Strategic intelligence

REGULATION AND LICENSING OF HEALTHCARE PROFESSIONALS: A REVIEW OF INTERNATIONAL TRENDS AND CURRENT APPROACHES IN PACIFIC ISLAND COUNTRIES

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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CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS

AAMC	Association of American Medical Colleges
ABMS	American Board of Specialties
ACME	Accreditation Commission of Midwifery Education
ACGME	Accreditation Council for Graduate Medical Education
AHPRA	Australian Health Practitioner Regulation Agency
AMA	American Medical Association
AMC	Australian Medical Council
AMCB	American Midwifery Certification Board
ANMAC	Australian Nursing and Midwifery Accreditation Council
BoN	Boards of Nursing
CACMS	Committee of Accreditation of Canadian Medical Schools
CAMC	Caribbean Association of Medical Councils
CARICOM	Caribbean Community
CMA	Canadian Medical Association
CMRC	Canadian Midwifery Regulators Consortium
CMRE	Canadian Midwifery Registration Examination
CMSA	Canadian Medical Schools Association
CMP	certificate maintenance program
CPD	continuing professional development
ECFMG	Educational Commission for Foreign Medical Graduates
EEA	European Economic Area
EU	European Union
FSMB	Federation of State Medical Boards
GMC	General Medical Council
IMED	International Medical School Directory
IMG	International Medical Graduate
LCME	Liaison Committee on Medical Education
LMCC	Licentiate of the Medical Council of Canada
MCCEE	Medical Council of Canada Evaluating Examination
MCNZ	Medical Council of New Zealand
MCQE	Medical Council of Canada Qualifying Examination
MEAC	Midwifery Education Accreditation Council
NARM	North American Registry of Midwives
NBME	National Board of Medical Examiners
NCLEX-PN	Licensure Examination for Practical Nurses
NCLEX-RN	Licensure Examination for Registered Nurses
NCNZ	Nursing Council of New Zealand
NCSBN	National Council of State Board of Nurses
NLC	Nurse Licensure Compact
NMBA	Nursing and Midwifery Board of Australia
NMC	Nursing and Midwifery Council
OSCE	Objective Structured Clinical Examination
PIC	Pacific Island country
RCPS	Royal College of Physicians and Surgeons
USMLE	United States Medical Licensing Exam
WFME	World Federation of Medical Education
WHO	World Health Organization

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.

SUMMARY

The process of registration and licensing is designed to protect the public from harm perpetrated by incompetent health care workers, particularly those in the private sector over whom there is little or no administrative oversight. This review describes international trends and approaches to regulatory and licensing systems and the integration of overseas trained healthcare professionals, including international medical graduates. It is prepared to inform a series of "Evidence and Policy Options" papers currently being developed by the Human Resources for Health Knowledge Hub (HRH Hub) at the University of New South Wales.

The review draws upon examples from countries whose cultural and geographical background may be of relevance and interest to the future development and strengthening of accreditation and licensing in the Pacific Island countries (PICs).

Common trends identified from the review include:

- Two broad models/types of licensing/registration are in common use: 1) based on education certification by the training institution and 2) based on national or regional examination. Choices between them are largely dependent on a country's geographical/regional affiliations and political and administrative structures.
- Most countries have clearly defined standards or competencies that professionals wishing to be admitted to the register (or part of it) have to achieve.
- Many countries have reciprocal agreements that allow for the free movement of doctors and other health professionals from other countries provided they have graduated from a government registered education provider.
- Outside of these reciprocal agreements, overseas-trained healthcare professionals are typically required to take specific licensing examinations prior to being admitted to the register, or to take modified versions of the same existing licensing examinations as domestic graduates.
- The licensing of qualified healthcare professionals is usually associated with fees, payable by the individual. Most countries operate a graded system whereby payment is required for each step along the career/registration process. Where licensing exams are required, fees are associated with each sitting of these. Where separate fee-paying arrangements exist for overseas-trained graduates, the fees required are generally higher than for locally trained graduates.
- Current practices in PICs vary, but most countries have their own registration and licensing system for doctors, nurses and midwives coordinated by the relevant councils (typically Medical and Dental Council and Nursing and Midwifery Council).
- Some PICs have additional councils for pharmacists, scientists and allied health professions but these are in the minority.

The process of registration and licensing is designed to protect the public from harm perpetrated by incompetent health care workers, particularly those in the private sector over whom there is little or no administrative oversight.

The review of trends and approaches towards regulation and licensing suggests a number of areas with potential relevance to PICs:

1. Collaboration between geographically disparate states/countries to facilitate –
   a. common standards, systems and licensing requirements;
   b. mobility of healthcare professionals across borders.
2. Automatic/simplified registration and visa requirements for healthcare professionals who currently have a licence to practise in countries with well-established systems of accreditation, licensing and registration.
3. Establishment of a cultural acclimation program for international medical graduates (IMGs) including a test of the relevant language of clinical practice.
4. Use of limited registration/licensing to address "Areas of Need".

INTRODUCTION

This paper is structured in five parts.

1. An overview of the standard definitions and the contextual challenges in the regulation and licensing of healthcare professionals.
2. The international evidence, drawn from three continents largely focuses on examples from North America (USA + Canada), Australasia (Australia and New Zealand) and Europe (United Kingdom). It considers how governments define, establish, fund, implement and evaluate regulatory and licensing systems for doctors, nurses and midwives with consideration of how overseas-trained healthcare professionals are licensed.
3. Consideration of 'regional' models (European Union and the Caribbean).
4. The funding of regulation and licensing.
5. Some of the current practices in the Pacific Islands.

This leads to a discussion and some initial conclusions with relevance to the future regulatory and licensing mechanisms in the PIC.

Healthcare challenges

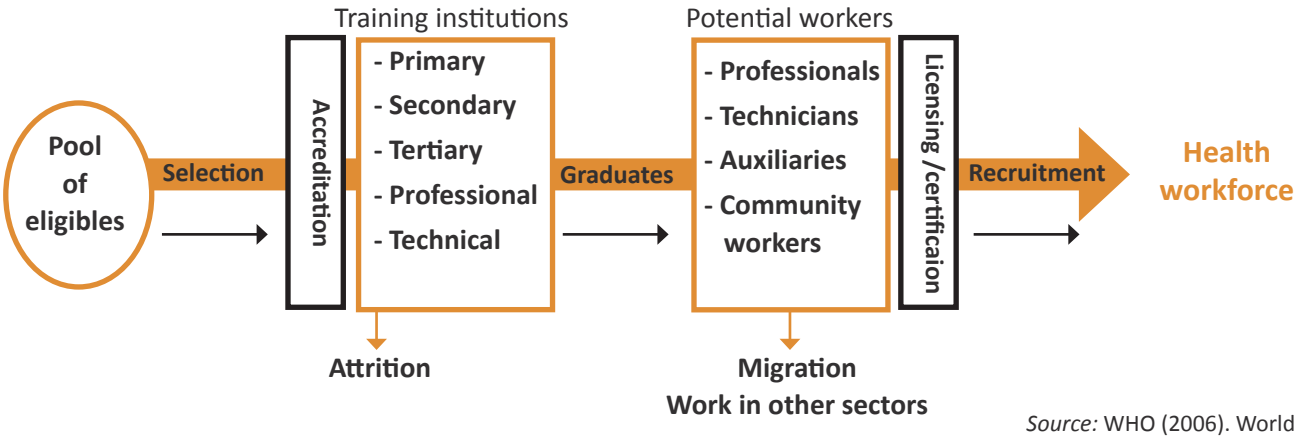
Developing a workforce of health professionals that is empowered by knowledge and skills, as well as motivated and supported by adequate policies, is essential both at the national and global level in order to create effective, efficient, safe, sustainable healthcare systems able to deal with current and future challenges [1, pp.xv].

