An Overview of Education and Training Requirements for Global Healthcare Professionals

❖ *Physician* ❖

GLOBAL KNOWLEDGE EXCHANGE NETWORK
on Healthcare

Workforce and Training Task Force

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EXECUTIVE SUMMARY

The diagnosis and treatment of human illness and disease requires a team of highly trained healthcare professionals, each with distinct skills and roles. As leaders of the healthcare team, physicians are the most highly trained of the healthcare professions.

This report presents an overview of physician education and training in eight select countries: United States (US), United Kingdom (UK), Australia, France Germany, Canada, Singapore, and Hong Kong. Across North America, Europe, and Asia, there is no standardized physician education model. There are similarities in basic curricula, but distinct differences as well. Length of study varies, as do requirements for specialty training, licensing, and maintenance of competency or recertification.

The length of training to become a physician varies by country, with the shortest path being six years (including study and practical experience) in Germany, Singapore and Hong Kong. Pursuit of a medical specialty in some countries can require upwards of 15 years of training. Only the US and Canada are true graduate-level programs requiring a bachelor's degree for admission to medical school. In France, Germany, UK, Singapore, and Hong Kong, medical school is an undergraduate program of four to six years; Australia offers both an undergraduate and graduate-entry program.

The US, UK, Australia, France, and Canada generally have more lengthy post-graduation requirements for clinical training in the form of internships and residency lasting from two to seven years.

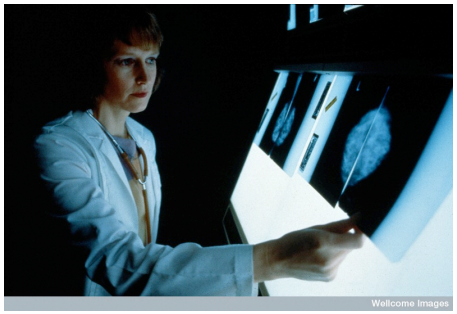
All countries administer a national certification or licensing exam to practice, but physicians in the US and Australia are also registered at the state or regional level by local medical boards. All countries also encourage the completion of periodic continuing medical education for practicing physicians; however most countries lack a formal regulatory requirement. Continuing education has become a strong topic of debate in recent years as countries consider ways to develop more effective means to ensure maintenance of competency of physicians' practice.

SPOTLIGHT ON HEALTH OUTCOMES AND PHYSICIAN CONTINUING EDUCATION

Continuing medical education (CME) is the primary formal method for physicians to engage in ongoing learning to improve and advance their practice and enhance the outcomes of patients. Physicians report spending approximately 50 hours per year in CME activities, ranging from conferences and lectures to more interactive workshops and individualized training sessions.[1] While all countries studied in this report require some level of regular CME completion by physicians, research is mixed on the effectiveness of formal CME in positively affecting physician performance and patient outcomes. Less didactic education strategies, such as outreach visits by physician educators and reminders have been shown to be more effective than traditional CME activities in some cases, however these strategies are much less likely to be used.[2] At the same time, there may be additional barriers that limit the impact of CME on health outcomes, such as patients' unwillingness to follow physician recommendations, socioeconomic and educational status of patients, and ineffectiveness of the clinical encounters themselves.[3]

Two systematic reviews of the literature on CME activities from the late 1990s support the notion that formal, didactic CME training, while more common, is generally less effective than other strategies. One comprehensive review studied 99 randomized controlled trials containing 160 educational interventions/strategies over two decades. The trials looked at educational interventions among a variety of physician specialties, including general practitioners, gynecologists, pediatricians, surgeons, and anesthesiologists. Seventy percent of the interventions affected a change in physician performance, and almost half of the interventions targeting health outcomes produced a positive change.[4] Even so, the degree to which physician behavior or patient outcomes changed positively was found to be small in most cases. A second, smaller study reviewed the effectiveness of 24 formal CME activities among US, Canadian, and French physicians. Once again, didactic interventions proved less successful in changing behavior or outcomes than interactive strategies such as case discussion and hands-on practice sessions.[5] An extensive review conducted in 2007 by John Hopkins University for the U.S. Department of Health and Human Services bore similar results.[6] The Royal College of Physicians and Surgeons of Canada has taken steps to address the efficacy issue by awarding fewer credits for less effective CME activities,[7] but systematic change has been slower to implement in most countries, and true medical education reform is a growing challenge facing health care systems across the globe.

