**Appendix A. All Country and Region Characteristics**

**China**

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|  | **Beijing**  **(Municipality)** | **Changsha**  **(Hunan)** | **Chengdu**  **(Sichuan)** | **Guangdong**  **(Province)** | **Hangzhou**  **(Zhejiang)** | **Shanghai**  **(Municipality)** | **Xian**  **(Shaanxi)** |
| **Municipality/**  **Province population (source: Statistica)A**  **(2019)** | 21.54 million | 69.18 million | 83.75 million | 115 million | 58.5 million | 24.28 million | 38.76 million |
| **Number of physicians in country/1000 peopleB** | 2.78\*  (2019)  All of China | 2.78\*  (2019)  All of China | 2.78\*  (2019)  All of China | 2.78\*  (2019)  All of China | 2.78\*  (2019)  All of China | 3.08  (2021) | 2.78\*  (2019)  All of China |
| **Academic preparation** | 2 systems: 8 year (baccalaureate plus medical school) or 5 year (baccalaureate plus fellowship and training) | 2 systems: 8 year (baccalaureate plus medical school) or 5 year (baccalaureate plus fellowship and training) | 2 systems: 8 year (baccalaureate plus medical school) or 5 year (baccalaureate plus fellowship and training) | 2 systems: 8 year (baccalaureate plus medical school) or 5 year (baccalaureate plus fellowship and training) | 2 systems: 8 year (baccalaureate plus medical school) or 5 year (baccalaureate plus fellowship and training) | 2 systems: 8 year (baccalaureate plus medical school) or 5 year (baccalaureate plus fellowship and training) | 2 systems: 8 year (baccalaureate plus medical school) or 5 year (baccalaureate plus fellowship and training) |
| **Licensing or regulatory agency to practice medicine** | National Health Commission of the People’s Republic of China | National Health Commission of the People’s Republic of China | Provincial Ministry of Health | National Health Commission of the People’s Republic of China | Health Commission of Zhejiang Province | Shanghai Health Commission | Must pass national exam; government gives license |
| **CME mandatory or not (tied to licensure)** | Not mandatory though employer may require; CME opportunities higher in Beijing as compared to other areas | Mandatory to renew licenses and required for promotion | Mandatory | Mandatory | Not mandatory | Mandatory | Have to participate in CME; different areas have different requirements |
| **Number of CME credits required annually** | 25 credits/year | 25 credits/year | 25 credits/year (first-class: 5-10 credits; second-class: 15-20 credits) | 25 credits/year (first-class: 5-10 credits; second-class: 15-20 credits) | 25 credits/year (first-class: 5-10 credits; second-class: 15-20 credits) | 30 credits/year (thesis, conferences, workshops, training programs ---- depends on the position and quality of the organizers) | Varies depending on employer |
| **Regulatory body for CME requirements for physicians** | Chinese Medical Association and Committee of Beijing CPD | Hunan CME Committee | Ministry of Health | Government | Health Commission of Zhejiang Province | National and Provincial Health Commission | Government and hospital have oversight; hospital sets requirements for own physicians |
| **Regulatory body for CME providers** | National Health Commission of the People’s Republic of China CME center | National Health Commission | Chinese Physician Training Academy | National Health Commission of the People’s Republic of China | Health Commission of Zhejiang Province | National Health Commission | None |
| **Types of approved CME providers** | Chinese Medical Association and Committee of Beijing CPD | Medical Association and Medical Association  Certified institution (usually hospitals) | Multiple CME Providers: National/provincial/Municipal health departments, approved training bases | National, provincial and municipal health commissions; hospitals; preventative care institution; colleges and universities; legally registered professional associations and academies | Hospitals, Universities, Social and Academic Organizations | Hospitals and medical associations | Hospitals and medical societies |
| **Types of CME formats/credits** | Multiple formats: Conferences, lectures; write research articles, books, get research fund; in-service training; community medical and health care service in rural area | Multiple formats though often workshop or lecture; certified training experiences (e.g. visiting physician) | Multiple formats | Multiple formats | Multiple formats - Class one and Class two | Lectures, simulation, rotations, exams | Multiple formats (conferences, simulation, courses) |
| **How CME credit awarded** | Credit points | Credit points | Credit points (Type 1 and Type 2) | Credit points (Type 1 and Type 2) | Credit points (Type 1 and Type 2) |  | Credit points |
| **Areas of opportunity as described by SME** | CME/CPD system currently focused on medical knowledge, skills and attitudes; should expand to include broader focus such as medical, managerial, ethical, social and personal skills; current staff driven to obtain points vs improve knowledge and skills; expanding web based opportunities would increase reach | Opportunity to increase structure of CME/CPD system; less dependence of political decisions, hospital decisions and commercial support; expand opportunities to more physicians; judging the quality of CME/CPD is hard; most of the focus in country is on undergraduate or graduate, not CME/CPD | Unbalanced regional development with high variance in physician competence; fragmented training system; CME/CPD seen as a “formality” and not meeting the educational and practice needs of physicians; need to focus CME/CPD on required competencies for performance; opportunity to learn from existing international systems; need dedicated time and resources for physicians to participate in CME/CPD | Medical technology, scientific research ability and teaching ability vary greatly between regions and institutions, the CME/CPD system needs to be more customized, designed and evaluate dynamically according to the requirements. Information technology facilitates global knowledge sharing, making theoretical progress easier, but it will take time for the capabilities to be improved. “Training the Trainer to Train” effectively improves the efficiency of capacity building, which should occupy a greater proportion in CPD activities. | CME can be tied to licensure in the future | Working to standardize expectations. Opportunities for “Train the Trainer” programs. | More comprehensive system with CME that is available in more places; more online opportunities; hybrid models are needed (in-person and online) |
| **Interprofessional opportunities** | Very rare; most single profession |  | Varies by setting; more often in clinical setting | Exists across multiple professions. | Physician and nurses can attend CME meeting together | Exists but needs to be further developed | Good idea and some opportunities exist; have competitions between teams to increase teamwork |
| **Perception of industry supported CME** | Pharma cannot provide education directly but can pay physicians to attend a conference | Commercial support is rare | Pharma cannot control content; can help to organize and market; can support travel and other fees | Pharma may not be a provider of CME/CE. | Sponsorship of industry stakeholder is prohibited | Can support but not provide | Unsure |

