

MEDICAL INTERNSHIP PROGRAMS IN THE PACIFIC: CURRENT SITUATION AND FUTURE CHALLENGES

Background paper for the HRH Hub series
on 'Evidence and Policy Options' for
healthcare education and training in
Pacific Island countries

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ACRONYMS

A&E	accident and emergency
ACGME	Accreditation Council for Graduate Medical Education
CME	continuing medical education
CMNHS	College of Medicine, Nursing and Health Sciences ((Fiji National University)
CPD	continuing professional development
ELAM	<i>Escuela Latino-Americana de Medicina</i> (Latin American Medical School)
ENT	ear, nose and throat
FNU	Fiji National University
FSMed	Fiji School of Medicine (Fiji National University)
GMC	General Medical Council
MoH	Ministry of Health
O&G	obstetrics and gynaecology
OUM	Oceania University of Medicine
PIC	Pacific Island country
RMI	Republic of the Marshall Islands
UPNG	University of Papua New Guinea
UPSM	Umanand Prasad School of Medicine

A note about the use of acronyms in this publication

Acronyms are used in both the singular and the plural, e.g. NGO (singular) and NGOs (plural).

Acronyms are also used throughout the references and citations to shorten some organisations with long names.

INTRODUCTION

This review describes international trends and approaches to the planning and delivery of medical internship programs relevant to the future development and strengthening of medical education in Pacific Island countries (PICs). It also describes the current situation regarding undergraduate medical admissions in the Pacific and the likely impact on existing internship programs. It examines policy options for addressing these evolving challenges through improved capacity and alignment of internship programs and the development of regional competency standards for new medical graduates as they prepare to enter the Pacific’s medical workforce.

The traditional sources of undergraduate medical education for candidates from PICs have been the Fiji School of Medicine (FSMed) – now part of the College of Medicine, Nursing and Health Sciences (CMNHS) at Fiji National University (FNU) – and the School of Medicine and Health Sciences at the University of Papua New Guinea (UPNG). A small number of students have been awarded scholarship support to study at medical schools in Australia, France, New Zealand or Chinese Taipei.

Over the last 8 years, medical education in the Pacific has become more complex. First, private medical schools have been established in Fiji (the Umanand Prasad School of Medicine [UPSM], a private university in Lautoka) and in Samoa (the Oceania University of Medicine [OUM], which is in transition from private management to the public sector). Second, Pacific students have started to access international scholarships to study medicine in countries including China, Cuba, Georgia, Kazakhstan, Morocco and Russia. Third, there has been increasing mobility of doctors within and between PICs.

As a result, there is growing interest in monitoring the quality and improvement of medical education in the region, including the development of regional competencies and standards for entry-level medical practitioners.

This paper considers the predominant internship models, internationally and in the Pacific, for training doctors for entry-level roles in their health system, and the policies, supervision, organisational systems and structures (at regional and national levels) that need to be in place.

The term “internship” describes the first phase of postgraduate (i.e. after graduation, but generally not associated with a postgraduate academic degree) medical education during which newly graduated doctors typically develop generic competencies and experience [1].

The internship is part of the continuum of learning in medicine, which includes a transition into postgraduate and specialty medical education, continuing medical education (CME) or continuing professional development (CPD). Although commonly used in relation to learning programs that begin after completion of undergraduate training, the CME/CPD concept relates to the concept of a career-long

commitment to self-directed learning throughout a continuum of practice, rather than a discrete period of supervised training.

Undergraduate medical education, specialty training and CME/CPD are discussed in the companion paper *Medical education: A review of international trends and current approaches in Pacific Island countries*.

Table 1 (opposite page) defines various terms used internationally to describe the internship period. Interns have completed basic medical training and hold a university medical degree.

There is variation between countries (and even sub-national jurisdictions) as to the length of training and whether interns have a full licence to practise or provisional or limited scope registration, but in all countries interns practise under supervision.

An internship usually lasts 1-2 years, and is typically structured around clinical placements in a small range of core clinical specialties: medicine, surgery and, in many programs, primary care.

The overall purpose of the internship is to help new graduates to consolidate and apply their clinical knowledge and skills, and to learn to take increasing responsibility for the provision of safe and effective patient care [1].

Because doctors need skills in assessing and managing patients with acute, undifferentiated presentation, many internship programs also include an emergency medicine rotation.

Other rotations are highly variable between programs and jurisdictions, and may include pediatrics, reproductive health, mental health, various sub-specialties (e.g. anaesthesia; ear, nose and throat [ENT] surgery; ophthalmology) and community placements.

To progress from the internship stage normally requires a sign off by educational and clinical supervisors and the completion of formal assessments, often with a strong emphasis on workplace-based assessment (see *Medical education: A review of international trends and current approaches in Pacific Island countries*).

