Doctors are a vital part of the Pacific health workforce but there is under-supply in rural, remote and outer island settings and in some specialities. Historical models of medical education and training are being challenged by demographic and healthcare needs, changes in medical education provision and rising numbers of overseas-trained medical graduates returning to the region. System-wide interventions and a regional approach to providing more formal and structured medical education will help to ensure that the medical workforce is trained appropriately to meet Pacific people’s health needs.

The continuum of medical education and training?
Broadly, four distinct stages exist in medical education and training:
- Undergraduate – typically delivered by universities in collaboration with health providers.
- Early postgraduate (e.g. internship), where the newly qualified doctor works under close supervision.
- Specialist postgraduate training where the doctor trains for a particular specialty or career (e.g. surgery, family medicine).
- Continuing professional development and updating.

Undergraduate medical training

Curriculum models
Two main models exist, although within them a range of teaching and learning approaches are displayed; these are:
1) ‘Traditional’ programs of between 5 and 7 years, primarily for school leavers.
2) Graduate entry programs of 4-5 years for entrants with a university degree or a health professional qualification (e.g. US and Canada).

More recently (e.g. in Australia), there has been a move towards providing master level basic medical and other health professional programs instead of bachelor level. In many countries there has been a shift from the traditional preclinical (i.e. biomedical sciences) + clinical (apprenticeship based) model towards more integrated programs where biomedical and behavioural sciences are learned in the context of clinical practice, early clinical experience is common and students gain experience in primary as well as secondary care.

Selection
Increasing attention is being paid to how students are selected for medicine. The trend is moving away from simply selecting on the basis of academic ability and towards assessing communication, motivation, resilience and suitability for coping with a pressured and changing environment. A wide range of selection methods and assessors (e.g. via multiple mini interviews (MMIs)) are now being used.

Teaching, learning and assessment
Schools typically use a range of learning approaches which mix large and small group learning, e-learning and clinical practice. Problem based and case based learning are commonly used across the world as a means of situating learning in clinical practice.

Assessments are also more varied, including:
1) Knowledge based – written tests, multiple choice, essays, projects.
2) Practical skills and procedures – the Objective Structured Clinical Examination (OSCE) is widely used, as well as work place based assessments (WPBAs).
3) Professional practice – WPBAs and OSCEs, multi-source feedback, portfolios.

Postgraduate education and training
Internationally, effective postgraduate education is highly structured with clear definition of standards, outcomes and
competencies delivered by trained supervisors and measured by a wide range of assessments.

**Internship**
The period immediately after initial licensing/registration (typically one or two years) is a key period of transition during which the new doctor requires close supervision and a structured training program. The program usually comprises a series of clinical placements in which the doctor gains experience of working more independently in a range of generic specialties, e.g. general medicine, family medicine, mental health, so they are prepared for more independent practice or specialty training.

**Speciality training**
Each specialty has its own national defined curriculum (sometimes internationally, as in the case of the Australasian professional colleges), outcomes, competencies, standards and assessments administered by professional bodies. Speciality training ranges from 3-10 years (depending on specialty) after which the doctor is deemed to be an independent practitioner.

Training posts are usually closely tied to workforce planning.

**Continuing professional development**
Once qualified and registered in their field, doctors are subject to engaging and evidencing continuing professional development (CPD) or medical education (CME) to keep up-to-date with evolving knowledge and techniques and to ensure safe practice. Increasingly, evidence of CPD participation is a requirement for re-licensing; this is typically undertaken on a 3-5 year cycle, sometimes involves examinations, but generally is carried out using a portfolio of evidence.

**Medical education in the Pacific**
Two schools in the Pacific (the Fiji School of Medicine at FNU and the School of Medicine and Health Sciences at UPNG) have provided undergraduate and postgraduate medical education across the region for many years. More recently, a new private school in Fiji and a school in Samoa funded collaboratively between a private provider and government have been established.

No common accreditation model or defined graduate outcomes exist, although all schools are working towards World Federation of Medical Education standards. Curriculum models vary (including Problem Based Learning), but there is no graduate entry program and little training for clinical teachers and supervisors.

Most students are funded through government or donor provided scholarships and many now study outside the region in countries as diverse as Georgia, Morocco and Cuba. Scholarships are often not linked with workforce needs. Attrition is relatively high. There is no regional internship training program or agreed competencies, and no regional system for assessing and assimilating overseas trained doctors into the Pacific's health systems. Postgraduate medical training is only provided at the University of Papua New Guinea (UPNG) and Fiji National University (FNU).

**Policy implications for the Pacific**
Based on the international evidence and regional trends, Pacific Island countries (PICs) would benefit from:

1. Aligning scholarship and educational commissioning systems with workforce planning and fiscal potential, so as not to impact adversely on health budgets.
2. Greater alignment of undergraduate medical education and postgraduate training with workforce planning, both within and between PICs.
3. Different curriculum models (such as graduate entry) to enable career progression into medicine for health professionals from other disciplines, or for new roles.
4. Defining common training standards, outcomes and competencies across the Pacific region (the 'Pacific doctor') at each stage of training to ensure Pacific doctors are 'fit for practise' and 'fit for purpose' given epidemiological transitions to non-communicable diseases (NCDs) and the reinvigoration of primary health care.
5. Ensuring curricula, teaching and learning methods and assessments enable achievement of the defined outcomes at key stages of medical education and training, and that learners gain sufficient experience of relevant specialities or topics (e.g. NCDs, tuberculosis, malaria) and health contexts (e.g. primary / remote area health care).
6. Review of program accreditation, regulatory and licensing mechanisms to reflect international best practice, ensure minimum professional standards and to facilitate mobility across the region to practice in areas of need.
7. A common, agreed scheme of postgraduate training which includes structured internships and specialty training programs.
8. Regulatory and licensing systems clearly defining scopes of practice relative to other cadres of health professionals and to facilitate the assimilation of overseas trained doctors into the workforce.
9. Designing training programs to equip practitioners to work in these defined scopes of practice.
10. Establish medical education training programs for academics, clinical teachers, and postgraduate supervisors, mentors and managers to facilitate learning and ensure a high quality education and training system.

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