In order to provide effective, safe healthcare, the 1 million new doctors, nurses and midwives who graduate each year need to be regulated; typically through the awarding and extending of a licence to practise. Particularly relevant to PICs, the increased mobility of healthcare professionals who wish to practise in a country other than the one in which they were trained gives additional challenges, as resources and standards vary considerably from country to country.

Meeting these challenges is essential to guarantee the ongoing quality of the healthcare workforce (fitness for purpose) as well as the quality and safety of the care they provide (fitness for practice) [2–4]. In line with these demands, some national and regional standardisation is emerging. For example, the World Federation of Medical Education (WFME), in collaboration with the World Health Organization (WHO) has developed global standards for medical education (basic, postgraduate and continuing professional development) and for accreditation of medical schools and international graduates [5,6]. In the European Union, European Parliament Directive 2005/36/EC sets common standards for education and recognition of health professionals across member states [7].

Figure 1 below sets out the processes and responsibilities of different organisations at various stages of education and training of the health workforce in relation to licensing/registration.

FIGURE 1. PIPELINE TO GENERATE AND RECRUIT THE HEALTH WORKFORCE



Source: WHO (2006). World Health Report [8]

COUNTRY FINDINGS

North America: United States and Canada

Context: North America (United States and Canada) has a total of 183 medical and 65 public health schools [8] for a total population of approximately 350 million [9]. There are 815,006 doctors and 3,275,499 midwives and nurses [10]. The structures and processes in North America typify licensing and regulation processes in many developed countries, including those in the European Union, Australia and New Zealand.

Medicine

Licensing of doctors in the USA and Canada requires successful completion of a three-part examination that can only be taken by students enrolled in accredited medical programs. However exceptions may be made for students from unaccredited medical schools in the USA or Canada, who might be eligible for the United States Medical Licensing Exam (USMLE) process if they are sponsored by a licensing authority (state medical board) and meet all the criteria requirements for licensing apart from the examination [11].

To be able to practise medicine in the USA students must pass all three stages of the USMLE. The Federation of State Medical Boards (FSMB) and the National Board of Medical Examiners (NBME) sponsor this exam.

USMLE step 1 is usually taken within the first three years of the medical degree and has an emphasis on knowledge of the basic biomedical sciences and the application of this knowledge to explain principles and mechanisms of health, disease and therapy [11].

Step 2 assesses knowledge application to clinical practice, clinical sciences, patient-centred care and clinical skills. This exam is designed to test that the candidate has the skills necessary to provide safe care to patients under supervision [11].

Step 3 tests the ability to apply biomedical and clinical knowledge, use appropriate skills to provide unsupervised care to patients, with a special focus on ambulatory settings. The USMLE program recommends the third step to be taken after completion of at least one year of postgraduate medical training, however, requirements and regulations related with this step vary between state medical boards [11].

The USMLE system does not automatically award licences to practise. The system only provides the different regional (state) licensing boards with a standard assessment of students' knowledge and skills at a national and regional level. The USMLE results are reported to those authorities and it is their responsibility to define the rules, regulations and required scores to pass the USMLE steps in order to obtain a licence in their jurisdiction. This is equally valid for Canada.

Alternatively, USA and Canadian medical students who wish to obtain a Licentiate of the Medical Council of Canada (LMCC) can sit the Medical Council Canada Evaluating Examination (MCCEE), and the Council's Qualifying Examination (MCQE) part I and part II.

The MCCEE is a generic test of knowledge and basic principles of medicine, similar to USMLE step 1. Part I is a one-day computer-based assessment of graduates for entry into supervised practice and postgraduate education. Part II is an Objective Structured Clinical Examination (OSCE) aimed at medical licensing and ability to practise independently [12].

Nursing

After successful completion of a state-recognised nursing program graduates are required to pass one of two exams by the National Council of State Board of Nurses (NCSBN), the Licensure Examination for Registered Nurses (NCLEX-RN) or the Licensure Examination for Practical Nurses (NCLEX-PN).

These national examinations ensure that the graduates from nursing schools have the necessary knowledge and skills to enter the nursing profession and are used by the regional BoN to make decisions on licensing of professionals [13]. Although these decisions are currently made on a regional basis, a tendency towards a definition of national standards is emerging regarding a new model to be implemented in accreditation of undergraduate programs by 2020. (See HRH Hub companion paper on program accreditation).

In Canada, the process is similar, each province or territory licenses nurses within each individual jurisdiction [14]. As in the USA the Canada Nurses Association (CNA) developed and manages a national exam, Canadian Registered Nurse Examination (CRNE), to help the different authorities make decisions on licensing [14].

BOX 1. NURSE LICENSURE COMPACT

Case Study: Nurse Licensure Compact (NLC)

Historically, the 50 states comprising the United States of America have had strong separate political and cultural identities. This has meant that the accreditation and licensing of healthcare professionals has included significant state-specific elements, limiting their mobility between states.

A recent innovation which could provide useful guidance for PICs has been the development, in the USA, of the Nurse Licensure Compact (NLC), a process which allows for 'mutual recognition' of nursing licences between member states. 24 states are currently part of the program and nurses who obtain a licence to practise in a member state are automatically able to practise in other member states, providing they are a resident of the state in which they obtained the licence.

Source: NCSBN Website [internet] 2012 [cited 2012 May]. Available from: https://www.ncsbn.org/nlc.htm

Midwifery and nursing-midwifery

As in nursing, graduates must sit an examination prior to licensing, administered by the American Midwifery Certification Board (AMCB) [15]. The board runs two exams, a nursing-midwifery and a midwifery exam, which provide a certification of quality for those entering practice, and all approved individuals are automatically enrolled in a certificate maintenance program (CMP). If the CMP requirements are not completed by the end of the five-year cycle, certification lapses, and no new certificate is issued.

As in nursing education, although the exam is national, the criteria for licensing decisions are variable according to the state of registration [16]. Additionally for midwives it is possible to register with the North American Registry of Midwives (NARM) [17] .

There are seven midwifery education programs available in Canada, each program administers exams recognised by their respective provincial regulatory bodies [18].

Additionally, the Canadian Midwifery Regulators Consortium (CMRC), a network of midwifery regulatory authorities, works as the advisory body for the local authorities, defining national standards, models of practice, advising government on legal issues, facilitating communication between different authorities and midwife mobility between provinces [19].