In addition to the practical, clinical aspects of internship programs, further theoretical learning is often required. This can be organised in various ways,

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either closely connected with the clinical training, or through regional, national or international courses or CPD programs. Such programs may be managed by universities, specialist boards, professional colleges or medical societies, or institutes for postgraduate medical education.

TABLE 1. TERMS USED INTERNATIONALLY AND IN THE PACIFIC TO DESCRIBE THE FIRST PHASE OF MEDICAL EDUCATION AND TRAINING BETWEEN COMPLETION OF MEDICAL SCHOOL AND ENTRY INTO THE GENERAL MEDICAL WORKFORCE AND/OR COMMENCEMENT OF SPECIALIST TRAINING

Term	Description (International)	Description (Pacific)
Internship	The first postgraduate year of structured practical training after completing medical school and before achieving full registration. The term may be used interchangeably with the first year of a longer, structured residency program (see below).	The first period of structured postgraduate training after graduation. It varies in duration between countries; it lasts for a minimum of one year, and may extend across two years or more.
Residency	The first postgraduate year in the United States. In Australia or New Zealand, the term may also be used to describe a second or subsequent service year that may be (but is generally not) associated with a postgraduate or specialty training program.	—
Medical Internship and Residency Program	—	The initial period of postgraduate training in some US-affiliated Pacific jurisdictions; it may extend across two years.
House Officer	Period of practice between medical school and full registration in several countries. Also called: medical officer or housemanship.	—
Foundation Program	A two-year, general postgraduate medical training program in the UK; it forms the bridge between medical school and specialist training.	—

INTERNATIONAL APPROACHES TO INTERNSHIP TRAINING

In general, there are 6 distinct educational pathways through undergraduate training to general, pre-specialist registration; these are summarised in *Medical education: A review of international trends and current approaches in Pacific Island countries*.

In several countries, no formal internship period exists and medical school graduates apply immediately for a residency position (e.g. in Canada). In others, a period of clinical experience before residency is optional (e.g. in the Netherlands). In other countries still, a period of mandatory service is required either immediately after completing medical school (e.g. in Colombia) or between an internship and a formal residency program (e.g. in Indonesia). Some countries designate the final year of undergraduate medical studies as a “student internship” (e.g. Fiji, New Zealand) or “rotational internship” (e.g. Cuba). As these programs lead to an undergraduate qualification but not to general medical registration, they are not considered in this paper.

United Kingdom

In the UK, the General Medical Council (GMC) sets the standards and outcomes for undergraduate and postgraduate education and training. (See: *Accreditation of healthcare professional education programs: A review of international trends and current approaches in Pacific Island countries*). It functions independently of government. The first two years of postgraduate training and education are called the “Foundation Program” [2]. These programs are funded, commissioned and managed by regional postgraduate deaneries, which have the responsibility to ensure that systems and resources are in place to enable GMC training standards to be met. The learning objectives and standards are set out by the GMC in a publication titled *The Trainee Doctor* [3].

The Foundation Program provides a fixed number of full time, paid employed positions in hospitals and primary care matched to subsequent specialty training and consultant posts and not to the number of graduates. The curriculum enables trainees to demonstrate that they are competent in a number of areas, including communication and consultation skills, patient safety and team work, and with a focus on managing the acutely ill patient, as well as the more traditional elements of medical training. The

framework for the structured 2-year program exposes trainees to clinical placements in a broad range of specialties including medicine, surgery, accident and emergency (A&E), obstetrics and gynaecology (O&G), and anaesthetics. They typically move between different hospitals. Foundation doctors are assessed against the outcomes in the curriculum through a range of workplace-based assessments and supervisors’ reports.

United States

Historically, postgraduate medical education in the US began with a one-year internship. The Accreditation Council for Graduate Medical Education (ACGME) officially dropped the term “intern” in 1975, instead referring to individuals in their first year of graduate medical education as “residents”. However, the American Osteopathic Association continues to require osteopathic physicians to complete an internship before residency.

The one-year “traditional rotating internship” continues to exist. Some residency training programs (e.g. neurology or ophthalmology) begin after completion of an internship or transitional year. Some medical graduates use an internship year to re-apply to programs into which they were not accepted, while others use it as a year to decide upon a specialty. However, the majority of doctors start a specialty track medical residency immediately after graduation and successful completion of the US Medical Licensing Exams. In most states, the minimum training requirement for obtaining a general licence to practise medicine consists of completion of the first year of specialty training, or the “transitional internship”.

Australia

Medical graduates in Australia are required to complete a one-year internship under provisional registration before full registration is obtained [4]. Generally, at least a second postgraduate year is required before entering a specialist training program; this may be predominantly aligned with the intended field of specialisation.

Interns in Australia are appointed to accredited internships positions approved by postgraduate medical councils. These accredited positions ensure that adequate supervision and access to education

are available. Full registration is only granted to those who have completed a satisfactory year in an accredited internship position.