PHYSICIAN EDUCATION AND TRAINING REQUIREMENTS



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United States

In the United States (US), medical schools may vary somewhat in their application requirements, however there is a general set of prerequisites for admission to most US medical schools. These include:

- Qualifying scores on the Medical College Admission Test (MCAT) test
- 4-year baccalaureate degree (does not have to be a science degree)
- Premed science coursework

The Doctor of Medicine (M.D.) degree is obtained from a medical school accredited by the Liaison Committee on Medical Education (LCME), an accrediting authority for US and Canadian medical schools. It is a four-year degree program which includes course work and clinical rotations.[8] Some medical students may choose to obtain the Doctor of Osteopathic Medicine (D.O.) degree from an accredited school of osteopathic medicine. While there is arguably a philosophical difference in the approach of an M.D. versus D.O., training and licensing for the two is generally the same. The one notable difference in education is that a D.O. is trained in manipulative medicine, a form of manual therapy that focuses on improving ailments that arise from the musculo-skeletal system.[9] Some schools allow concurrent acquisition of other degrees such as Master of Business Administration, PhD, Doctor of Law, etc., which may or may not require additional time.

Following graduation, all doctors are required to complete a residency in a teaching hospital. Depending on the specialty, a residency can last three to seven years or more. Acceptance into a residency program in the US is a competitive process. Doctors who wish to become specialized in a subspecialty field of practice may also choose to complete a fellowship of one to three years of additional training.[10]

Upon completion of the residency, doctors must be licensed in the state in which they choose to practice. Licensure requirements vary by state, but in general states require that doctors pass all three steps of the United States Medical Licensing Examination (USMLE) or the Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA). Licensing boards may also accept certain combinations of the USMLE and the Federation Licensing Examination (FLEX), which was the common licensing exam before 1994. Doctors may also voluntarily choose to become board certified by a specialty medical board.[11] All boards that are part of the American Board of Medical Specialties require recertification every seven to ten years.[12] Board certification is required for hospital staff privileges in the certified specialty and also for membership in Professional Colleges (FACS), Academies (AAP, AAOS, etc.), Societies (ASPS, etc.) and Associations (AUA, etc.)

Some states may also require doctors to earn credits for Continuing Medical Education (CME) each year to ensure on going training to keep doctors' skills and knowledge current. Maintenance of competency is a relatively new aspect of concern for board requirements that will become part of residency training and required for continuing recertification. Competencies include: Basic Knowledge, Clinical Competence, Interpersonal Skills, Professionalism, Patient-based Learning, and System-based Learning.

While the above represents the current status/requirements, there is a vigorous, active, and ongoing deliberation that will result in significant changes in undergraduate and graduate education and training in an effort to keep pace with 21st century technologies and realities.

Physician Assistants

In the mid-1960's a new profession, Physician Assistant (PA), emerged in the US to address the shortage of primary care physicians in the country. PAs are trained in an intensive 2-year education program, and are licensed to practice medicine under a physician's supervision. PAs must past a certification exam to obtain licensure, and must accrue 100 hours of continuing education every two years and recertification every six years to remain licensed. Under a physician's supervision, PAs may conduct activities such as routine exams, diagnosis and treatment of illnesses, provide health counseling, and prescribe medications. More information on the physician assistant profession can be found on the website of the American Academy of Physician Assistants at http://www.aapa.org/index.php.