Also it is the responsibility of the CMRC to develop and administer a Canadian Midwifery Registration Examination (CMRE), which is the national examination for entry to practise, recognised in some of the provinces.

Overseas-trained doctors

Overseas-trained doctors or international medical graduates (IMGs) comprise ~25% of the physician workforce in the USA [20]. Graduates from universities other than those in the USA or Canada can apply for licensing in either of these countries. Two credentialing pathways exist:

1. Graduates may apply for certification by the Educational Commission for Foreign Medical Graduates (ECFMG), which will confirm their identity, personal details and enrolment in/ graduation from a medical school listed in the International Medical School Directory (IMED). Candidates must pass the USMLE Steps 1 and 2, after which a certificate is issued to allow the candidate to apply for postgraduate training in the USA (which includes the USMLE Step 3) [20].
2. Graduates may have their credentials approved by the Medical Council of Canada, successfully complete the MCCEE and MCQE part I and then register for postgraduate medical training.

BOX 2. EDUCATIONAL COMMISSION FOR FOREIGN MEDICAL GRADUATES (ECFMG) ACCULTURATION PROGRAM

Case Study: Educational Commission for Foreign Medical Graduates (ECFMG) Acculturation Program

Accreditation, licensing and registration are only one part of the transition process for overseas doctors. There are often enormous cultural differences to adjust to and these may have a significant impact on the practice of overseas doctors – obvious examples include cultural differences in attitudes towards gender, sexual orientation, mental health, contraception and end-of-life arrangements.

Cultural differences may impact the life of doctors outside of their practice and so provide an additional barrier to their successful assimilation into the workforce. In the USA, the body responsible for the management of international medical graduates (the ECFMG) also runs an acculturation program, providing resources to facilitate cultural acclimation and thereby address these issues.

Source: [21]

Overseas-trained nurses and midwives

In the USA, eligibility for the National Council of State Board of Nurses exams and subsequent registration is defined state by state by the BoN. Both overseas-trained nurses and midwives are advised to contact the BoN, provide proof of credentials and seek advice. If they are considered eligible then they take the NCLEX-RN/PN to become registered or practical nurses. Overseas-trained midwives can then apply for retraining in an American College of Nurse-Midwives accredited program [16].

In Canada, a program has been created to help international midwives register for practice in the country. The Multi-jurisdictional Midwifery Bridging Project (MMBP) is a nine-month program based on the International Midwifery Pre-registration Program (IMPP) provided by Ryerson University's (Toronto) G. Raymond Chan School of Continuing Education [19].

United Kingdom

Context: The United Kingdom (UK) has 45 medical schools [22], 166,006 qualified doctors and 631,201 nurses and midwives (in 2010) for a total population of 62,262,000 [23].

Medicine

The General Medical Council (GMC) is responsible for the accreditation of undergraduate and postgraduate medical programs, licensing of newly qualified medical students and revalidation of medical professionals. Registration is a two-part process. Graduates are granted 'provisional registration' on successful completion of a GMC accredited medical program. They then undertake one year (the F1 year) of postgraduate training/work, which, if completed successfully, leads to full registration.

The GMC is both the licensing/registration body and the accreditation body of medical schools in the UK. As it serves both roles, consistency between standards for medical school education/outcomes and national requirements for entering the professions can more easily be achieved.

Therefore, contrary to the system in the USA and Canada, no national exam upon graduation is required before graduates from UK medicals schools apply for provisional registration with a licence to practise [24].

This provisional licence has no time period, although a 2012 GMC consultation has suggested that a three-year time limit be imposed for Foundation trainees, and a 'stop the clock' mechanism for trainees with domestic or health issues. However, the licence does limit the type of activities and employment that the holder can apply for (only *locum* posts, approved by the medical school as part of the foundation training program) and a fee is required to hold the provisional licence after two years.

After the first year of postgraduate medical education, medical trainees must complete a certificate of experience to submit to the medical school or deanery, along with a form that certifies their competency as F1s. Medical school or deaneries make this information available to the GMC; to be added to the candidate's online application. The candidate must also answer a set of questions regarding their own conduct and health records ('fitness to practise').

Once those are completed, application for full registration is complete, and those holding full registration are considered to have the necessary knowledge and skills to practise medicine in the UK [24].

In 2012, the GMC introduced a new revalidation process under which all currently registered doctors must regularly demonstrate their fitness to practise and that they are up-to-date in all areas in which they work (clinical practice, education, leadership/ management and research). The revalidation process is closely tied to annual formal appraisal processes which are carried out by the employing organisations.

Nursing and midwifery

All students graduating from a UK Nursing and Midwifery accredited program can register with the NMC by submitting an application form. Comprehensive standards are defined by the NMC for all scopes of practice and stages of education and training which have to be met. The NMC will then carry out a credentialing check of the information provided and if all is in order will issue the registration [25].

Nurses and midwives are required to maintain registration by engagement in the 'Prep' process which requires 450 hours of registered practice and 35 hours of learning activity (continuing professional development) in the previous three years. The practice standard can be met through administrative, supervisory, teaching, research and managerial roles as well as providing direct patient care [25].

Overseas-trained doctors

Overseas-trained doctors have to register with the GMC. Evidence of qualifications has to be provided. Based on European Union Directive 2005/36/EC almost all European qualifications will be eligible for an equivalent certification in the UK [24].

For non-European Union doctors there are three possible routes into licensing for practising in the UK: (1) the Professional and Linguistic Assessments Board (PLAB) test, (2) acceptable postgraduate qualifications from a UK medical Royal (Specialty) College or (3) 12-months work in an approved practice which agrees to sponsor the candidate through the process of licensing. In the latter case the candidates can only practise in that specific setting and not anywhere else until they are given a full registration with licence to practise in the UK [24].

Overseas-trained nurses and midwives

For all EU/EEA-qualified nurses and midwives, automatic registration is possible only if the candidate holds a qualification listed under the same category from their training country.

For all other candidates, including from non-EU/EEA countries, a registration pack must be filled in and returned for assessment by the NMC.

Australia and New Zealand

Context: Australia has 19 medical schools registered in the IMED database [22], 62,800 qualified doctors and 201,300 nurses and midwives (in 2009) [26] for a total population of 22,893,487 [27]. As in the UK, Australia has two main types of undergraduate medical programs - entry level for people who have just completed secondary education or graduate entry programs. New Zealand has 2 medical schools registered in the IMED database [22], 11,412 qualified doctors (in 2010) and 44,491 nurses and midwives (in 2007) for a total population of 4,433,890 [28].

Medicine

The Australian Medical Board (AMB) awards five types of registration: (1) General, (2) Specialist, (3) Provisional, (4) Limited, and (5) Non-Practising:

1. **General** registration certifies that individuals have the necessary knowledge and skills to practise autonomously in Australia. It requires the completion of both undergraduate and postgraduate training.
2. **Specialist** registration is awarded to those who have been assessed by an Australian Medical

Council (AMC) accredited specialist college. Limited registration can be awarded to those who qualify from a medical school outside Australia or New Zealand.

