Licensure: the granting of a permit to perform acts which, without it, would be illegal. The licensure of health care personnel traditionally has been the responsibility of the state licensing boards, governed by licensing statutes enacted by the state. 

Credentialing: the process of reviewing a health professional's credentials, training, experience, or demonstrated ability, practice history and medical certification and privileging is a grant of a special right or immunity, under certain conditions. In this article licensure, credentialing and privileging among physician, nurses and other health care professional's system in different countries will be discussed.
Licensing and Credentialing Physicians and Nurses in the USA

Physicians:

In the USA, an individual interested in pursuing a career as a physician must complete at least 90 credit hours of selective courses (plus a Bachelor's degree – 4 years), then take an Exam – MCAT (medical college admission test) with a combination of a good GPA (graduate point average) and a high score in the MCAT. This will grant the candidate admission to a medical school which is another 4 years towards an MD degree.

With an MD degree, a graduate must pass two steps of the Medical Licensing Exam (USMLE). This will allow them to apply for and compete for a slot in the medical residency programs. Residency programs range from 3 years (family medicine and general medicine) to 5 years (surgery, Ob/Gyn). Successfully completing a residency program will make you eligible to sit for and take that Specialty Board exam towards Board Certification in the specialty e.g. Board Certified in Internal Medicine or Surgery or Pediatrics, etc. If however a Resident is interested in certain subspecialties like Cardiology, Cardia Surgery, Pulmonology, Endocrinology etc., then he/she must apply for and get accepted in a "Fellowship" program ranging from 2-4 years depending on the subspecialty. Again at the successful completion of the Fellowship, the graduate is now eligible to sit for and take the sub-specialty board exam of that subspecialty. If however a Resident interested in certain subspecialties like Cardiology, Cardia Surgery, Pulmonology, Endocrinology etc., then he/she must apply for and get accepted in a "Fellowship" program ranging from 2-4 years depending on the subspecialty. Once a physician is Board Certified in their specialty or subspecialty they are evaluated by local hospitals for membership to their Medical Staff as an "Attending Physician". This is the only title a physician will attain for membership to their Medical Staff as an "Attending Physician". This is the only title a physician will attain regardless of their seniority or level of accomplishments.

Licensure of physicians start only after completion of the MD degree and passing steps 1 and 2 of the USMLE plus completing at least one year of residency (in some States they require 2 years) before getting a full unrestricted license and a Drug Enforcement Agency number that will allow them to prescribe narcotics. Physicians must renew their license yearly (pay their dues) and must submit proof of adequate and accredited continuing medical education credits – CME (accumulated every three years) to keep their license valid. Failure to complete adequate CME's or not pay their dues will suspend their license. Suspension of a license or in certain cases revocation of a license may also occur due to incidents of gross negligence, misconduct and criminal acts.

It is worth noting that the vast majority of physicians in the USA are independent practitioners who contract with local hospitals and clinics to render care services. They are usually reimbursed on case by case basis. A new position has been introduced lately in most hospitals, the “hospitalist”. This physician is a full time salaried physician fully licensed and usually a specialist in either internal medicine or intensive care. Hospitalists have the privilege of admitting patients when other physicians are not physically available and can attend to patient needs in the absence of their assigned physicians.

So succession of becoming a physician is the following:


Nurses:

Becoming a nurse in the USA is much easier than becoming a doctor. There are four levels of nurses; nurse aids or assistants (NA), licensed practical or vocational nurse (LPN), registered nurse (RN), Bachelor of Nursing (BSN), and Nurse Practitioner (NP).

Nurse Aid can be achieved after completion of a 6-8 weeks of practical (simulation) and theoretical course and pass an exam to become a "certified" nurse aid. LPN is based on completing (after graduating from high school a one year undergraduate vocational (practical) training and education and passing a licensing exam at the completion of that program.

RN designation is achieved in three different ways (all after high school or secondary school); (1) Complete two years of an associate undergraduate degree in nursing and taking the national nursing licensing exam. (2) Completing a 3 year “diploma” course at a recognized hospital nursing program and then passing the licensing exam. (3) Completing a full 4 year Bachelors’ degree in nursing at a College or a University and again must pass the national nursing licensing exam.