Psychologists and Prescription Authority

Psychologists are professionals trained in the study of the human mind and behavior. Psychologists may work in research, clinical, or organizational settings, including schools and community health centers. Clinical psychologists often work in conjunction with medical personnel to ensure overall health through treatment and intervention programs designed to promote mental wellbeing.[13]

The primary practice avenues include clinical, counseling, school, industrial-organizational, social and research/experimental psychology. In order to practice independently in the US, a doctoral degree is generally required, and psychologists must be licensed. Master's degree options are also available, and graduates who work in any clinical setting (including counseling and schools) must also be licensed. However master's level psychologists working in a clinical setting generally do so under the supervision of a doctoral-level psychologist. Master's level graduates also work in research and other settings or may obtain a specialist degree to work as a school psychologist. Further specialization is available in 13 areas by American Board of Professional Psychology administered exams.[14]

Mental illness poses a growing challenge to healthcare systems in many countries. In the US it is estimated that 26.2% of Americans older than eighteen experience mental health disorders in a given year.[15] Within the psychology profession there is increasing global interest and division with regard to psychotropic medicine prescribing privileges for clinical psychologists. Currently psychologists have limited, independent prescriptive authority in the United States Military as well as the states of Louisiana (2004) and New Mexico (2002).[16] Since 1985, when Hawaii introduced the first (ultimately unsuccessful) bill to authorize prescribing privileges for psychologists, 88 similar bills have been introduced in 21 states/jurisdictions. Only Indiana and Guam have since legislated some form of psychologist prescriptive authority.[17] In jurisdictions where it is allowed, pre-requisites to prescribe include a doctoral degree in psychology, state license to practice, five years of experience as a "health service provider" psychologist, completing extensive psychopharmacology training, and passing a national certification exam.[18]

Opponents of prescriptive authority bring many points of issue to the table, including lack of societal need, insufficient professional competence, incomplete consensus within the profession, and potential negative impact on national graduate education programs. Proponents highlight the lack of public access to mental health professionals with prescribing privileges, the high burden of societal mental illness, and the potential to enhance continuity of care and lower healthcare costs.[19]

A series of events in the 1980s also continues to give context to the debate over prescribing privileges. First, a new and far less toxic class of antidepressant (seratonin selective reuptake inhibitors (SSRI), marketed as Prozac) was introduced that hugely increased the rate of prescription of antidepressants. However, in time the initial promise of the new drug gave way to concerns about over-prescribing, problematic side effects, and the legitimization of a national drug culture.[20] Second, an influential study on depression was published that

compared the health outcomes of psychotherapy, medication, or a combination of both as treatment strategies. In general, the study determined that all the various therapies were effective in treating depression, even including administering a placebo alongside clinical management/psychotherapy. Medication plus clinical management was slightly more effective than psychotherapy alone, but the appearance of an overall equivalence between drug and non-drug treatments increased the debate on the need for medication to treat depression and the role that psychotherapy can play in conjunction with drug treatment.[21] Finally, a number of other studies confirmed the presence of a placebo effect in the use of antidepressants, with a generally accepted placebo response rate of 30%-35%. This has triggered debate of its own, and has been used by opponents to further argue against the need for psychologists to prescribe.[22]

The growing number of non-physician healthcare providers (NPHCPs), such as PAs, nurses, and psychologists, has led to increasing debate over prescribing authority and other scope of practice issues. The movement toward legislating prescriptive authority for the psychology profession has not been as effective as in other NPHCP professions,[23] and the debate continues both inside the profession itself and within the public at large.

Medical Education in Europe – The Bologna Process

In 1999, Ministers of Education from 29 European countries signed the Joint Declaration on the European Higher Education Area, or Bologna Declaration, as part of efforts to reform higher education by creating a European Higher Education Area by 2010. The approach was to devise a unified system of comparable degrees and a common academic credit and continuing professional education system. These efforts are intended to give students and professionals greater mobility and promote uniform quality assurance.

Based on voluntary adoption, currently 40 countries have begun the process of implementation. The implementation process has progressed slower in the area of medicine and concern has been expressed about the consequent changes that would need to occur in medical education, particularly the adoption of a two-cycle (bachelor/master) degree system.[24] Groups such as the International Federation of Medical Students' Associations (IFMSA) have suggested that if a two-cycle system was not uniformly adopted by all Bologna signatory countries, workforce mobility would decrease as well as the readability of the medical degree. There is also concern in regard to the content of the separate programs, particularly the need to include both basic science and clinical science curricula in the bachelor program. In many two-cycle degree systems for medicine, clinical sciences are not introduced until the master's program. IMFSA supports the proposition of a European Core Curriculum in medical education and requiring a Bachelor of Medicine to enter a Master's medicine program.[25] As of 2007, an Association for Medical Education in Europe survey found that seven countries have adopted the two-cycle system while 19 are opposed and 15 have not decided or will leave the decision to their country's medical schools.