Interns undertake rotations through a variety of specialties, and rotations may differ between states. Most states require three core rotations to be completed – general or internal medicine, general surgery and emergency medicine. In some states, a rotation in general practice or community settings is offered instead of, or in conjunction with, emergency medicine.

To provide a common framework for training and education of junior doctors, which previously differed between Australian states, since 2010 the Commonwealth and State Governments have introduced a national registration scheme, with the Medical Board of Australia now under the Australian Health Practitioners' Regulatory Authority (AHPRA). This move towards centralisation was supported by the production of the Australian Curriculum Framework for Junior Doctors by the Confederation of Postgraduate Medical Councils (CPMEC) [5].

New Zealand

New medical graduates in New Zealand receive provisional registration with the Medical Council of New Zealand (MCNZ) to work as interns. Since medical schools in New Zealand are accredited under bilateral agreements with Australia, medical graduates may be registered and work in both countries, and are eligible to apply for internships in Australia. They receive general registration after successful completion of the first intern year. A second residency year (see Table 1, page 5) may comprise the first year of specialty training.

The Pacific context

The term “internship” is used almost universally in the Pacific to describe the period of supervised training after medical school that precedes general registration. Although Pacific interns are employed during their internship, there is no system of identified and accredited internships positions that ensure adequate supervision and educational resources. Supervision is provided by senior clinicians and registrars in each clinical rotation.

Formal specialty or residency training programs beyond the internship year are uncommon. On successful completion of the internship, doctors usually enter the general medical workforce where they may continue to work under ongoing supervision in a referral hospital in a major centre, or work more autonomously in a sub-national centre, or a remote rural or outer island setting.

Pacific internships vary considerably in duration, but are usually within the range of 1-2 years. They also vary considerably in structure and clinical rotations, which are often determined not only by the intended scope of practice but also by the availability of specialist supervision. For example, a country may include an ophthalmology rotation in its internship program because entry level medical officers may be posted to remote settings where they may need to manage acute eye conditions with limited access to specialist advice, or they may include it simply because a specialist ophthalmologist is available for supervision.

In general, clinical placements during internship programs in the Pacific are geared towards development as an independent and more autonomous practitioner, but with limited access to supervision than those in higher income settings and larger health systems. Interns also take on roles that carry increasing decision-making and management responsibilities, and the programs provide experiences to inform future career choices. Assessments are typically through written supervisor assessment of clinical competencies, log books and workplace-based assessment. Completion of an internship program is generally a prerequisite when applying for postgraduate training in a clinical specialty through FSMed or UPNG or an advanced specialist training rotation in Australia or New Zealand.

INTERNSHIP PROGRAMS IN THE PACIFIC

Methods

Data for this section of the paper were obtained as part of a study to document Pacific internship programs and their capacity [6]: This was undertaken by the Strengthening Specialised Clinical Services in the Pacific (SSCSiP) Program, a donor-funded capacity development program based at FSMed. Gaps in information were addressed through key informant interviews conducted directly with Directors of Clinical Services, medical educators and health workforce managers in those PICs with internship programs.

Overview

Six PICs currently run their own distinct internship program – Fiji, Palau, Samoa, Solomon Islands, Tonga and Vanuatu. With the exception of Palau, all are larger countries with populations greater than 100,000 (Table 2, below), and therefore more likely to have sufficient case loads, case mix and the supervisory capacity to meet the educational needs of a junior medical workforce.

Although Palau has a relatively smaller population than the other countries with internship programs,

the number of Palauan medical graduates each year is small and the doctor- and specialist-to-population ratios are among the highest in the Pacific. Consequently, competition for clinical cases is minimal and supervisor-to-intern ratios are extremely good in comparison with other PICs (Table 2).

Countries and territories without internship programs include Cook Islands, Federated States of Micronesia, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Tokelau and Tuvalu. These countries have traditionally sought to negotiate internship placements in the country of graduation of their medical students (usually Fiji; or New Zealand for the occasional graduates from Niue and Tokelau who have trained there).

However, demand for internship places in Fiji is about to rise steeply with the imminent graduation of the first cohort of medical students through UPSM. The Fiji Ministry of Health (MoH) has now closed its internship program to applicants from other PICs in order to protect the availability of places for its own citizens.

Kiribati is in the process of developing a new internship program to accommodate the anticipated

TABLE 2. POPULATION AND PHYSICIAN DENSITY, PICS HOSTING INTERNSHIP PROGRAMS

Country	Population	Doctors per 10,000 Population	Doctors with postgraduate qualifications per 10,000 Population
Existing			
Fiji	837,271	4.5	0.47
Solomon Islands	515,870	1.9	0.35
Vanuatu	234,023	1.2	0.30
Samoa	180,741	4.8	0.72
Tonga	101,991	2.9	0.78
Palau	19,907	13.0	2.51
Under development			
Kiribati	103,105	3.0	1.07

Sources: Population data from SPC (2011) [7]; physician data from WHO World Health Statistics (2012) [8], and SSCSiP (2012) [6]

return of up to 31 new I-Kiribati medical graduates from Cuba (commencing in August 2013), another 8 from FSMed, and four who joined the Kiribati medical workforce under provisional registration after they graduated from FSMed in 2011 and 2012 but have not been able to undertake an internship.