Nurse Practitioner designation is achieved after completing a 1-2 year postgraduate program in a nursing specialty such as; family practice, public health or community nursing, nurse midwife, or nurse anesthetist. After the completion of the program, there is a certification and licensure exam geared towards that specialty.

Postgraduate Nursing programs are dedicated for
those interested in teaching and academics where a nurse with a Bachelors’ degree can pursue a Masters or a Doctorate degree in nursing.

Licensure has the same requirements as any profession in the USA (relevant education, application and dues). These have to be renewed every year (with paid dues) plus the accumulation and submission of adequate continuing education credits every three years. Similar action can be taken like that with other professionals towards suspension and revocation of licenses.

**Licensing and Credentialing Physicians and Nurses in Canada:**

**Physicians:**

To become a physician in Canada, one has to complete his medical school requirements first and obtain an MD degree. Similar to the USA, Medical schools in Canada vary in length from the traditional 6 Year plus one year of internship right after high school or complete a four year college degree and medical school pre-requisites then complete 4 year of medical school education after which the graduate must complete at least one year of training (internship). Another requirement is to pass the Medical Council of Canada Evaluation Exam during the last year of medical school (MCCEE). After completing their internship or during that period, a medical graduate much pass part 1 and 2 or the MCC Qualifying Examination to obtain a licensure of medicine. But this certification will only make the holder eligible to apply for a full unrestricted licensure to practice medicine in one of the provinces of Canada as additional requirements vary by each province. The physician is then eligible to apply and gain access to one of the specialty residency programs (medicine, surgery, pediatrics etc.). Completing residency requirements vary in length depending on the type of specialty sought similar to those in the USA (3, 4 or 5 years) with other requirements for sub specializations such as additional training ranging from 2-5 years, again depending on the specialty sought e.g. pulmonology requires 2 years “fellowship” while cardiovascular surgery requires four more years.

In general, registration of physicians is done by a federal governmental body like the Medical Council of Canada. Licensure however is only given by one of the provincial medical licensing boards, also a government entity. A physician’s license is always valid for one year but renewable yearly by paying dues and fulfilling the continuing education requirement every 3 years. Licenses can be suspended or revoked if the physician commit a certain violation or malpractice worthy of such action. Certainly losing a license is a major issue to the affected physician but there is always a mechanism for appeal. In all cases a license does not limit the scope of work of that physician but privileging and credentialing do. However, these are only performed at the individual facility level based on the physician past training, certification, skills and experience.

**Nurses:**

Nursing education and qualifications in Canada has lots of similarities to their counterparts in the USA but a bit simpler. Only a few of the provinces in Canada require that nurses are registered and licensed e.g. Alberta, Quebec and Ontario while the rest only have registration requirement but not licensure which means that once a nurse in those provinces pass a registration exam are registered for life with no explicit requirement for continuing education credit except for those additional requirements applied by the facility where they work.

In general in Canada, all nurses have to be educated at the Bachelors’ degree level (usually 4 years after high school). There are still however those older nurses who were grandfathered in as RN’s even though they do not have a bachelor’s degree. Once they complete their degree they are required to pass a national registration exam and they are then qualified as registered nurses or RN. Some RN’s may continue to study at the Masters or Doctorate levels.

The other category of nurses are the licensed practical nurses (LPN) and similar to their counterpart in the US, these nurses are only educated at 2 years college level and are licensed as LPN’s. These LPN’s have certain scope of work that is less intensive or skillful as their RN counterparts.

Nurse Practitioners are similar to those in the USA with similar requirements and licensure guidelines. To become an NP, an RN must complete specific education and training in a nursing specialty and pass a qualifying exam at the end of the program. These nurses are almost independent in their practice of nursing and have the privileges of medication prescriptions and in some provinces this may include narcotics. Unlike the USA, Canada does not have a certified licensed nurse anesthetist.