AAccessed at: <https://data.worldbank.org/indicator/SP.POP.TOTL>

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**Europe**

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|  | **Austria** | **Bulgaria** | **Croatia** | **Finland** | **France** |
| **Country populationA**  **(2021)** | 8.96 million | 6.88 million | 3.9 million | 5.54 million | 67.75 million |
| **Number of physicians in country/1000 peopleB**  **Number of physicians in country/1000 peopleC** | 5.2  (2018) | 4.2  (2018) | 3.0  (2016) | 4.6  (2018) | 3.2C  (2020) |
| **Academic preparation** | 6 years of medical school followed by residency training; public universities are free; licensing exam to practice medicine | 6 years of medical school followed by residency training (average 3 – 5 years); national licensing exam to practice medicine | 5 – 6 years of medical school followed by residency training; licensing exam to practice medicine | 6 years of medical school followed by 5 – 6 years of residency training for specialties | 6 years of medical school followed by 3 – 5+ years of residency training; *state diploma; there is little or no variation between medical education programs across the different universities.*  *The initial medical education is divided in three cycles. The first and the second are common to all physicians. The third corresponds to the internship which defined the specialty. Even GP are doing an internship, it is considered as a medical specialty.* |
| **Licensing or regulatory agency to practice medicine** | Austrian Medical Chamber | Ministry of Health and Bulgarian Medical Union | Croatian Medical Chamber | National Supervisory Authority for Welfare and Health (Valvira), under the Ministry of Social Affairs and Health | French National Medical Council |
| **CME mandatory or not (tied to licensure)** | Mandatory for all physicians, includes QA of activities and CE providers; disciplinary sanctions for failure to meet; national CME database system for tracking | Not mandatory | Mandatory for all physicians | According to legislation, taking part in CME/CPD is required but it is not tied to licensure; may be required for individual physician if safety issues are identified in practice; Finnish Medical Association recommend that physicians track own CME/CPD | Mandatory for all health professionals; is a legal obligation but not enforced |
| **Number of CME credits required annually** | 250 points in 5 years or 150 in 3 years | None | 120 points in 6 years; points determined by Croatian Medical Chamber based on quality of educational offering | None though Finnish Medical Association recommends 10 days of external CME be paid for by employers annually | 3 years cycle incorporating educational activities, practice review and QI/patient safety activities (minimum of 2 activities of 2 different types); CPD programs must align with national priority goals defined by the government and professional organizations; no credit system |
| **Regulatory body for CME requirements for physicians** | Austrian Medical Chamber | Bulgarian Medical Union | Croatian Medical Chamber | Ministry of Social Affairs and Health together with Valvira | National Agency for CPD; governs CPD in all health professions |
| **Regulatory body for CME providers** | Austrian Medical Chamber | Bulgarian Medical Union | None | Medical schools, Finnish Medical Association and specialist societies | National Agency for CPD |
| **Types of approved CME providers** | Scientific societies, medical universities, university clinics and clinical institutes, hospitals, medical associations; have activity based and provider system | Specialty societies, universities | Hospital, university, professional society, pharma or device company | Universities, medical specialty societies, Finnish Medical Association; health care providers; some commercial providers (not pharma or medical industry) | Any organization registered with the National Agency for CPD; no link with the pharma industries are allowed. |
| **Types of CME formats/credits** | Multiple formats; elearning requires testing | Multiple formats | Multiple formats | Multiple formats | Multiple formats |
| **How CME credit awarded** | Point system (250 points in 5 years or 150 in 3 years) | Credits | Points based on quality of activity | For international only, 1 hour = 1 ECMEC credit | None |
| **Areas of opportunity as described by SME** | Overall quality is high with positive impact on knowledge and practice improvement; small impact on patient or population outcomes; fully controlled by profession; demand for CME/CPD exceeds supply and physicians have to participate on own time | Decrease barriers associated with lack of financial support for physicians to attend and lack of time; should create a system for accreditation and provide CE credit for digital CME | Teaching and hands-on courses most valuable; classical lectures less valuable; no control or evaluation of knowledge; opportunities include obligation for physician participants to demonstrate knowledge after engaging in CME/CPD and implementing evaluation of quality of content in CME/CPD; challenges for MDs who are working in specialties without pharma or device support or interest have difficulty finding relevant and/or affordable CME/CPD | Increase spending to CME/CPD by the employers;  Increase possibilities for physician to take part in CME/CPD; Develop new methods of CME/CPD, especially increasing interactive methods | Overall quality is improving as National Agency increases monitoring and evaluation; CPD aligned with national priorities and across the professions; opportunities include increasing engagement across the professions; implementing a policy and regulation system that can be enforced; resolving controversies over purpose and governance of CPD; fully funding CPD to increase access |
| **Interprofessional (IPE/IPCE) opportunities** | Exists and is recognized; physicians can claim credit as long as content is applicable to physician practice | Very rare | Exists and is supported across multiple professions | Exists but still rather rare | Exists |
| **Perception of industry supported CME** | Pharma may sponsor but not provide or control content | Pharma may sponsor activities | Most education is funded by pharma or device companies; pharma or device company can influence content; some efforts implemented to limit number of pharma or device company CME/CPD | Programs offered solely by industry (pharma, medical device) are not accepted as CME (or for specialist training). Industry support in the form of educational grants to the providers in accepted but strictly regulated. | Pharma does not provide funding and can’t develop or control content |