Nauru and Tuvalu have expressed interest in their graduates from international medical schools undertaking internships in Kiribati if they are unable to secure places in an established program.

Management and supervision of country internship programs

Only Tonga has a formal management structure for its internship program – called the Internship Supervisory Committee. Kiribati has proposed forming a supervisory body to be called the Internship Training Committee. In Fiji, Samoa, Solomon Islands and Vanuatu, the internship program is managed by the Director of Clinical Services (or equivalent) in collaboration with the heads of clinical

departments. Unlike Tonga, none has a formal structure (e.g. a committee) with specific terms of reference.

Due to the small number of medical graduates undertaking internship in Palau, the program has merged with a broader Medical Workforce Building Program and CPD program that has its own management structure.

Duration and areas of internship

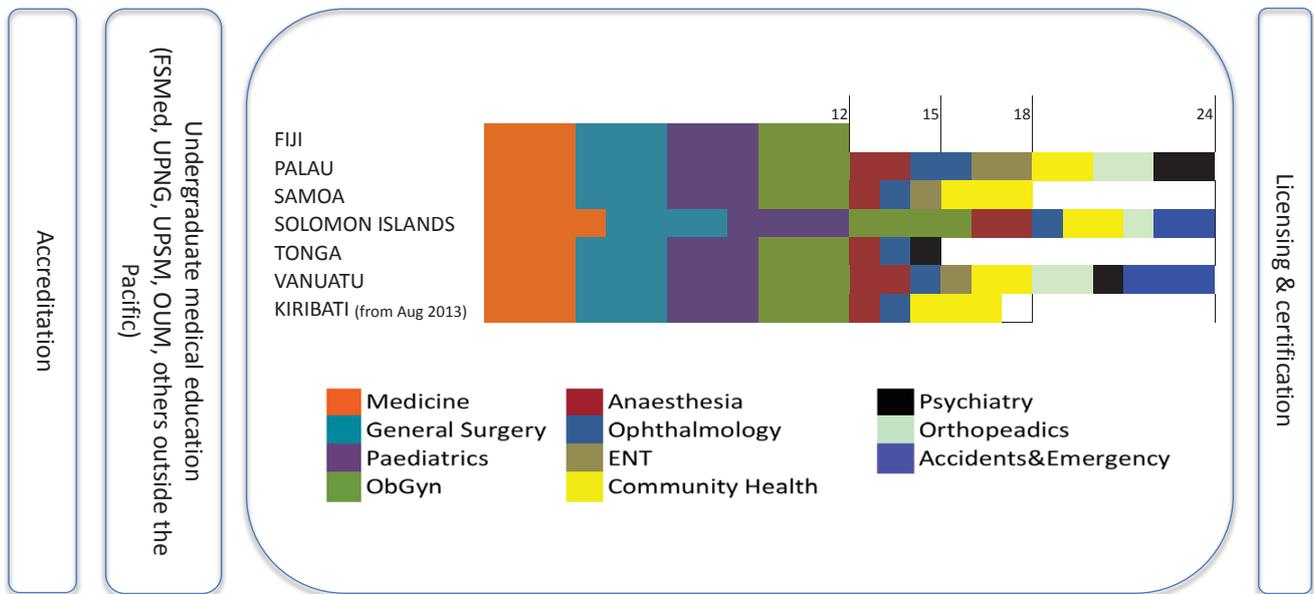
The duration of Pacific internship programs ranges from 12 months in Fiji to 26 months in Solomon Islands. Information relating to the clinical rotations and their duration for internship programs from all 6 countries, plus the evolving program in Kiribati, is detailed in Figure 1 (page 10).

The Solomon Island internship program covers more specialty areas (10 in total), and allocates longer times for each block. In 5 countries (Fiji, Palau, Samoa, Tonga and Vanuatu) and in the proposed Kiribati program, the principal and equal focus is on

TABLE 3. MANAGEMENT STRUCTURE FOR INTERNSHIP PROGRAMS IN PICS

Country	Management structure of the internship program
Fiji	Deputy Secretary – Clinical Services, in collaboration with the medical superintendents of each divisional hospital.
Kiribati (proposed)	An Internship Training Committee will be co-chaired by the Directors of Clinical Services and Public Health; program to be coordinated by a contracted expatriate specialist, the heads of all clinical departments and principal public health programs as members.
Palau	Director of Clinical Services as part the Medical Workforce Building Program, in consultation with the heads of clinical departments at the national hospital.
Samoa	Manager, Clinical Services together with the heads of each clinical specialty unit under the National Health Service.
Solomon Islands	Under-Secretary for Health Care; interns’ activities coordinated by Medical Superintendent of the National Referral Hospital in Honiara, with the support of clinical consultants and heads of departments.
Tonga	Internship Supervisory Committee chaired and coordinated by the Medical Superintendent of Vaiola Hospital.
Vanuatu	Director of Curative Services, in consultation with the heads of clinical departments at the Vila Central Hospital.