**Licensing and Credentialing Physicians and Nurses in the UK:**

**Physicians:**

Getting licensed as a physician in the UK is a bit different than what the USA and Canada have. First, one has to complete and obtain a high score in the
General Certification Exam – Advanced or GCE A-level on at least three main subjects (physics, chemistry and mathematics or biology). The GCE A-level is 1-2 years of study and exams after high school. After a formal application to a medical college and gaining acceptance, a candidate will have to study for 5 years towards a medical degree (MBBS or MBChB). Once a graduate, they have to pass a national exam delivered by the General Medical Council (a government agency). This exam by itself will allow you to apply for and get acceptance as an employed junior physician or intern called a House Officer (HO). The candidate is required to complete at least one year as an HO to get his/her unrestricted license as a Physician. If however the candidate is interested in specializing including General Practice then he/she is required to completed several years in that specialty. At a minimum, you have to complete 2 years as a Senior House Officer (SHO) then 2-3 years as a Registrar and if needed several years as a Senior Registrar before gaining a position as a Consultant (the highest level for a practicing physician).

You are however not referred to as a “specialist” until you complete at least one year as a Registrar in that specialty and pass the related Royal College exam. There is one for general medicine, another for surgery, pediatrics, Pathology etc. If you pass one of these exams you are then entitled to the designation as a Member or Fellow of Royal College of that specialty e.g. Member of the Royal College of Physicians (MRCP) or a Fellow of the Royal College of Surgeons (FRCS), etc.

Therefore the succession of the Physician in their career ladder in UK is as follows:


Achieving the level of a consultant is not based on year of experience alone but on the number of slots available for that senior level in that department at that hospital or institute. So some departments may have only one consultant and the rest are at other lower levels (Sr. Registrars, Registrars, etc.) and only if that person leaves the department would allow one of the Sr. Registrars to be promoted to a Consultant after peer competition. Regardless, these titles are awarded at local institutes and not by the government or a specialty board.

Nurses:

In the UK nurses are divided into two main categories; nurses and midwives. Both are regulated and registered by the Nursing and Midwifery Council (NMC) of the UK. A person interested in becoming a nurse or a midwife must complete a dedicated educational program of study at one of the Colleges or Universities in the UK. Each program is about 3 years in length (after completing the General Certificate of Education – GCE advanced level). Graduates can then apply to the NMC for proper registration within 6 months of graduation and once registered they are now entitled to the designation as RN or RMidwife. Registration is permanent (unless there is a violation) and as long as the registrant has regularly been paying the annual registration fees. A new requirement has recently been introduced by the NMC called “revalidation” of the registration. Introduced only last April 2016, where now each registered nurse or midwife must apply for revalidation of their registration every 3 years. Revalidation requirements includes minimum practicing hours (450 hours for either nurses or midwives) plus 35 hours of continuing professional development activities and other “character” requirements.

Nurses in the UK are employed under different levels and categories. Here is a list of these categories and levels in chronological order of seniority:

• Staff Nurses
• Senior Staff Nurses
• Junior/Deputy Sister (Deputy Charge Nurse or Ward Nurse)
• Sister or Charge Nurse or Ward Nurse
• Senior Sister
• Clinical Nurse Manager/Nurse Lead
• Modern Matron

Other categories include those nurse specialists such as:

• Nurse practitioners (with more experience and specific advanced educational requirements beyond the College level).
• Specialist Community Public Health Nurse (district nurses, occupational nurses, school nurses)
• Clinical Nurse Specialist
• Nurse Consultants
• Lecture-Practitioner (or clinical lecturers)
• Lecturers
• Managers (Director of Nursing, or Chief Nurse)

Licensing and Credentialing Physicians and Nurses in the FRANCE:

Physicians:

To become a physician in France, one has to first complete a secondary school diploma then gain
admission and complete first a premedical preparation year. Once completed graduates have to then pass a medical college entrance exam to be admitted to a 5 year medical college that will lead to the State Diploma of Doctor of Medicine (MD). The next phase is gaining access to a residency program which varies in length from a 3 year for general medicine to 4-5 years for other specialties. Completing a residency program will lead to a Diploma of Specialized Studies. The National Management Center, a governmental agency is responsible for the registration and qualifications of the doctors in France. Graduate medical students must pass the ECN exam, a national exam managed by the national management center. Exam scores and preferences will dictate the residency program desired and accepted. There is another avenue for specialization but it is targeted for foreign doctors. These doctors can purse a 6 month to one year Diploma program in certain specialties leading to a specialist designation. These however are only useful outside France.

Physicians interested in postgraduate medical education can pursue masters and doctorate degrees at French universities in the areas and subjects of their desire. These qualifications are primarily used in academic sectors and for professional development purposes.