For more information about Bologna Process, and reports from each signatory country, visit their website at http://www.ond.vlaanderen.be/hogeronderwijs/bologna/

United Kingdom

The educational path to become a doctor in the United Kingdom (UK) is nine to twelve years depending on the specialty. Medical school in the UK is a four to six year undergraduate course of study leading to a Bachelor of Medicine and Surgery. (Acronyms for the degree vary by university (MBBS, BMBS, etc.) but are generally referred to as the "first MB.")

In the final year of medical school, students apply for "foundation," a two-year program which provides clinical experience and additional training to bridge the gap between medical school and specialty training.

Following foundation, graduates complete three years of specialty training, or "run-through training," where they further develop competency in general practice and are exposed to a number of specialist disciplines.

In order to be certified to practice in the UK, graduates undergo a Summative Assessment (SA) which is a final evaluation administered by the National Office for Summative Assessment (NOSA). Graduates must also pass exams/assessments to qualify for a Certificate of Completion of Training (CCT), which allows doctors entry on the General Practitioner (GP) Register. The GP Register is maintained by the General Medical Council (GMC) and acts as evidence to employers and the public that a doctor's qualifications are acceptable in the UK.[26] Beginning in November 2009, all doctors will also need a license to practice medicine in the UK. In addition, the country is in the process of developing a framework for revalidation whereby doctors will also be required to undergo an annual appraisal in the workplace to demonstrate they are meeting the standards of practice set by the GMC.[27]

General practitioners in the UK are required to engage in on-going education and improvement in knowledge and skills through Continued Professional Development (CPD). GPs go through an appraisal each year with a fellow GP colleague to develop objectives for the coming year and have input from a fellow doctor to demonstrate that the individual is fit to continue in practice.[28]

France

French students who wish to attend a university are generally required to earn an academic qualifying degree known as the baccalaureate, which is acquired by passing an exam at the end of high school. Medical study in France then takes approximately nine to eleven years to complete, depending on the specialty. Education and training are divided into three stages. The first stage involves undergraduate coursework

for two years. Any student with a baccalaureate may attend the first year of medical studies, however students must pass a rigorous exam at the end of the first year in order to move into the second year. The first year exam has an exceptionally high failure rate, sometimes as high as 90%.[29] An annual quota set by the government also limits the number of students admitted for the second year. Beginning in 2010 as part of the Bologna Process, French medical students will start their medical education by taking a year of common curriculum with midwifery, dentistry and pharmacy students. With the 2010 changes following the first common year, medical students will be permitted to take exams in two out of four disciplines, which allows individuals that are not accepted into the medical program to have an alternative course of study.[30]

The second stage of training is considered the master's program and takes four years to complete. This stage involves educational instruction and 36 months of clinical training through hospital internships in various specialties. Students must pass several exams in the master's program phase in order to earn a Certificate of Clinical and Therapeutic Synthesis. The certificate allows students to move into the third, or doctoral, phase of medical education.

The third stage of education is residency training in a particular specialty which leads to a diploma of specialized study (DES). Students are assigned to specialties and residency location based on their scores on a national classifying examination. Residency training may take from three to five years, depending on the specialty. Residents must also defend a thesis in order to be awarded the final "diplôme d'état de docteur en médecine" (state diploma of doctor of medicine), or M.D. degree. Doctors may then register with the French Medical Council (Ordre National des Médecins, or CNOM), a regulatory organization similar to the General Medical Council of the U.K.[31]

Up until 2005, the medical diploma gave French doctors authority to practice medicine for their entire career. However, in 2002 continuing education became mandatory and French doctors must complete 250 continuing medical education credits (CME) every five years. The French National Council for Continuing Medical Education sets guidelines on the number of credits, evaluates physician compliance with requirements, and issues certificates of completion.[32] While there is no formal regulatory mechanism in France for periodic relicensing, the introduction of mandatory CME and other steps are in progress to create a system for ongoing assessment of competence in medical practice.[33]

Germany

Medical school in Germany is a six-year undergraduate course of study leading to the title of Physician. Graduates who also complete a doctoral thesis receive the title of Doctor of Medicine.