3. **Provisional** registration is awarded to a graduate of an approved undergraduate medical degree in Australia or New Zealand. This licence, similar to that given to UK graduates by the GMC, allows graduates to proceed with postgraduate medical training, working only in approved training positions (intern). This licence is also given to international medical graduates holding AMC certification, allowing them to work for a period of 12 months in a supervised training position until they qualify for full registration.
4. **Limited** registration is the type usually awarded to international medical graduates and is broken down further into four sub-types dependent on purpose: Postgraduate training or supervised practice; Area of Need; Public interest, and; Teaching or research. The 'Area of Need' category, as the name suggests, allows for individuals to practise in Areas of Need if they have the necessary expertise in that particular area but not in all areas required for general or specialist registration. This licensing category is particularly used to fill workforce gaps in rural or remote areas and is associated with requirements for supervision and development.
5. **Non Practising** registration is for those who are not currently practising in Australia but might want to keep their registration.

It also offers a 'student registration' which is automatic if the students are enrolled in an AMC approved program.

The Medical Council of New Zealand (MCNZ) is responsible for granting licences to practise in New Zealand. Its functions and responsibilities and types of registration awarded are similar to those of the AMC [29].

Nursing and midwifery

In Australia, the Nursing and Midwifery Board of Australia (NMBA) is responsible for licensing nurses and midwives who wish to practise in those countries, for developing standards for the profession, assessing overseas professionals and accrediting courses.

The NMBA works at the national level, defining policies and standards, while state and territory boards make decisions about the registration of nurses and midwives in their specific regions. The NMBA grants four types of registration – general; limited; non-practising, and; student registration [30].

The Nursing Council of New Zealand (NCNZ) has similar responsibilities to the NMBA [31]. Registering as a nurse in New Zealand involves a letter of support from the head of school of nursing at the institution at which an applicant studied, two references and a declaration of communication skills and motivation [31].

Overseas-trained doctors

The AMC is responsible for assessing the knowledge, skills and quality of previous training of doctors trained in other countries who wish to practise in Australia.

This process can follow three alternative routes to certification depending on where the undergraduate medical training took place, whether or not the institution of training has similar standards (AMC-approved) and the level of training (graduate, specialist) of the candidate.

- Competent authority pathway, for those who qualified from a university listed in the IMED or an AMC-approved authority (example: UK universities recognised by the GMC). Candidates must have been approved and provide evidence of qualifications. Successful applicants are then required to work under supervision in an AMC accredited training placement (provider) while undertaking a workplace-based assessment. After this period, and following a recommendation from the supervisor, an AMC certificate can be awarded to the candidate allowing for registration with the Australian Medical Board.
- Standard pathway is for non-specialist international medical graduates who do not qualify for the competency authority pathway. It requires the candidate to be assessed by a multiple choice question (MCQ) examination and a clinical examination or a workplace-based assessment (CAT and AMC clinical examination) with one of the AMC accredited authorities.

- Specialist pathway: Specialists from other countries can apply for certification choosing one of three options:
    1) Specialist recognition, consisting of a verification/assessment of previous qualifications.
    2) 'Areas of Need', this pathway allows specialists not holding a formal certification in the specialty being assessed to be offered a job as a specialist in an Area of Need.
    3) Specialist-in-training application: For medical specialists who have been awarded a medical qualification by a university listed in the IMED and intend to take further training in Australia, and have already secured a relevant training position approved by the Medical Board of Australia.

In New Zealand there are several options for registering for overseas-trained doctors depending on how long they wish to practise in the country. For those wishing to develop a long-term career in the country and wishing to have a specialist registration a vocational pathway is available with four licensing options.

Alternatively those who wish to enter general practice also have four available options. For short-term practice in the country there are special purpose pathways, encompassing seven possible types of licence according to the purpose of the visit [29].

Overseas-trained nurses and midwives

Registration with the NMBA can be achieved by internationally qualified nurses and midwives on the bases of five criteria: (1) Proof of identify, (2) English language proficiency (3) meeting current Australian nursing and midwifery education standards, (4) evidence of having practised as a nurse and/or midwife within a period of time close to the application, and (5) demonstration that there are no health or conduct ('fitness to practise') issues which may affect their ability to practise nursing and/or midwifery in Australia [31].

COOPERATION BETWEEN COUNTRIES

Some models of cooperation between countries exist to develop and standardise regulation and licensing. Two examples are provided below.

Europe: Automatic mutual recognition

The European Economic Area (EEA) was established on 1 January 1994 following an agreement between the member states. In 1999, 29 European countries signed 'the Bologna declaration' to create and adopt a system leading to more comparable degrees within these countries.

Since then efforts have been made to change existing models to fit the new standards and models defined by the Bologna declaration, so that the mobility of qualified professionals in Europe could be made easier for practitioners and regulators [32].

Having comparable degrees with automatic recognition of qualifications between countries, thus removing the need for further costly assessment procedures has clear financial benefits.

The European Parliament and Council of the European Union subsequently approved Directive 2005/36/EC(7) to allow recognition of professionals across borders in the EU/EEA zone and enabled the setting of standards for basic and advanced training of doctors, nurses and midwives across European countries, providing a list of accredited institutions and programs.

Licensing continues to be under the remit of professional bodies within countries/member states, however this directive provides a legal framework for the recognition of EU/EEA zone doctors, nurses and midwives within Europe. It should be noted, however, that concern for ensuring competency in the language of clinical practice is currently entering regulation.

Caribbean: Medical Education

The Caribbean region comprises a group of island nations, each with distinct cultural and political identities. There are two major types of medical school in the Caribbean – 'regional' and 'offshore'.

Regional schools train graduates for the country in which they are located (and for the wider Caribbean). Offshore schools are effectively satellite campuses for foreign universities, usually from the USA. These will not be considered further.

Registration to practise medicine in the Caribbean Community (CARICOM) has, historically, varied from country to country, with most countries having their own medical board. Graduates from accredited schools in the UK, USA and Canada were able to register for a licence, while some Caribbean countries had their own licensing exams.

The Caribbean Association of Medical Councils (CAMC) was formed in 2003 to bring some consistency to the registration process and facilitate movement of doctors across, and into, the region.[1] CAMC examinations were introduced to "assess for registration purposes, the general body of medical knowledge and clinical skills of trained doctors whose basic medical qualifications are not recognised by the regional medical councils, i.e. doctors trained in medical schools that have not been formally reviewed and accredited by the CAMC".

The examinations are conducted bi-annually in April and November by the Medical Council of Jamaica and administered by the Faculty of Medical Sciences at the University of the West Indies (UWI). There is a current proposal by CAMC that all graduates (i.e. including those from accredited medical schools) should pass the exam before being licensed to practise.

CAMC has noted a number of issues with both implementing and administering the examinations and registration of foreign-trained doctors across CARICOM that are of relevance to PICs and the Pacific region. Issues include establishing the association as a legally constituted body, clearly defining the roles of CAMC and the separate National Medical Councils and clarifying the sovereignty of the latter, establishing an intergovernmental agreement to legalise CAMC's licensing role, allocating sufficient resources to the program and issues relating to the establishment of the secretariat.

