A short history of the post-graduate surgical training in Fiji - where to from here?

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ABSTRACT

Post-graduate surgical training at the Fiji National University (FNU), previously known as the Fiji School of Medicine) has recently been updated by incorporating elements from the Royal Australasian College of Surgeons (RACS) training curriculum. The revised curriculum maintains strong contextual relevance to the needs and pathologies of the Pacific Island nations. This paper outlines why the FNU surgical postgraduate training programme should be applauded as a successful programme in the training of surgeons for the region.

Keywords: postgraduate, surgical training, Fiji National University

HISTORY OF POST-GRADUATE SURGICAL TRAINING:

The Fiji School of Medicine (FSM) was first established in 1885.[1] It has grown in strength over the last 132 years and is now part of the College of Medicine, Nursing and Health Sciences (CMNHS) under the Fiji National University. The introduction of the Bachelor of Medicine and Bachelor of Surgery (MBBS) programme with its first graduates in 1987, led to ongoing development with various Pacific Island nations and stakeholders initiating the concept of postgraduate training in 1994.¹ This was part of the FSM Development Plan, endorsed by the then Fiji government which paved the way for high-level discussions by consultants, Pacific Island government representatives, major organizations and donors during the Pacific Ministers of Health Meeting held in 1995 at Yanuca Island.² The outcome of that meeting recommended the introduction and establishment of the postgraduate Diploma and Masters programmes in Medicine, Surgery, Anaesthesia, Paediatrics, Obstetrics, and Gynaecology.²

A draft programme was established between 1996 and 1998. This included a 4-year training programme, similar to the Master’s course at the University of Papua New Guinea (UPNG) that trains general surgeons to be competent in treating and managing surgical patients in a limited resource setting. The post-graduate curriculum for surgery at FSM was strengthened by the appointment of qualified, well established local and expatriate surgical consultants and advisors from Australia and New Zealand.²

The guiding principles at that time included distance learning where part of the post-graduate diploma training could be taught at the trainees’ home countries. This was especially critical during the pioneering period of the course when there were a limited number of doctors, and relocating them to Suva would have had a significant impact on health care delivery in their home countries. Trainees had to complete a 1-year post-graduate diploma in surgery of which the first 6 months was undertaken in their home countries. This was especially critical during the pioneering period of the course when there were a limited number of doctors, and relocating them to Suva would have had a significant impact on health care delivery in their home countries. Trainees had to complete a 1-year post-graduate diploma in surgery of which the first 6 months was undertaken in their home countries.

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graduate diploma programme utilised the Royal Australasian College of Surgeons (RACS) Surgical Trainees Educational Modules (STEM), while a large portion of the course was case-based problem solving and self-directed learning. Trainees needed to attain a minimum overall grade of B+ in each module in their final assessment to proceed to the Master of Medicine in Surgery (MMED-Surgery) Programme.

The Masters' programme was a further 3 years of more supervised, hands-on training and face to face education with regular assessments. Due to the vast needs of the Pacific, trainees were taught principles and management of patients in relation to General Surgery, Orthopaedics, Neurosurgery, Plastic and Reconstruction, Urology, Paediatric Surgery and even Gynaecology/Obstetrics for the benefit of surgeons from the smaller regional islands. A public health component was incorporated into the syllabus and the successful completion of an original research study was mandatory in the final year. This research was submitted as a minor thesis and presented to a selected panel of lecturers and senior hospital staff. Additionally, trainees were required to pass an exit exam to be able to graduate with the Master of Medicine degree. These resulted in graduates' competencies in a broad range of surgical knowledge and skill, making this a unique training as opposed to the model of sub-specialised training abroad. Many of these trainees would return to work in isolation until further successful trainees joined the service, often being the solitary health professional with surgical expertise.

Pioneers of the Postgraduate Surgical Training:

The development and delivery of the curriculum required appropriate supervision of students locally and abroad. In 1998, under the supervision and guidance of Associate Professor Eddie McCaig with the assistance of Mr Frank Piscioneri and Mr Fred Merchant, the first seven trainees of the post-graduate Diploma in Surgery (PG Dip Surg) graduated which included Dr Sitiveni Vudiniabola (Fiji), Dr Santos Wari (Vanuatu), Dr Chester Kuma (Solomon), Dr Faka'osi Pifeleti (Tonga), Dr Kamlesh Kumar (Fiji), Dr Kelemedi Uluitoga (Fiji) and Dr Sainimere Matararaba (Fiji). The military coup in 2000 disrupted training resulting in only three trainees (Sitiveni Vudiniabola, Chester Kuma and Faka'osi Pifeleti) completing the Master's degree in December 2001. Dr. Kuma left surgery to pursue a career with the Seventh Day Adventist Church, while Dr. Pifeleti currently practices in the United Kingdom. Dr Vudiniabola was employed as a senior lecturer in Surgery until 2013, where he was instrumental in the delivery of the surgical education curriculum in both the undergraduate and postgraduate programmes. Dr Robert Hakwa from Vanuatu completed the MMED-Surgery in 2002, returned home for a short period and is now working in Australia. More surgical trainees from Fiji and the Pacific region have successfully completed the Masters' programme and have either travelled abroad for further specialized training with some staying back in developed countries or have become leaders, mentors and surgical teachers in their respective countries.