Recently the French ministry of Health required physicians and other healthcare workers to update their knowledge through continuing medical education and has become a mandated requirement towards sustaining a valid license.

Nurses:
Nurses or “Infermier” is the proper title for a registered nurse. To become a nurse, one must complete a high school, take an entrance exam to nursing college, then complete a nursing college diploma before they can apply for registration at the prefectural department. Registration as a nurse is a national license but nurses must apply to relocate their registration file at each prefect where they are located for work.

Other titles include specialist nurses such as pediatric nurse (2 years of education post RN), nurse anesthetist (2 years of education post RN), and operating room nurse (9 months of education post RN). These nurses have to complete additional educational programs (at least an additional year) and obtain a diploma in that specialty. Other titles include nurse manager that requires at least 5 years of experience as a registered nurse plus complete a nine month to one year educational program at a nursing college.

Licensing and Credentialing Physicians and Nurses in the GERMANY:

Physicians:
Medical education is usually 6 years after secondary education. Once completed, graduated are required to pass a national qualifying exam of medical knowledge upon which they will receive a permanent (full) medical license.

Germany is composed of 16 independently governed states (Landers) so the law on getting medical license is different from one Lander to another. Some Landers maintain an old system and physicians who don’t get license are still permitted to work in “guest doctor” status (Gastarzt).

Before starting work, one can get a temporary work permit (Berufserlaubnis) and get ready for medical license in a preliminary period of 2 years. Duration of work permit varies from state to state depending upon the location of the hospital or clinic in which the candidate is working.

Specialty training in Germany takes place exclusively within the framework of medical practice, and junior physicians receive remuneration for their work. A prerequisite for beginning specialty training is the acquisition of a full or temporary license to practice medicine (Approbation or Berufserlaubnis). Physicians who have completed their basic medical training and are in possession of a valid full or temporary license to practice are entitled to apply for a position as a junior physician at an institution licensed for medical training in the relevant area of specialization. Specialty medical training usually takes between five and six years to complete, depending upon the specific training regulations for the specialty. Completing such training would entitle the graduate to be designated as a specialist physician. These physicians can gain employment in either private or governmental institutions and can work as salaried or independent practitioners.

Nurses:
Nursing education varies from one year leading to an Assistant Nursing diploma and registration to a 3 year program leading to either a general (male/female) nurse or a pediatric (male/female) nurse. Whether general or pediatric nurse or even assistant nurses, all have to pass State regulated exams relevant to their level and type and only then they are entitled to a “diploma” and registration.

Another type of nurses are the elderly care nurses. These nurses care for geriatric patients. These are required to
have training and practice not only in nursing care but also in social work. Each State (Lander) however has issued its own regulation as to the scope and content of training and qualification of such nurses.

There are also a few other titles with nursing such as Nurse Teachers and these hold an additional postgraduate diploma or masters in a specific specialty or nursing area.

In all of the above categories the nursing “license” is valid permanently as long as annual registration dues are paid on time and the nurse is not under criminal or civil misconduct conviction. All license related issues are regulated by the local Lander by a specific governmental agency dealing with such issues.

**Licensing and Credentialing Physicians and Nurses in the Saudi Arabia:**

In the Kingdom of Saudi Arabia (KSA), the government created an independent governmental agency at the national level called the Saudi Commission for Health Specialties. This agency is responsible for the classification and credentialing of all health professionals. Credentialing is for the purpose of verifying education and experience (from the primary source), while classification is for the purpose of clarifying job duties and scope of service of health professionals at healthcare facilities in the country.

For licensure of health professionals, one of the specialized departments of the Ministry of Health is in fact responsible for all licensure activities. This department is responsible for all licenses in the country both for individual professionals (doctors, nurses, dentists, pharmacists, laboratory technicians, radiology technicians, nutritionists, respiratory therapists, physiotherapists, and even healthcare administrators) and for facilities (hospitals, clinics, labs, pharmacies, etc.). In all cases licensure is valid for 3 years (renewable) but can be revoked under certain conditions of misconduct or court convictions. Even though this MOH department is the one responsible for licensure activities in the Kingdom, it has branches at the different district health departments and has decentralized the award and monitoring of the license to each district.