For the accreditation of educational programs, the Caribbean Accreditation Authority for Education in Medicine and other Health Professions performs a similar role to that performed by the CAMC with licensing and registration, bringing consistency and unity to accreditation.[2]

[1] Further information available at: http://www.camcweb.org/
[2] Further information available at: http://www.caam-hp.org/about.html

FUNDING LICENSING PROCESSES

The regulation and licensing processes described above require a substantial amount of investment in time and resources. The financial costs are largely dependent on the number of candidates, institution or individuals that apply for regulation and licensing, but also on the process and organisation. Therefore making an informed decision on licensing systems requires an understanding of the costs associated with different modalities.

An analysis of the Annual Reports (where available) of the licensing bodies described above was carried out in order to understand the fees charged for these processes and to determine whether or not they have direct governmental funding.

The licensing of qualified healthcare professionals is usually associated with fees, payable by the individual. Most countries operate a graded system whereby payment is required for each step along the career/registration process. Where licensing exams are required, fees are associated with each sitting of these.

Where separate fee-paying arrangements exist for overseas-trained graduates, the fees required are generally higher than for locally trained graduates. See Appendix 1 (page 21) for full details and country-by country breakdown.

REGULATION AND LICENSING IN THE PACIFIC

Current practices in PICs are variable, but most countries have their own registration and licensing system for doctors, nurses and midwives coordinated by the relevant councils (typically Medical and Dental Council and Nursing and Midwifery Council). Some PICs have additional councils for pharmacists, scientists and allied health professions but these are in the minority.

Table 1 (below) lists the registration bodes in each PIC, the workers covered, the frequency and requirements of re-registration.

Many PICs have been working in relative isolation (although often donor-funded) to develop and establish more robust regulation and licensing systems. For those countries with established training programs for health professionals, there is a clear link between program approval/accreditation and initial registration and licensing. Regional and in-country systems for accrediting programs and approving tertiary qualifications are beginning to be agreed, which will provide benchmarks for performance standards on graduation. For example, recent developments by the South Pacific Board of Educational Assessment (SPBEA) in preparing a regional qualifications framework offers the potential for standardisation across the region.

The majority of PICs tend to formally recognise initial qualifications from medical schools listed on IMED and training/qualifications from Medical Royal Colleges and nursing schools from Australasia, the UK/Ireland, US and Canada. Systems for registration and regulation at post-registration level are less consistent than those of initial licensing, particularly for nursing/midwifery, allied health professions and advanced practitioners.

TABLE 1. HEALTH WORKER REGISTRATION BODIES AND REQUIREMENTS IN THE PACIFIC

Country	Registration Bodies	Health Workers Covered	Frequency of Registration / Licensing	Requirements of Registration
Cook Islands	Medical and Dental Council	Medical and Dental Practitioners	Conditional registration for 2 years and then full registration	Conditional registration - Holds a qualification from Australia, Fiji, New Zealand, the Republic of Ireland or the United Kingdom, or a country with an equivalent standard. Full Registration - Conditionally registered or practised as a medical or dental practitioner for not less than 2 years.
	Nursing Council	Registered Nurses, Community Nurses, Nurse Aides, Midwives, Nurse trainee	Annual	Holds a nursing qualification from a recognised training institution.
Fiji	Medical and Dental Council	Medical, dental practitioners; dental therapist; all medical and dental students	Annual	Holds a medical or dental qualification from a recognised training institution. Conditional registration on graduation leading to full after internship. Annual licensing includes a CPD requirement.
	Nursing Council	Nurses, midwives, nurse specialists, nurse practitioners and nursing students	Annual	Holds a nursing qualification from a recognised training institution.
	Medical and Dental Council	Medical assistants (no longer in production)	Annual	Holds an accepted Certificate from Fiji School of Medicine. Although registered by the MDC there is no specific mention of the MA cadre MDC decree of 2010.
	Pharmacy and Poisons Board	Pharmacists	Annual	Passed the final examination of an Institution of an approved Commonwealth country. May be asked to sit an additional examination for the Board.

Country	Registration Bodies	Health Workers Covered	Frequency of Registration / Licensing	Requirements of Registration
Fiji (cont.)	Fiji Radiation Health Board	Medical imaging technologists	Full registration - ongoing; Provisional registration - 3 months; Temporary registration - 24 months	Holds a recognised certificate in medical imaging science from an approved training institution, passed any examination or training if required has proven ability to use relevant equipment. Licence issued by the Fiji Society for Medical Imaging Technologists Council.
Kiribati	Kiribati Medical Council	Medical officers	Not specified	Successfully completion of a university course in medical and surgical study at a university or institution approved by the Medical Council and has completed one year's training as an intern or resident at a hospital
	Kiribati Nursing Council	Nurses and midwives	Not specified	Holds a recognised qualification by an approved institution, is a registered nurse or midwife in another country with an equal or higher training standard, has an approved special qualification.
	Pharmacy and Poisons Board	Pharmacists	Not specified	Passed the final examination of an institution of Great Britain or Northern Ireland, or another approved state.
Marshall Islands	Board of Health Professions	All health workers	Biennial	Registration for nurses: Complete a nursing course from CMI or approved institution, pass a skills checklist, pass a Board-set examination, reference letter from a nursing school instructor. No available information for medical practitioners or other.
Federated States of Micronesia	MoH Committee headed by Secretary Health	All health workers	Ongoing	Approval of qualification and experience endorsed by the Secretary of Health.
Nauru	Health Practitioners Registration Board	Medical practitioners, dentists and nurses	Ongoing	Holds approved qualification or experience, will practice in Nauru to the benefit of the Nauru community.
Niue	There is no specific legislation for registration of health workers and no registration councils.			
Palau	Board of Health Professions	Doctors, allied health and environmental health workers	Annual	
Papua New Guinea	Medical Board	Medical practitioners, dental practitioners and allied health staff	2 years provisional, then full registration. Annual licensing	Provisional registration - Completed a medical/ dental degree from UPNG or recognised university. Full registration - held provisional registration for 2 years, practised full time at a hospital or health facility, completed medical/dental degree at a recognised overseas university.
	Nursing Council	Registered nurses, enrolled nurses and nurse aides	Annual	Provisional registration - Completed a training program from UPNG or a recognised university. Full registration - completed a Council approved program, held provisional registration and proved qualifications to practice.
Samoa	Medical Council	Medical practitioners	Annual	Hold a qualification from a recognised institution, good character, has practical experience as required by the Council.
	Nursing and Midwifery Council	Registered nurses, enrolled nurses, specialist nurses and midwives	Annual	Hold a qualification from a recognised institution, good character, has practical experience as required by the Council.
	Allied Health Professional Council	All allied health staff	Annual	Holds a practising certificate, holds minimum competencies set by the council. Required to maintain and upgrade competence by participating in ongoing professional education.