FIGURE 1. AREAS AND DURATION OF INTERNSHIP, IN MONTHS



the four core specialty areas – Internal Medicine, General Surgery, Paediatrics and O&G. By contrast, interns in the Solomon Islands spend more time in three of these specialty areas – 4 months each in Medicine, Surgery and Paediatrics – and only two months in each of the other blocks. Three countries (Palau, Samoa and Tonga) require their interns to go through an integrative community placement towards the end of their program; as is also proposed for the Kiribati program.

Tonga and Palau have a psychiatry component (Kiribati will include this as a rostered part-time placement within the general medicine attachment). Only the Solomon Islands and Palau have specific orthopaedics rotations. In Samoa and Fiji, the surgical subspecialties (e.g. orthopaedics, urology) are included in the general surgery block. A&E placements may be rostered simultaneously with other components of the program (e.g. as in Palau) or may be a discrete requirement within the program (e.g. Solomon Islands, Vanuatu).

The proposal for Kiribati adopts an integrated clinical and public health model, with trainees rostered to relevant public health units during their core rotations (e.g. to the tuberculosis, non-communicable disease and leprosy programs during the internal

medicine block; the Family Planning Unit during O&G; and the immunisation and under-fives clinics during paediatrics). Rostered A&E attachments will be included as part of the surgical block.

Interns will complete a short course in altitude physiology and transport medicine during the anaesthesia placement; this will be the only intern program in the Pacific to offer such a course – a clear recognition of an important knowledge and skill-set for doctors practising in an island nation where referral hospitals are widely dispersed and patients with more complex or acute conditions generally need to be evacuated by air.

Induction

In Samoa, new medical graduates starting off the internship program go through induction courses which cover topics and issues such as code of practice, medical professional standards and employment conditions, and relevant legislation, policies and procedures. Interns are also required to participate in a structured CME program, and CME points form part of the appraisal. These structures are also included in the draft Kiribati program.

In the Solomon Islands, new medical graduates are required to report to the Under Secretary for Health Care for registration and induction into the internship program.

Assessment

In five countries (Fiji, Palau, Samoa, Solomon Islands and Tonga), interns are required to meet competency-based log book requirements; a log book has also been prepared for the commencement of the program in Kiribati. Supervisors' judgments of the capabilities and attitudes of interns also play an important part of the assessment of each rotation. No PIC currently requires interns to complete an exit or licensure examination.

Recent review of the competencies in the Solomon Islands internship log book and the development *de novo* of a core set of competencies on which to base the Kiribati intern log book represent an early move

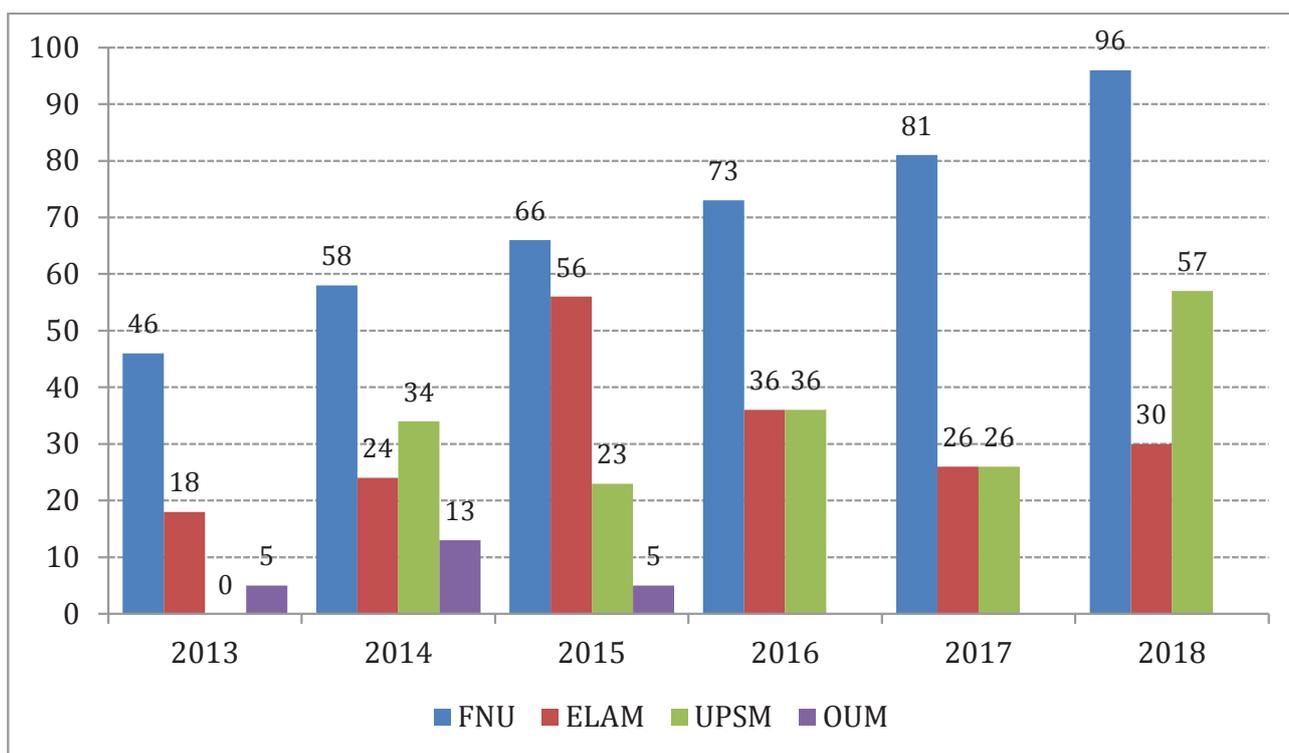
towards a competency-based standard for entry level medical practitioners applicable across the Pacific. However, there is currently no regional mechanism or body that is mandated to certify or introduce such a standard beyond the undergraduate level.