**Physicians:**

Similar to the European model, students pursuing medicine must pass the secondary school national college admission test(s) and accumulate a suitable GPA (grade point average) worthy of admission to a medical school. Different medical schools in the country have published additional requirements and their minimum GPA’s to select best candidates. Medical school studies are for 6 years while the 7th year is called “Imtiaz” or an internship year where the graduate is obligated to complete a clinical rotation of all major specialties plus one elective of his/her choice and then pass the national medical licensure exam before becoming a doctor. At this stage, the candidate is eligible to apply for and enroll in a medical residency program of his choice (also based of his scores at the medical school plus those of the qualifying exam). Residency programs vary in length from 4-5 years depending on the specialty. During the residency program, the individual candidate is classified as a "resident" in that specialty (e.g. resident in Surgery). Once completed, candidates are then eligible to apply for and sit for the specialization exam (the Saudi Medical Board). Passing this test will qualify the candidate for the title of "specialist" or Registrar. This classification can be upgraded to Senior Registrar if the candidate has worked and show evidence of satisfactory practice in that specialty for at least 3 consecutive years. Beyond this classification is the title of "Consultant" which reserved to those Senior Registrar who have been working in their specialty for at least an additional 5 years. As mentioned earlier, all of these classifications are awarded not by the MOH but by the independent governmental agency called the Saudi Commission for Health Specialties. Also, to be noted this organization is the one that will dictate the scope of work for each specialty e.g. privilege to perform an endoscopy or bronchoscopy.

Similar titles and classifications are awarded to other disciplines such as Dentistry, Pharmacy, Lab, etc.

**Nurses:**

The minimum nursing requirement is a bachelor of nursing for KSA or those graduates of KSA. For foreign nurses, KSA has different requirements based on the origin of education. For "western" qualifications, KSA accepts nurses at the 2 or 3 year education as long as they are already registered or licensed in their countries. Education in an Eastern country would require a bachelor degree to be classified as a nurse in KSA. Regardless of educational origin once considered qualified, nursing candidates in KSA must pass a national qualifying exam to be classified as a registered nurse. Similar to other health disciplines, licensure is independent of classification as each is issued by a different governmental entity. Licensure is only valid for 3 years of satisfactory work history, and is renewable.

A note should be made here, that if the candidate is unable to qualify as a registered nurse then they will be...
registered and further classified as “nurse technician”. These can be upgraded to registered nurse if and when the requisite education and experience is reached.

Similarly, a nurse with a Master’s degree may be classified as a nurse specialist and that title can be upgraded if the nurse obtains a Doctorate and with relevant experience can be classified as a nurse consultant.

In practice however, registered nurses may acquire different titles depending on experience. They can start as registered nurses (or staff nurses) then can be promoted as charge nurse, then head nurse to nurse supervisor to director of nursing (DON). In some facilities the nursing director is considered a senior administrator and they may hold the title of Chief Nursing Officer (CNO).

Other Related Issues and Recommendations

To whom is the license given for performance of medical care activity (doctor; nurse)?

Once the candidate fulfills the educational requirement and pass a qualifying exam he/she will be licensed. In most countries, licenses are issued and further regulated by the individual state (province/lander/district) where you reside and work. Usually in each of these states there is a specific governmental entity responsible for this service, most probably related to the Ministry of Health at the district level.

What way is the licensing procedure performed in, what are the procedures?

For individuals, there is an application, proof of eligibility (education, references, exam scores), then pay dues to get the license (each year must be renewed but in some countries once every 3 years). For facilities, an application is submitted first, then “inspectors” from the related MOH department will make a site visit and review the application of licensing regulations and if deemed satisfactory complaint, the facility is issued a license. Again licenses are valid for 1-3 years but unannounced visits or inspection may take place anytime in between licensing renewal dates.

Is the activity of nurses (middle medical workers) licensed?

Yes for licensed practical nurses (LPN), registered nurses (RN) and nurse practitioners (NP). In the USA even nurse aids or assistants (NA) are licensed. To receive a license individuals must make an application with evidence of related education. They will then have to pass a national exam to become eligible for licensure. Licenses must be renewed annually (in some countries) or each 3 years.

Is the scope of provided care indicated in a license?