Country	Registration Bodies	Health Workers Covered	Frequency of Registration / Licensing	Requirements of Registration
Solomon Islands	Medical and Dental Board	Medical and dental practitioners		Holds recognised qualifications, good character, fit and proper person to practise.
	Nursing Council	Registered nurses, midwives and auxiliary nurses	12 month probation, then full registration for life	2 step process: Part A - Complete Diploma in Nursing from SICHE, 12 month probation program. Part B - Full registration upon completion of probation program.
	Pharmacy and Poisons Board	Pharmacists		Passed final examination of the Pharmaceutical Society of Great Britain or Northern Ireland or another qualification approved by the Board, above the age of 21 years.
Tokelau	No councils exist			There is no specific legislation for registration of health workers
Tonga	Medical and Dental Practice Board	Medical and Dental Practitioners, Health Officers, Dental therapists	Annual	Holds an approved qualification.
	Nurses Board	Registered nurses, midwives, nurse practitioners	Annual	Holds an approved qualification.
	Pharmacy Board	Pharmacists, Pharmacy Assistants	Annual	Holds an approved qualification.
Tuvalu	Medical and Dental Register	Medical and Dental Practitioners, Nurses, Midwives		*Doctor:* Conditional registration – holder of an approved qualification; Full registration – conditionally registered and more than 1 year of practical experience in an approved institution or hospital; or eligible for conditional registration and has experience outside Tuvalu for 1 year in an institution or hospital of equal standard; or eligible for conditional registration and practised medicine and surgery for 5 years continuously from date of receiving his/her qualification. *Dentists:* Approved qualification. *Nurses and midwives:* Approved training and examination and has good character or has approved special qualifications
	Register of Pharmacists	Pharmacists		Pass the final examination of the Pharmaceutical Society of Great Britain or Northern Ireland or another approved body, over 21 years of age.
Vanuatu	Health Practitioners Board	Dentists, Pharmacists, Physiotherapists Radiographers, Osteopaths, Laboratory Technicians		Holds a qualification by an approved institution and entitled to practise in the country that the qualification was gained.
	Nursing Council	Registered Nurses, Midwives, Nurse Practitioners	Annual	*General Nurse:* Approved qualifications and met requirements determined by the Council, fit and proper person. *Midwife:* Approved additional qualifications.

Source: Compiled from Human Resources for Health Knowledge Hub Country profiles [Kafoa 2011]

INTERNATIONAL MODELS OF LICENSING AND REGISTRATION

Models of licensing and registration

Final decision on the licensing of healthcare professionals is the responsibility of the professional bodies, although in some cases, for example in the United States, independent agencies can be responsible for developing and dealing with the logistics of national examinations. Two models of licensing can be identified from the review:

- Based on education certification: Countries in which the certification of completion of an accredited program is sufficient to register with the professional body.
  Example: UK and other European countries, Australia and New Zealand.
- Based on national examinations: Professional bodies, or independent agencies, run national examinations and licensing can only take place after successful completion of those examinations.
  Example: Canada, USA.

In the case of the UK, registration with the professional body follows graduation from an accredited medical, nursing or midwifery program, either with or without extra training requirements.

Graduates can then enter practice and, depending on profession and speciality area, can continue training into postgraduate education and (for doctors) ultimately register in a medical specialty. Nurses can also work towards extended scope of practice or a speciality area.

In the USA and Canada a three-part examination is required in order to obtain a license to practice medicine independently and register for further postgraduate medical education. Only students from accredited programs are eligible to take this examination.

In addition to licensing requirements, two general systems for licensing and registration exist that depend largely on geography. In some countries, registration is with a central regulatory body, usually government appointed. Examples from medicine include the UK (General Medical Council), Ireland, India, Pakistan, South Africa and Egypt and the Pacific countries.

In other countries, registration is with a regional (provincial or state) regulatory body, with varying input from a national organisation. Examples from medicine include the USA and Canada, both of which have national licensing exams that must be passed in order to obtain a (regional) license to practice. This is also the case in Germany, Spain, Poland, Italy and Greece.

All developed countries considered in this report have requirements for qualified practitioners to maintain their licence to practice clinically, typically requiring a minimum amount of time of clinical practice each year, plus evidence of continuing appropriate professional development. This is usually submitted via a portfolio comprising evidence, rather than a practical or written examination.

Requirements vary for registering undergraduate students. In the UK, students do not register with a professional body until they graduate and are about to obtain either a provisional or full license (varies with the profession). In the USA, undergraduate medical students are required to register in order to sit the national licensing exams. In Australia all students of healthcare professions register with the Australian Health Practitioner Regulation Agency (AHPRA) 'to protect public safety' [33].

Regulating the regulator

A relatively recent development in many countries is a 'regulator for the regulator'. These are generally government-appointed independent bodies with varying powers and responsibilities.

In Australia the AHPRA oversees the registration and accreditation of all health practitioner programs, including nursing, midwifery and medicine implementing the 'National Registration and Accreditation Scheme' of 2010.[3] Supporting the APHRA, each discipline then has its own 'board', responsible for registration and decisions about accreditation.

A similar model operates in the United Kingdom, where the government-appointed Council for Healthcare Regulatory Excellence (CHRE), established in 2003, regulates the professional 'Councils' for each profession (e.g. the General Medical and Dental Councils and the Nursing and Midwifery Council).[4]

The potential for registration authorities to have a negative effect on the workforce should be noted. Where an authority has a legal monopoly on entry into the profession the potential exists for the authority to regulate the supply of professionals, create scarcity and increase average income of those registered.

[3] Further information available at: http://www.ahpra.gov.au/
[4] Further information available at: http://www.chre.org.uk/

POLICY IMPLICATIONS FOR THE PACIFIC

The review suggests a number of areas with potential relevance to PICs and to Pacific regional organisations:

Registration and licensing for all health professionals working in PICs

1. Commonly agreed registration and licensing requirements and processes in the Pacific could result from multi-country collaboration to guarantee the quality of health workers and to facilitate regional professional mobility, while also retaining the sovereignty of national councils or registration bodies.
2. Defining common competencies for each profession, contextualized specifically for PICs' needs, would enable benchmarking of health professionals wishing to obtain licensing or registration in the region.
3. Mapping the competencies of the Pacific Island graduates attained through the diversity of medical education programs now available will assist in identifying areas for supplementary training or orientation to contextualize their education to the Pacific region's health needs.
4. The international experience of countries with regional affiliations suggests the potential for regional examination(s) and/or an internship based on agreed, common competency standards to provide assessment of all graduates before entering practice or a common internship assessment, and to identify areas for supplementary training.

Overseas trained health professionals

5. International comparison provides examples for enabling automatic/simplified registration and visa requirements for healthcare professionals who currently have a licence to practise in countries with well-established education and regulatory systems.
6. Licensing and registration of overseas trained health professionals from countries without well-established systems of program accreditation, licensing and registration may include requirements to work within a defined/limited scope-of-practice, or a specific length of service, and/or require training to address areas of need/deficiencies. Similar considerations apply to medical graduates who have completed undergraduate training overseas but have not completed formal registration requirements before returning to the Pacific.
7. Good practice for the registration for overseas trained healthcare professionals entails establishing a health systems orientation program including a cultural assimilation component, and which includes a test of competency in the relevant language.