Sub-specialisation -Fiji Trainees and Fiji Experience:

With the success of the programme and the steady increase in the number of graduates, the programme encouraged trainees to undertake a further 2-3 years of sub-specialised training abroad in an area of surgical specialty that interests them. Training abroad increased the chance of trainees not returning home after training. However, it also encouraged the health system to adjust policies and structure to reduce the frustrations of trained surgeons and to have clear career progression pathways to retain the trained surgeons in the Pacific. The two years spent overseas working and training meets the assessment requirements of the Fiji Medical Council (FMC) for vocational registration in general surgery.

Sub-specialisation within surgery in a developing nation such as Fiji is challenging. The obstacles include a lack of infrastructure, equipment and consumables; lack of monitoring and evaluation of the specialists to attain and maintain a standard threshold required of sub-specialisation by a registered college such as RACS; and the lack of specialised training of other essential allied health workers such as nurses and physiotherapists. The first to be recognized with sub-specialization within surgery was Dr Sireli Vakadrauvuya who has vocational registration as a urologist after returning to Fiji in 2011.

Pacific Island surgeons who have attained the MMED-Surgery degree have become specialist surgeons in various surgical sub-specialties and leaders in health in their respective Pacific Island countries. In Fiji, Dr Ifereimi Waqaainabete, is a general surgeon who specialises in gastrointestinal, breast and endocrine surgery. He served as medical superintendent of the Colonial War Memorial Hospital (CWMH) from 2009 to 2011 and is currently the President of the Fiji Medical Association, the FNU Associate Professor of Surgery and lead clinician in the post-graduate surgical teaching programme. He
is assisted by Dr Basharat Munshi who is a general surgeon and Senior Lecturer. Recently, the Fiji Medical Council (FMC) recognised vocational registration in sub-specialist training in Neurosurgery (Dr Allan Biribo), Plastic and Reconstruction (Dr Semesa Matanaicake Jnr), Urology (Dr Rajeev Patel), Orthopaedics (Dr Vaigalo Eddie McCaig, Dr Pauliasi Bauleka, Dr Alipate Natoba) and Paediatric Surgery (Dr Josese Turagava and Dr Savenaca Rusaqoli) after their return from clinical attachments abroad with accompanying satisfactory references. These surgeons are leading the way forward in FNU’s sub-specialty training in the CWM Hospital and Lautoka Hospital. Furthermore, general surgeons – Dr Maloni Bulanauc, Dr Jaoji Vulibeci, and Dr Ali Ahktar - are recognized surgical leaders and trainers at the Western and Northern Divisional Hospitals. Dr Esala Vakamacawai, Dr Ronal Kumar, Dr Fane Lord, and Dr Warren Thagard are currently pursuing further training in New Zealand or Australia and would be returning to Fiji in a few years.

**The Pacific and MMed Surgeons in the region**

In the Pacific region, surgical graduates of the FSM/FNU are in leadership roles within and beyond surgery in their countries. The Honorable Dr Saia Piukala is currently the Minister for Health in Tonga, while Dr Kolini Vaega is a consultant surgeon in Nuku’alofa. Dr Richard Leona (on secondment to Nauru), Dr Trevor Culwick, Dr Basil Leodoro, and Dr Samuel Kemual are in Vanuatu and have increased the scope of practice in their country. The late Dr Oten Bwabwa and Dr Kabiri Itaka took over the surgical services in Kiribati which was previously managed by expatriates. Dr Deacon Teapa is the solitary surgical graduate in the Cook Island’s and is now heading surgery at the National Rototonga Hospital. Since Dr Aleki Fuimaono first completed the postgraduate diploma in 2000, Dr Dyxon Hansell from Samoa completed the MMed- Surgery in 2012 and has contributed to surgical services and expanded this to teaching, becoming the Senior Lecturer in Surgery at the National University of Samoa. He has recently been supported by Dr Joe Toloa and two recent graduates, Dr Sione Pifeleti (Tongan) and Dr Petueli Emose (Fijian) who are permanent residents of Samoa due to marital commitments. Dr Alito Soares who is the first graduate from East Timor has opened the doors for other trainees to follow suit and is currently the Chief of Surgery in Timor Leste.

Apart from the few that have left for further studies abroad or have migrated, the training has achieved most of its goals, in training and retaining surgeons in the Pacific region to provide adequate, accessible and affordable surgical care. A major success of the programme has been that training was led locally with mentorship and assistance from surgical colleagues in New Zealand and Australia. A local training hub in Fiji leads to ownership of the curriculum as in other developing countries and is the most important aspect in retention and development of the medical workforce is training.²

**Local Champion of the Programme – Associate Professor Eddie McCaig**

The success of any surgical training is dependent on the ownership and commitment of the surgical teachers and mentors. One is not able to talk about the postgraduate surgical training at the FSM and later FNU without mentioning the hard work and leadership of Associate Professor Eddie McCaig. Being one of the few surgical fellows of the RACS who returned to the Pacific and is still in Fiji, he took it upon himself to mentor and supervise the trainees since the inception of the programme in 1998. He has collaborated well with RACS and much of the success of the surgical training programme is attributed to his commitment, dedication, and diligence. His outstanding contribution to surgery in the Pacific was recognized by a prestigious college award in June 2014 when he was awarded the ESR Hughes Award from RACS, first for a Pacific Island surgeon.