Future Internship numbers and demand for placements

Figure 2 (below) summarises the expected number of graduates from the FSMed, the *Escuela Latino-Americana de Medicina* (ELAM; Latin American Medical School) in Cuba, the UPSM in Lautoka and the OUM in Samoa, all of whom will require internship placements over the coming 6 years.

As it is impossible to predict attrition rates with any certainty, the projection assumes that all current medical students enrolled at each of these medical schools will complete their training and proceed to internship.

FIGURE 2. PROJECTED NUMBERS OF PACIFIC ISLAND COUNTRY MEDICAL GRADUATES ENTERING INTERNSHIP, BY YEAR AND MEDICAL SCHOOL (FNU, ELAM, UPSM AND OUM ONLY)



Note: OUM data exclude non-PIC candidates; data available to 2015 only.

FSMed accepts undergraduates from across the region; it currently has 430 medical student enrolments in all years, drawn from most PICs.

ELAM currently has 191 medical students from 8 PICs: Fiji (7), Kiribati (31), Nauru (7), Palau (6), Solomon Islands (90), Tonga (6), Tuvalu (19) and Vanuatu (25). The first batch of 18 I-Kiribati students will enter the intern workforce in mid-2013, followed by 23 Solomon Islanders and one Nauruan in mid-2014. The first batch of 10 students from Tuvalu will enter the internship in 2015, along with 16 from Vanuatu.

UPSM currently has 176 fee-paying undergraduates enrolled; apart from 7 Solomon Islanders, all are from Fiji. The first batch of 34 Fijians will graduate in 2014; the first Solomon Islands student will graduate in 2015.

The majority of current OUM students are drawn from the domestic Samoan market, with occasional enrolments from other PICs; students from the United States, Australia and New Zealand are also enrolled and, to date, comprise the majority of OUM's 34 graduates. Samoan graduates are able to enter their country's national internship program, while other candidates generally enter a medical workforce outside the Pacific by completing the necessary internship and/or licensure examinations.

Capacity for clinical supervision and mentoring

The two largest PICs, Fiji and the Solomon Islands, have well-trained practising clinicians in almost all of the clinical specialty areas. However, current clinical demands in the Solomon Islands suggest that the existing specialist workforce may struggle to meet the supervision requirements of several consecutive, large intakes of interns over the next 5 years.

Without external support, the proposed new program in Kiribati is likely to place heavy demands on the existing internal medicine and paediatrics specialist teams. It is proposed to engage two expatriate specialists in each of these areas pending the return of trainees currently undertaking postgraduate study in Fiji, while additional support will be provided by FSMed faculty on a fly-in fly-out basis during the establishment phase (i.e. the first two cohorts). Members of the 12 international specialist teams that visit Kiribati each year from Australia, New Zealand

and Chinese Taipei will also be engaged in training activities, as will resident expatriate specialists from Cuba and Chinese Taipei.

Some countries have expressed an interest in expanding their internship programs to cover more specialty areas but were constrained by the lack of qualified clinicians in the area of psychiatry, ENT and ophthalmology. Tonga has ENT as part of its internship program despite the lack of a qualified ENT specialist practising in-country.

It should be noted that very few clinicians, although experienced in their clinical specialty, have been formally trained in teaching, supervision and assessment.