Health workforce planning

8. A review of existing formal and informal arrangements between the PICs in health workforce production, planning and deployment would identify areas for improved governance and stewardship in future licensing and registration mechanisms.
9. Leadership is needed to adopt a regional overarching framework that links commonly agreed sets of standards for accrediting health professionals' education programs with processes for licensing and with regulation mechanisms.
10. PICs may wish to commit to sustained political and financial support to establish regionally agreed standards in order to guarantee health professionals' competence to practice in the region, and to attract independent investment from development partners.

CONCLUSIONS

The objective of establishing a Pacific health workforce, rather than many national workforces, will require agreement by sovereign states on common standards, common international accreditation standards, complementary licensing arrangements and comparable terms and conditions of employment.

It can reasonably be expected that when Pacific doctors and other health professions trained internationally return home, they will also look for opportunities for intra-regional professional mobility, as have their predecessors at Fiji National University and the University of Papua New Guinea, thereby assisting to fill professional skills gaps in the region.

Achieving such common approaches to allow intraregional health worker mobility would require commitment and cooperation of national medical, nursing, midwifery and health professional councils where they exist, and public sector employers.

This was discussed at the Pacific Island Countries Health Ministers' meeting in 2011, which recommended that a *"regional framework for regional professional competencies, accreditation & standards for various health workforce cadres"* be developed [WHO 2011].

The current large scale-up of the medical workforce consequent to Cuban scholarship offerings will begin to place strain on health ministries' budgets, commencing in 2014, as they absorb new medical graduates into national health systems.

The need for establishing transparent and robust processes for assimilating many international medical school graduates provides a significant driver and opportunity to develop and establish standards and processes for initial licensing, intern training and competency assessment for defined scopes of practice.

This forthcoming imperative could be the catalyst for developing the regional framework that the PIC health ministers recommended in 2011.

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APPENDICES

APPENDIX 1. FEES AND PAYMENTS FOR LICENSING OF HEALTHCARE PROFESSIONALS

All fees are given in local currency

			Requirements and fees					
Countries	Health Profession	Licensing body	Home		International Graduates		Government funding direct only	Source
			Requirements	Fees	Requirements	Fees		
US	Medicine	State Medical Boards	USMLE step I, step II (Clinical Knowledge exam + Clinical Skills exam) and step III exams plus a registration fee dependent on the regional Medical board (REF)	USMLE Step 1: $535, Step 2 CK: $535* Step 1 and 2CK Eligibility Period Extension: $65 Step 2 CS: $1,140 Step 3 is $745 with the exception of Iowa $795; South Dakota $895; Vermont $780	USMLE Steps 1, Step 2 Clinical Knowledge and Clinical Skills; ECFMG registration; post-graduate training in the US, USMLE step 3 and registration with State Medical Board	Application for ECFMG Certification $50 USMLE Step 1 $790 USMLE Step 2 CK $790 Step 2 CS $1,375 Additional fees apply for any rescheduling, rechecking and issuing of transcripts Application Information Exchange Visitor Sponsorship Program (EVSP) $275 Verification to State Medical Licensing Authority $35	No	www.usmle.org/
	Nursing	State Board of Nurses	Application for licensure to the BoN in which will practise; National certification examination NCLEX	Registration Fee $200 Licensure Fee dependent on the state board of licensing	Previous records verification, exam and registry with BoN	Fees as for 'Home' applicants plus Additional International Scheduling Fee (+value added tax where applicable) $150	No	https://www.ncsbn.org/nclex.htm
	Midwifery	American Midwife Certification Board	Graduation from ACME certified program; National Examination (same as for nursing); Registration	National certification examination is $500.00, re-examination fee is $500.0 includes an examination processing fee of $121. Plus a $65/year for the CMP	Previous records verification; exam and re-train in an ACNM accredited program and registry with AMCB	Same as Home plus a verification of Certification $50.00		ACNM, 2011

Canada	Medicine	Royal College of Physicians and Surgeons Canada (RCPSC)	MCCEE and MCQE part I or USMLE as in US	First-time applicant: C$1,615 Repeat applicant: C$1,365 Qualifying Examination Part I: C$900 Qualifying Examination Part II: C$2,150 Additional fees for rescheduling, rechecking and issuing transcripts MCCEE C$64 MCCQE Part I C$64	Requirements will depend on the chosen route.	Dependent on the RCPSC chosen pathway to licensing and province of registration. http://www.royalcollege.ca/public/credentials/accreditation	No	http://www.royalcollege.ca/public
	Nursing	Canada Nurses Association (CAN)	Canadian Registered Nurse Examination, CRNE	Fees for exams will be defined by the regional provinces	Policies on foreign nurses depend on the regulations applied by individual provinces an exam is generally required except in Quebec			http://www.cno.org/en
	Midwifery	Canadian Association of Midwives (CAM)	Exams administered by the educational programs and recognised by regional provinces, and Canadian Midwifery Registration Examination (CMRE) which is the national examination for entry to practise administered by the CMRC in some provinces	NA	Exams, if required, are administered by regional provinces. International Midwifery Pre-registration Program (IMPP)	NA		www.canadianmidwives.org/

UK	Medicine	General Medical Council (GMC)	Graduation from an GMC-UK accredited program, Certificate of Completion of (postgraduate) Training (CCT)	Provisional registration £95; Full registration for doctors who hold, or have previously held, provisional registration or for those who submit their application within two years of passing a primary medical qualification £195; Full registration for doctors not covered by the scenarios above £390; Temporary Full registration for visiting overseas doctor £390 Annual retention fee (payable by all registered doctors) £390; Annual retention fee without licence to practise - £140	Verification of credentials Certificate of Completion of (postgraduate) Training (CCT) when applicable, and, in the case of non-EU/EEA doctors, the PLAB exam	Certificate of Eligibility for Specialist or GP Registration (CESR) £1,500; Certificate of Completion of Training (CCT) £390; PLAB Exam fees: Part 1 of the PLAB test £145; Part 2 of the PLAB test £430; Request for clerical check of results for the PLAB test £40; Application for sub-specialty recognition or Certificate of GP acquired rights £275. Annual retention fee for registration with a licence to practise £390 and without licence to practise £140 Additionally there are appeal and reviews.		www.gmc-uk.org
	Nursing & Midwifery	Nursing and Midwifery Council (NMC)	Graduate from a UK program	Annual registration fee £76; Subsequent entries of registered qualifications £23; Fee for recording a qualification £25	Verification of credentials and possible educational programs (case-by-case).	Europe evaluation fee £110; Outside Europe evaluation fee £140; Annual registration fee: £76		http://www.nmc-uk.org/Registration/Planning-to-work-outside-the-UK/