Medical school consists of two years of pre-clinical studies focusing on the basic sciences, lab work, and bed-side teaching. The first round of German National Board licensing exams are administered after pre-clinical studies. Students must pass the first exam to move into the

three-year clinical training stage. Students are allowed two chances to pass the exam. Approximately 20% of students fail the exam on first try and 5% never pass.[34]

The final (6th) year of medical school is the "practical" year which involves three clerkships in surgery, internal medicine, and one elective. The practical year is followed by a second round of medical licensing exams which allow a graduate to apply to work as a Physician. The second part of the licensing exam covers clinical studies and consists of a written section, an oral exam, and a practical exam. Students who pass the second exam are licensed to practice medicine, but they do not receive an academic degree with a title.

In order to receive an academic degree with the title of Doctor of Medicine, graduates must complete a dissertation/thesis. Approximately 70% of all graduates eventually complete the academic degree. Once licensed, physicians who wish to treat patients independently must also complete a residency in their field of specialization. [35] Practicing physicians must also complete periodic continuing medical education or risk financial penalty or temporary loss of license. Other than CME, however, there is no formal process for revalidation or recertification to ensure maintenance of competency.[36]

Australia

Two types of medical training are available in Australia – an undergraduate degree (five to six years of study) and a four-year graduate entry degree. Both programs award the Bachelor of Medicine and Bachelor of Surgery (MBBS) degree. Upon graduation, the pathway for graduates of both programs is the same. Graduates are known as "junior doctors" and are required to complete a one-year clinical internship.[37]

After interning, junior doctors are eligible for registration with the medical board in their state or territory. In order to practice independently, doctors must also complete postgraduate medical specialty (vocational) training which leads to a fellowship of a specialized medical college. Doctors who wish to specialize generally extend the clinical internship into a residency at a public hospital for one to two years before entering postgraduate specialty/vocational training. Vocational training takes between three to eight years, with exams administered by the individual specialist professional colleges. Successful completion of vocational training allows doctors to practice independently anywhere in Australia.[38]

Completion of CME credits is generally required for recertification/maintenance of competence of physicians in Australia. The Royal Australasian College of Physicians has developed recertification criteria that include not only CME credits but also participation in quality improvement initiatives such as audits of practice. Physicians also participate in a unique assessment program in which they are rated by peers, coworkers, and patients on their clinical management and "holistic" and personal skills with patients.[39]

Canada

The medical training/licensure system in Canada bears similarities to the US system. Entrance into Canadian medical schools generally requires a four-year undergraduate/bachelor's degree. Medical school is considered undergraduate medical education and includes two years of classroom instruction, two years of clinical rotations, and clerkships of four to twelve weeks. Students graduate with a Doctor of Medicine (M.D.) degree and enter into postgraduate residency training, which may last from two to seven years. During residency, graduates work in hospitals or other institutions to gain experience and training to practice independently in a particular specialty.

Upon completion of training, physicians must pass a certification exam administered by one of three certifying bodies in Canada, depending on the specialty. Physicians must also be registered to practice in a given province/territory. Provincial authorities regulate the practice of medicine in a given region, and physicians must pass a licensing exam in order to become registered in a particular province. The provincial authority issues a Certificate of Registration for Independent Practice which entitles the physician to practice independently in that province/territory. The certificate is maintained through payment of an annual membership fee.[40]

Singapore

Singapore trains physicians through a five-year undergraduate degree program leading to the Bachelor of Medicine and Bachelor of Surgery (MBBS) degree. The program includes coursework and supervised clinical rotations/clerkships. In the fifth year, students complete a one month internship shadowing and working as an intern with close supervision.[41]

