way. It was expected that the syllabus content would have to change to reflect local practice, but the assessment tools adopted by the Guyanese surgeons were also different, and demonstrated the need to allow flexibility for local content to develop. The chasm between aspiration and reality has also become apparent since the beginning of the programme. Guyanese residents and faculty both need time to acclimatise to a more rigorous system of assessment and documentation than they have been accustomed to using. An example of this is the surgical logbook, which has become second nature to UK registrars, but which is not routinely used in Guyana. Regular completion of PBAs and CBDs can be trying for UK registrars, so it may well be imagined how challenging it is to introduce these where nothing similar existed. Gentle encouragement and leading by example are the best antidotes in such situations, and are made easier by the obvious aptitude of the residents.

Faculty development is also an important area to focus on when introducing a new curriculum. There are only a few senior surgeons at GPHC, who are all dedicated to the development of an excellent programme, and who are very forward thinking in their approach. However they already have very busy clinical commitments. Their workload has suddenly increased exponentially with the start of the MMed. In addition to supervision and assessment of residents in the clinical and academic arenas, they now also have to deal with a new system of recruitment and delivery of formal teaching sessions, not to mention the mountain of administration that goes hand in hand with such endeavours. Professor Turner kindly arranged a place for one of the Guyanese surgeons on a Training the Orthopaedic Trainers (TOTS) course in April 2019, and this proved to be enormously productive. Visits by UK consultants in various subspecialties would also be very beneficial in developing the capacity of the team at GHPC. Additionally, regular Skype teaching sessions from the UK will relieve some of the burden on local faculty. ■

I welcome correspondence from anyone interested in becoming involved in the project. Please email: deepa.bose@uhb.nhs.uk.