On the license it just says “Physician” or “Nurse” (no mention of specialty or level of care). Most countries regulate the practice of the profession at the level of the facility not by the government through privileging (for doctors) and competencies (for all other health professionals). In Saudi Arabia and the Gulf States, another independent entity (governmental) has been created that regulates the level of the individual professional and the scope of his/her work. However, more detailed and refined privileges are still regulated at the facility level based on need, skills, certifications and experience.

Does the salary of a specialist depend on the type of license or any other factors? (specialty of a doctor, level of risk and etc.)

Yes it is mainly based on specialty certification, subspecialty certification, type of specialty/subspecialty (e.g. medical vs surgical), years of experiences, and risk in performance (interventional vs office based e.g. Cardiologist with Angioplasty vs General Cardiologists). Usually the higher the risk the specialty the higher the compensation with a few exceptions (e.g. cosmetic dermatology). However this is decided not by the license but by the certification and the skills required. Therefore, an interventional cardiologist is paid much higher than a general cardiologist and similarly a surgical specialty (e.g. Orthopedic Surgeons) is paid higher than a medical specialty (e.g. Psychiatry).

Who is the licenser?

A license is always granted by a government agency e.g. Medical Licensing Commission or the Nursing Licensing Commission, etc. Licenses are never granted by a private sector. In the USA, Canada and Europe general registration of medical and nursing professionals are conducted at the national level (usually the MOH or a specialized governmental body) but licensure is always granted at the peripheral or provincial levels but always by a governmental agency. Similarly, for facilities licenses are granted at the state or district levels. Most countries have now instituted requirement of continuing professional development (CPD) hours to be obtained in between license renewal cycles (usually 3 years apart).

What are the preparatory stages required for introduction of licensing in a country and possible ways of realization?

1. Standardize the education processes for doctors and nurses throughout KZ especially for nurses.
2. Upgrade and expand nursing education and scope of care and responsibility to the level of a bachelor level or at least 3 years post-secondary education.

3. Separate licensure from credentialing, privileging and promotion. Prefer the Saudi model where these activities are not handled by the MOH but by another independent entity at the national level with branches at the state/district levels.

4. Standardize the eligibility requirement for licensure and develop a rigid process of qualification, assessment and monitoring.

5. Develop national qualifying exams for each discipline (doctors, nurses, pharmacists, etc.)

6. Develop guidelines for career ladder promotions especially for doctors with differentials for type of specialty, risks involved, whether interventional or not, years of experience, and performance profiling.

7. Standardize and periodically update national licensing examinations.


9. Develop national guidelines for continuing professional development (CPD) and education and make available opportunities for such education and training (thru government or private agencies). In the USA, doctors must acquire 90 of accredited CPD hours every 3 years in order to continue with licensure.

10. Develop a national data bank for specialty registrations including performance profiles especially for doctors.

11. Strengthen national monitoring of licensed practitioners and facilities with guidelines on conduct, performance and patient feedback. Monitoring of facilities through unannounced on site surveys and interactive investigations of sentinel events (root cause analysis).

12. Extend licensure to other health professions such as dentists, pharmacists, technicians (lab, radiology, respiratory, etc.), physiotherapists, dietitians and even administrators.

How best should we introduce the licensure of medical professionals?

See steps above. Benchmark with other countries and choose a model or a hybrid model (combination of models) that is most appropriate to the country. Use only the positives of certain models and create your own model.

Licensure processes of professionals and that of healthcare organizations, should these run in parallel or should they be independent of one another?

These are separate activities but can be run by the same department at the MOH in two different units. Facility licensure is much more extensive due to the licensing regulations and requirements that have to be created to judge the eligibility of the facility for licensure. Most importantly however that such licensure must be coupled with a strong and enforceable monitoring program to insure continued compliance to regulations.

As for professionals, licensure is a unique process and is even more unique to each discipline. Again, continued licensure must be associated with CPD that is specific to each discipline to insure adequate and timely knowledge and skills updates.

Should we give up the licensure of healthcare organizations if we are implementing medical professionals licensing?

No. Licensure of healthcare organizations is a useful process as long as it is monitored on a continual and periodic bases through on-site surveys, national performance indicators, sentinel events monitoring and reactive investigations of legitimate patient complaints. Licensed facilities must be visited at least once every year (unannounced) to review compliance to MOH regulations. Warnings and penalties must be instituted for those with repeat violations especially those that affect patient safety.
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