**DEVELOPMENT OF THE NEW POST-GRADUATE SURGICAL PROGRAMME:**

Under the administration of the CMNHS of FNU since January 2010, the post-graduate surgical training programme came to an abrupt suspension in 2014. This was a period of turmoil for the programme which caused a lot of anxiety to existing trainees and alumni. Despite the stringent requirements of the FNU and the Higher Education Commission in Fiji, a lot was discussed about motives behind the suspension of this successful surgical training. Senior surgeons in the region, including Associate Professor McCaig, Lord Vilame (Bill) Tangi, and Mr. Kiki Maoate through the assistance of RACS, revised the surgical curriculum and restructured training. This restructure and further developments allowed training to resume in January 2015 and formed part of a succession plan where the previous supervisor, Associate Professor McCaig, took on more mentorship role, handing over the day to day running of the programme to Drs Ifereimi Waqainabete and Basharat Munshi. This is recognized as a success of the programme where trainees will in future, be supervisors and mentors to trainees. To assist in the succession of
training leaders, senior trainees would have assisted in the supervision of the first-year post-graduate trainees at FNU. This contributes to the leadership qualities of senior trainees who will eventually become leading surgeons and teachers in the region. The new curriculum dictated an increase in teaching and supervision which is challenging where there is a small academic faculty.

CRITICAL ANALYSIS OF THE POST-GRADUATE TRAINING

The programme has graduated at least 35 surgeons over 16 years with more than 75% of these graduates serving in the Pacific. Information on the quality of training and supervision with the new curriculum will be available after an evaluation is undertaken in the next few years, and will hopefully achieve a similar-if not better-success story than now. The continued involvement of RACS in providing advice and an external examiner ensures the quality of the training programme. The programme is further strengthened with specialist visits via visiting teams, particularly through the Pacific Island Project (PIP).

A thorough evaluation will provide useful and important information to different stakeholders including trainers, trainees, university management, government, professional bodies, funders, and other academic institutions.

One can judge the impact of the training program in terms of the process of developing knowledge and skills, attitudes towards particular conception, actual behavior change, and even more long-term impact. This Kirkpatrick's four-level model, which consists of four evaluation criteria: reaction, learning, behavior, and results and each criterion measures different levels of impact will need to be formally done as a separate evaluation study. However, the greatest impact is having all the surgeons in the Pacific with the Masters of Surgery as the minimum requirements. We believe that in the future, these surgeons, together with the Pacific Island Surgeons Association (PISA) would enable members to be honorary fellows of a surgical college abroad.

WEAKNESSES OF THE POST-GRADUATE TRAINING

Every training programme will have weaknesses which when highlighted can allow for changes and improvement. For the surgical training, this includes but is not limited to:

1. Lack of research dissemination including publication in peer-reviewed journals and presentation by the trainees, surgeons, and academics in local, regional and international meetings and conferences.

2. Loss of surgical trainees overseas/brain drain. This will be an ongoing issue that will be very challenging to control as people migrate for various reasons. It could also reflect the success of the surgical training where trainees are considered capable of working and successfully completing further training overseas. Fiji has lost six surgeons while Vanuatu, Solomon Islands, and Tonga have all lost a surgeon each to developed countries. Finding a placement overseas for further surgical training in Australia and New Zealand has not been an issue for those who successfully completed medical council requirements including a pass at the International English Language Testing System (IELTS). The loss of surgeons to overseas countries should not be considered a total loss as many still contribute in various ways to Pacific health and surgery as educators via the Pacific Island Project and other funding organizations as well as being focal points for placement for future trainees.

3. Surgeons who have returned from their overseas attachments have not been paid appropriately for prolonged periods. Senior surgical posts are limited in number and there is a need to expand the national surgical service and build more capacity for the future.

4. Lack of opportunities for continuous professional development (CPD). PISA has a regional meeting every 2 years where sponsored surgeons attend. Otherwise, surgeons rarely have another opportunity unless a workshop or a meeting involving a few surgeons is held. There is a potential for PISA in the future to host CPD activities with better internet access and over social media.

CONCLUSION

Post-graduate surgical training in FSM/FNU has come a long way and can be considered a success with graduates who are now providing surgical services in the Pacific region. Surgeons are contributing to the betterment of surgical care as health leaders. Future trainees of the surgical programme at the FNU will hopefully continue to succeed, be supported and retained in the Pacific. It is the responsibility of all the senior surgeons in the Pacific and to mentor, train and supervise the upcoming surgeons. PISA will continue to
strengthen collaborations with colleagues in New Zealand and Australia to assist with training in the Pacific. Research and the dissemination of findings in peer-reviewed journals is an area that needs strengthening. The future is bright and we wish the surgical trainees a better training, professional development, and career in the Pacific.

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