In order to practice independently in Singapore, a MBBS must obtain a certificate of experience by completing postgraduate training in the form of a 12-month "housemanship" (i.e. apprenticeship). Graduates must also be registered by the Singapore Medical Council (SMC) in one of four ways. Provisional registration is available to medical graduates who are pursuing a certificate of experience through housemanship. Conditional registration is granted for a period of one year to Singapore citizens (two years for foreign-trained physicians) after certain criteria are met, including completion of housemanship. Full registration allows a physician to practice anywhere in Singapore and is granted after successful completion of the conditional registration period. Temporary registration is also available to foreign-trained doctors and Singapore citizens in some circumstances. Upon registration, doctors must obtain a fee-based practicing certificate (PC) before practicing medicine.[42]

Physicians must renew their PC every one to two years and are required to meet compulsory continuing medical education requirements

(CME) before renewal. Doctors with two-year PCs must obtain a minimum of 50 CME points/credits, while doctors with one-year PCs must obtain a minimum of 25 CME points/credits.[43]

Additional postgraduate training is also available for doctors who wish to specialize in a particular field, and the national university offers a research-based graduate medical program that awards master's and Ph.D. level degrees.[44] Specialists must obtain accreditation from the Specialist Accreditation Board (SAB) and then register as a specialist with the Singapore Medical Council. Specialists pay a one-time registration fee to be added to the Register of Specialists.[45]

Hong Kong

In Hong Kong, medical education is offered by two local universities, namely the University of Hong Kong and the Chinese University of Hong Kong, through a five-year undergraduate program leading to the Bachelor of Medicine and Bachelor of Surgery degree (either MBBS or MBChB). The program includes two years of pre-clinical basic science studies and a three-year supervised clinical rotation and clerkships. Upon completion of the five-year program and passing of all the professional examinations at various stages, graduates are required to undergo a 12-month internship training program in approved hospitals. Subject to satisfactory internship performance, the respective faculties issue a Certificate of Experience, which qualifies the interns for full registration with the Medical Council of Hong Kong ("the Medical Council"). A General Register of medical practitioners is maintained by the Medical Council subject to a fee-based annual renewal of the practicing certificate.

Registered medical practitioners who wish to pursue post-registration specialist training must seek employment in a hospital or institution accredited by the Hong Kong Academy of Medicine ("the Academy"), which is an independent institution with the statutory power to organize, monitor, assess and accredit all medical specialist training in Hong Kong. The Hong Kong Hospital Authority ("the Hospital Authority") also plays a predominant role in specialist training for junior doctors in Hong Kong through its management of public hospitals and well-established training facilities.

The requisite period of specialist training set out by the 15 constituent specialty Colleges under the Academy is six years. Individual colleges hold professional examinations to assess the progress of trainees at various stages of their training. Trainee doctors are required to fulfill the training requirements and pass the exit examination and/or assessment before becoming eligible for College Fellowship. This is a precondition for admission to Fellowship of the Academy and inclusion in the Specialist Register of the Medical Council.

Although there is currently no statutory requirement on recertification, maintenance of the Academy Fellowship and specialist status is dependent on the fulfillment of Continuing Medical Education (CME) requirements set out by individual Colleges. The program is based on a

“credit point system” and a minimum of 90 credit points must be accumulated during a three-year cycle. Some Colleges may also impose a minimum level of credit points to be achieved each year.

General practitioners are encouraged on a voluntary basis to enroll in a CME program accredited by the Medical Council. Practicing doctors who have accumulated a minimum of 30 credit points per year will be awarded a Certificate to certify that they have achieved a satisfactory level of CME activity during a particular period. Individuals who have completed a minimum of 90 credit points over a three-year cycle will be allowed to use the title “CME certified” on their visiting cards.