Australia	Medicine	Australian Medical Board (AMB)	Graduating from a AMC approved program	Competent Authority Pathway $600 plus AMC Certificate $275; Specialist recognition or Area of Need specialist $285; Standard and Specialist (recognition) $285	Required documents and approvals depend on the route to certification chosen, some may require exams	Standard Pathway $230 AMC Certificate $275 Specialist recognition or Area of Need specialist $285 Standard and Specialist (recognition) $285 Primary Source Verification Specialist-in-Training $230 Competent Authority Pathway $600 plus AMC Certificate $275 Examination fees: CAT MCQ examination authorisation $2,100; Clinical Examination (per attempt) $2,850	No	http://www.amc.org.au/index.php/ass/fees#pathway-fees
	Nursing & Midwifery	Nursing & Midwifery Board of Australia (NMBA)	Graduate from Australian or New Zealand recognised program and completion of an AMC recognised postgraduate program of training.	Application for general registration $160; Fee for annual renewal of general registration $160	Evaluation based on 5 criteria: Proof identify; English language proficiency; meeting current Australian nursing and midwifery education standards; evidence of having practised as a nurse and/or midwife within period of time close to the application; demonstrates they are 'fit to practise' nursing and/or midwifery in Australia	Apply for general registration $160 Apply for limited registration $160 Apply for non practising registration $30 Apply for registration endorsement $125 Apply for fast track registration $80 Annual renewal of registration $160 Annual renewal of non practising registration $30 Overseas assessment charge $220	No	www.nursingmidwiferyboard.gov.au/

New Zealand	Medicine	New Zealand Medical Council (NZMC)	Graduate of New Zealand (NZ) or Australian (Aus) Medical School	Application for registration $434.45; Application for registration with vocational scope of practice (after postgraduate) $434.45.	Several routes exit for registration of international graduate/specialist in New Zealand fees will depend on options applicable.	Application for registration $434.45; Application for registration with vocational scope of practice (after postgraduate) $434.45; other fees can be found at http://www.mcnz.org.nz/get-registered/fees-forms-and-checklists/	No	http://www.mcnz.org.nz/get-registered/fees-forms-and-checklists/
	Nursing	Nursing Council of New Zealand	Graduation form a NZ or Australian approved program, letter of support from the head of school, two references and a declaration motivation/personal statement.	NA	Verification of credentials Competence assessment programs are generally six to eight weeks long and include a theoretical and a clinical component.	Application fee NZ $485.00.	No	http://nurseducation.org.nz/FAQs/Undergraduate-students [accessed 6 May 2012]]
	Midwifery	Midwifery Council of New Zealand (MCNZ)	Various professional identity and competency requirements	The application for NZ graduates: fee to sit the National Midwifery Examination is $200NZD; The application fee for Registration is $300NZD. Application fee for Australian Registered Midwives is $NZ500.	Various professional identity and competency requirements	Application fee is $NZ1,000.	No	http://www.midwiferycouncil.health.nz/australian-registered-midwives/

APPENDIX 2. DEFINITIONS

These are meant to be used **in the context of this report** and are derived from the multiple definitions used by different healthcare systems in different countries.

Accreditation is a process designed to confirm the educational quality of new, developing and established education and training programs. It is usually carried out by peer/third party review against established *standards/outcomes*.

Approval is sought via *accreditation*. Decisions to approve (or not) an educational program are often taken by a different body from the one that has carried out the accreditation process.

Assessment refers to a determination of student/learner performance/competence, often via examinations.

Bonded/Bonding: An arrangement where trainees/students agree to return to a particular geographical location and/or specialty after completing their education in return for financial assistance with the cost of their education or other benefits.

Commissioning is used to describe the scheme and processes by which education and training programs (and in particular the numbers of students/trainees involved in those programs) are funded and allocated to education and healthcare training organisations. Commissioning activities include the allocation of scholarships and subsidies and self-funding schemes and typically involve some type of formal quality assurance of the education and training provided.

Continuous Professional Development (CPD) (also known as Continuing Medical Education, CME) is the process by which fully qualified professionals demonstrate that they are maintaining and updating their education and clinical competence. It usually involves completion of a specified number of accredited activities over a fixed recurring time period (e.g. 1-5 years).

Competency: A broad composite statement, derived from professional practice, which describes a framework of skills, knowledge, attitudes, psychosocial and psychomotor elements.

Curriculum: The totality of the education program, that is coherent in structure, processes and outcome and that links theory and practice in the professional education of a doctor, nurse or of a midwife.

Credentialing is the process of reviewing and confirming the qualifications and profile of a healthcare professional, for example when they apply for positions in different institutions or countries. It is particularly important in countries with regional registration systems.

Licensing generally involves conferring upon an individual a licence to practise their particular healthcare profession. Many countries do not distinguish between licensing and *registration* (below) and both may be partial/temporary/conditional in certain circumstances (for instance, newly qualified professionals in some countries).

Local: Applicable to individual Pacific Islands, Countries and Territories (PICT).

Numerus Clausus *(closed number)* is a system of regulating student numbers (usually medical students) wherein a fixed number of places are available each year, usually determined by the government and based upon future workforce planning. The opposite form of student number regulation is a **free market**, wherein there is no regulation of student numbers – graduates compete for jobs and universities compete for students (and funding, from students and/or government).

Postgraduate refers, in the context of the education of healthcare professionals, to education that occurs after initial registration with/licensing from a professional body.

Regional: Applicable to all PICT across the Pacific region.

Registration generally refers to the actual process of enrolling with a professional regulatory body following graduation from an accredited program. Many countries do not distinguish between registration and licensing, but some do and a licence to practise may be issued by a separate authority, particularly in countries where the processes are managed at a regional level. Both licensing and registration may be partial/temporary/conditional under certain circumstances (for instance, newly qualified professionals in some countries).

Revalidation (or relicensing) refers to the renewal of a licence to practise. Many countries have some sort of regular renewal or re-registration, generally every few years (although the term revalidation is one most commonly associated with UK doctors and dentists). Revalidation typically involves providing evidence of continuing professional development (CPD).

Specialty/Specialist refers to the latter stages of postgraduate training, generally for doctors, where they attain their final career status (e.g. surgeon, psychiatrist).

Standard: A definition or statement for evaluating performance and results established by evidence and approved by a recognised body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the requisite degree of compliance in a given context.

Undergraduate refers, in the context of the education of healthcare professionals, to education that occurs before, and usually leads to, registration with/licensing from a professional body/regulator. It is sometimes called pre-qualifying or pre-registration education. Students engaged in undergraduate education of this sort may already have a previous degree (and so may, in academic terms, be considered postgraduates, but will always be referred to here as undergraduates).

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Compass: Women's and Children's Health Knowledge Hub
Compass is a partnership between the Centre for International Child Health, University of Melbourne, Menzies School of Health Research and Burnet Institute's Centre for International Health.

Aims to enhance the quality and effectiveness of WCH interventions and focuses on supporting the Millennium Development Goals 4 and 5 – improved maternal and child health and universal access to reproductive health. Key thematic areas for this Hub include regional strategies for child survival; strengthening health systems for maternal and newborn health; adolescent reproductive health; and nutrition.

www.wchknowledgehub.com.au

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