FUTURE CHALLENGES

Volume of graduates and capacity of internship programs

The anticipated increased number of medical graduates currently training through FSMed, ELAM and UPSM will enable many PICs to back-fill vacancies in their medical workforce over a relatively short period of time. The strong emphasis on community medicine in the Cuban program is also well-aligned with the needs of Pacific health systems, which are strongly focused on primary health care. However, these factors also represent the principal challenges to the capacity of internship programs in the region, which must ensure that the medical workforce is “fit for purpose” and “fit to practise”.

The sharp increase in the number of Fijian medical graduates will see the need for internship places to increase to an anticipated 120 by 2018; this includes the need to cater for small annual cohorts of Fijian foreign trained medical graduates currently training outside of Fiji. As a result, the Fiji MoH has closed access to its internship program for applicants from other PICs.

The number of new medical graduates in countries which have historically depended on Fiji to absorb their interns will also increase over the next several years, when medical graduates start to return from Cuba. Kiribati will see the return of its first batch of 18 Cuban-trained doctors in 2013, while in 2015 Tuvalu and Nauru will receive their first batches of 10 and 7 Cuban-trained doctors, respectively. These demands have created the imperative to develop additional places. Although centred on Kiribati for core specialty rotations, the new program will most likely serve as a sub-regional program for the Central Pacific with community and some sub-specialty placements being undertaken in Nauru and Tuvalu for candidates from those countries.

Solomon Islands and Vanuatu will each see a large increase in their junior medical workforces as their graduates return from Cuba. Solomon Islands will receive its first batch of 23 ELAM graduates in 2013, rising to an expected total of 90 by 2018 – more than twice the number of FSMed graduates requiring internship over the same period. Vanuatu currently has 25 medical students in Cuba and 12 at FSMed.

Samoa does not currently send medical students to Cuba, but looks to OUM to meet its pre-registration

medical training needs. Palau and Tonga each has 6 students currently studying in Cuba and have planned to absorb them into their domestic internship program on graduation. It is unlikely that the internship programs in these three countries will have major challenges meeting demand over the next six years, and may even be able to contribute to absorbing overflow demands from other PICs.

The Cook Islands has historically looked to Fiji to provide internship places for its FSMed-trained medical graduates, and may have to re-consider where it would send its future trainees (1 in 2014 and 1 in 2018) if it is unable to negotiate continued access to places on the Fiji program. Historic cultural links and a shared geo-political alignment with New Zealand may create opportunities for Cook Islands graduates to participate in the Samoa program.

RMI is expecting 4 graduates from FSMed in 2018 and, in the absence of a national internship program (and with limited capacity to develop one), may need to look to Palau or Kiribati for intern places.

POLICY IMPLICATIONS FOR THE PACIFIC

Commissioning of medical education and future medical student intakes

The growing role of Cuba in Pacific health sectors – since 2003 in Nauru and 2008 in many other PICs – has occurred under bilateral arrangements between the Cuban and PIC governments. These arrangements are generally negotiated at the level of the respective Ministries of Foreign Affairs or even higher levels of government. The absence of health workforce plans in many PICs means there have been few documentary standards to guide the forward projections of doctor requirements and medical student intakes.

The de-coupling of medical training from national workforce planning needs to be addressed decisively, and country resolutions about the following policy options are needed if foreign-trained medical graduates are to be successfully re-assimilated into national health systems. Ideally, countries that have engaged most strongly with international undergraduate medical scholarship schemes should address these policy issues before considering adding to the number of medical students already in training.

Medical workforce structure and placement of doctors in training

Faced with sharp increases in their numbers of doctors requiring internship and specialty training (including assimilating international medical graduates into the workforce), many PICs will need to make policy decisions related to a potential transition to a doctor-centred primary care workforce. Ongoing supervisory outreach mechanisms will need to be developed for new graduates placed in inland rural areas or the outer islands.

Countries like the Solomon Islands (which has the largest number of students training in foreign medical programs) and Fiji (where there are uncertainties about the alignment between the UPMS and FSMed curricula) are also faced with important policy decisions about their workforce structure.

The principal choice is whether to:

- a) require all medical graduates to complete their national internship program, irrespective of where they undertook their medical degree;

Faced with sharp increases in their numbers of doctors requiring internship and specialty training (including assimilating international medical graduates into the workforce), **many PICs will need to make policy decisions related to a potential transition to a doctor-centred primary care workforce.**

- b) establish licensing examinations for all graduates on completion of an internship program to assure standards; or,
- c) consider establishing a two-tier medical workforce in which graduates from medical schools with primary care-focused curricula are engaged as a separate cadre of “community practitioners” while those from more traditional courses, e.g. those offered at FSMed and UPNG, are absorbed into the hospital system and more conventional medical career pathways.