TABLE 1: PHYSICIAN TRAINING AND EDUCATION – SELECT COUNTRIES

Requirement	US	UK	Australia	France	Germany	Canada	Singapore	Hong Kong
Previous/ undergraduate degree required?	Yes	No	Sometimes - Undergrad and graduate programs offered	No	No	Yes	No	No
# Years undergraduate required	4	n/a	4, if graduate entry program	n/a	n/a	4	n/a	n/a
Years of medical school	4	4-6	4-6	6	6	4	5	5
***Additional* Clinical/ residency training required?**	Yes: 3-7 years residency	Yes: 2 years 'foundation'	Yes: 1 year internship, 1-2 years residency	Yes: 3-5 years	No: 1 year 'practical' included in med school	Yes: 2-7 years residency	Yes: 1 year 'housemanship'	Yes: 1 year internship
***Additional* specialty training?**	Optional: 1-3 yrs	Yes: 3 yrs	Optional: 3-8 years	No (specialty training during residency)	Optional	No (specialty training during residency)	Optional	Optional: 6 years
Licensing/ Certification/ Registration	Licensing by state medical boards, through completion of national licensing exam. Optional specialty board certification.	Administrative national registration, with licensing to begin November 2009.	Administrative registration by local medical boards.	Administrative national registration.	Licensing by national exams.	Certification and licensing by national exams.	Administrative national registration and practising certificate.	Licensing by Medical Council of Hong Kong. Specialist registration by exam/ assessment.
Continuing Education required?	Varies by state	Yes	Yes	Yes	Yes	Yes	Yes	Yes (specialists); Voluntary (GPs)
Relicensing/ Recertification required?	Specialty board recertification every 7-10 years.	In development	Linked to CME	In development	No formal regulatory requirement	Annual, fee based	Every 1-2 years, fee based	Annual, fee based

PROFESSIONAL ORGANIZATIONS AND RESOURCES

United States

- American Association of Medical Colleges, http://www.aamc.org/
- American Association of Colleges of Osteopathic Medicine, http://www.aacom.org/Pages/default.aspx
- American Board of Medical Specialties, http://www.abms.org/
- Accreditation Council for Graduate Medical Education, http://www.acgme.org
- American Medical Association, http://www.ama-assn.org/
- American Osteopathic Association, www.osteopathic.org/

UK

- General Medical Council, http://www.gmc-uk.org/
- Royal College of Physicians, http://www.rcplondon.ac.uk/
- British Medical Association, http://www.bma.org.uk/
- European Medical Students Association, http://www.emsa-europe.org/

Australia

- Australian Medical Council, http://www.amc.org.au/
- Australian Medical Students Association, http://www.amsa.org.au/
- Royal Australian College of General Practitioners, http://www.racgp.org.au/

France

- French Medical Council (Ordre National des Médecins, or CNOM), http://www.conseil-national.medecin.fr
- French National Authority for Health, http://www.has-sante.fr/portail/jcms/c_5443/english?cid=c_5443
- French Society of General Medicine (Société Français de Médecine Générale), http://www.sfmg.org/accueil/

Germany

- German Medical Association, http://www.bundesaerztekammer.de/page.asp?his=4.3569
- German Medical Students' Association, http://bvmd.org/

Canada

- The College of Family Physicians of Canada, http://www.cfpc.ca/
- The Royal College of Physicians and Surgeons of Canada, http://rcpsc.medical.org/
- The Association of Faculties of Medicine of Canada, http://www.afmc.ca/index-e.php
- Collège des médecins du Québec, http://www.cmq.org/

Singapore

- Singapore Medical Council, http://www.smc.gov.sg/html/SMC_Home.html
- Academy of Medicine Singapore, http://www.ams.edu.sg/
- National University of Singapore Yon Loo Lin School of Medicine, http://medicine.nus.edu.sg/corporate/

Hong Kong

- The Medical Council of Hong Kong, http://www.mchk.org.hk
- The Hong Kong Academy of Medicine, http://www.hkam.org.hk
- Li Ka Shing Faculty of Medicine, The University of Hong Kong, http://www/hku.hk/facmed
- Faculty of Medicine, The Chinese University of Hong Kong, http://www.med.cuhk.edu.hk
- Hong Kong Hospital Authority, http://www.ha.org.hk

Other Resources:

International Research Center for Medical Education, http://www.ircme.u-tokyo.ac.jp/pdf/040915GermanMedicalEduSys.pdf

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