Kiribati and Tuvalu have chosen to support the entry of all medical graduates into their workforces under the same category, and the Kiribati internship program has been designed to standardise competencies and quality with a view to all graduates potentially being able to achieve general medical registration.

Development of a two-tier workforce risks isolating “community practitioners” from the usual medical career pathways – particularly their eligibility to pursue future training in clinical specialties. Countries that adopt a two-tier system may need to consider developing bridging programs for “community practitioners” who may have had a vision of a career as a fully-registered “doctor” and are considering proceeding to clinical specialisation after completing a period of community service. This approach has previously been piloted in Fiji under a scheme that developed a cadre of community practitioners distinct from the broader medical workforce.

The adoption of regional competency standards and accreditation of internship programs would facilitate both the eligibility of trainees from the new internship programs in the region to apply for postgraduate training in clinical specialties at FSMed and the re-entry of “community practitioners” into the mainstream medical workforce.

Many PICs have well-established cadres of medical assistants and nurse practitioners working in community settings (see: *Expanded and extended health practitioner roles: A review of international practice*). Placing junior medical staff in those same settings will require clear definitions of roles and scopes of practice, without which there is a risk of displacement, marginalisation or even redundancy of non-medically qualified community practitioners.

Implications for internship program structure

The Solomon Islands and Vanuatu are among a group of 5 PICs that currently have the greatest per capita exposure to undergraduate medical training schemes, both within and outside the region’s usual pathways (the others being Kiribati, Nauru and Tuvalu).

The current Solomon Islands and Vanuatu internship programs have longer durations than other programs in the region, mainly because all graduates are expected to be competent across a range of practice – including the core clinical specialties and anaesthetics – to prepare them for more autonomous roles in resource-limited areas. Successive large groups of interns entering the two-year programs in both countries will create a one-year overlap between cohorts and place significant demands on supervisory capacity and access to the case numbers and clinical mix of patients necessary to ensure adequate experience.

Given the likelihood that several new graduates will be co-located in provincial centers after completing their internship, both countries will need to analyse their models of care and referral patterns to determine whether all graduates need to be competent in all areas covered by the current programs. A more generalist core internship program might potentially lead on to a second residency year with a choice of different sub-specialty attachments; this might be designed to prepare different sub-groups for a generalist role, but with responsibility at

a pre-specialist level in the procedural disciplines (i.e. surgery, anaesthesia and O&G).

Direct and indirect costs

Finally, a large increase in the number of doctors may saturate available positions within the medical workforce establishment and consume recurrent budgets. Many PICs offer doctor salaries that are low by comparison within the region and, in particular, with more developed Pacific Rim countries like Australia and New Zealand or the United States and French Pacific territories. However, those same PIC economies have limited fiscal space to expand their health workforce. Direct costs like doctor salaries, accommodation allowances and participation in CPD may place health budgets under increased stress, to the point where not all new graduates can be employed.

Indirect costs associated with an expanding medical workforce will include increased prescribing of pharmaceuticals, increased use of medical imaging and laboratory services, and a risk of an increase in referrals from remote and outer island settings where cases are beyond the capability of junior medical staff to manage. These risks may be partially – but not completely – mitigated by improved standards of mentoring and supervision (including through outreach from referral centres) and the increased use of internet-based technologies for CPD and tele-medicine support.

The PICs that are likely to experience the greatest expansion in their junior doctor workforces will need to undertake careful modeling and projections of the impact on their health budgets and forward estimates of health expenditure.

CONCLUSIONS

Completion of a structured, supervised medical internship allows new medical graduates to consolidate and apply their clinical knowledge and skills, to learn to take increasing responsibility for the provision of safe, high quality patient care, and to develop a sound, professional approach to managing a range of clinical conditions and situations.

The number of medical graduates entering Pacific health systems over the next 7 years presents an opportunity for many countries to back-fill long-standing vacancies in their medical workforces. In particular, the strong focus of the Cuban curriculum on primary and preventive health care and community practice is clearly aligned with the priorities articulated in all PIC national health strategic plans; PICs can capitalise on this to improve access for communities to primary medical care.

Supervisory and capacity constraints in existing internship programs will challenge the ability of many countries to manage the assimilation of international medical graduates into their workforces in a way that both ensures quality standards and is phased to meet the timing of graduation of successive cohorts of medical students.

Policy decisions are also needed to guide the future development of medical workforces in a way that provides adequate support for doctors in training, prevents displacement of existing cadres of community practitioners, and protects the future career choices of new medical graduates. Careful analysis of direct and indirect costs and financing options is also required.

The establishment of regional competency standards for entry-level medical practitioners would help to align new internship programs with existing ones and ensure access to postgraduate clinical training.

Supervisory and capacity constraints in existing internship programs will challenge the ability of many countries to manage the assimilation of international medical graduates into their workforces in a way that both ensures quality standards and is phased to meet the timing of graduation of successive cohorts of medical students.

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