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|  | **Hungary** | **Italy** | **Netherlands** | **Norway** | **Poland** |
| **Country populationA**  **(2021)** | 9.71 million | 59.11 million | 17.53 million | 5.41 million | 37.75 million |
| **Number of physicians in country/1000 peopleB** | 3.4  (2018) | 8.0  (2019) | 3.7  (2018) | 4.9  (2019) | 2.4  (2017) |
| **Academic preparation** | 6 years followed by 4 – 6 years of residency training; national licensing exam to practice medicine | 6 years followed by residency training of 3 – 6 years; national licensing exam to practice medicine | 6 years of medical school followed by 3 – 6 years in residency training | 6 years of medical school followed by residency training (avg 6.5 years) | 6 years of medical school followed by 1 year internship; residency training is 4 -6 years; national examination to practice medicine |
| **Licensing or regulatory agency to practice medicine** | Hungarian Medical Chamber | Ministry of Health | Medical Specialties Council (CGS) and Dutch Medical Registration Council (RGS),  both part of the Royal Dutch Medical Association | Norwegian Directorate of Health (Helsedirektoratet) under the Ministry of Health and Care. | Chambers of Doctors (Regional and National)  Centre of Postgraduate Medical Education |
| **CME mandatory or not (tied to licensure)** | Mandatory for all physicians | Mandatory for all physicians | Mandatory for specialists only | Not mandatory | Mandatory but not enforced |
| **Number of CME credits required annually** | 250 credits in 5 years | 150 credits every 3 years | 1] 200 credits or hours in 5 years, plus  2] mandatory self-reflection as an individual practitioner and as a member of a team every 5 years | None | 200 points (credits) every 4 years; self-tracking by physicians |
| **Regulatory body for CME requirements for physicians** | Vocational and Continuing Education Center of the 4 medical universities | National College of Physicians and Ministry of Health | Medical Specialties Council (CGS) for regulations for requirements in general.  For accreditation standards of credits: the Scientific associations of the 34 medical specialties as an Accreditation assemblee | None | Chamber of Doctors (Regional and National) |
| **Regulatory body for CME providers** | Vocational and Continuing Education Center of the 4 medical universities | National CME Commission, governing body of the CME system, composed of representatives from Agenas, Ministry of Health, Ministry of Education, University and Research, Regions, National Federations of Health Professions Orders. | Scientific associations of the 34 medical specialties as an Accreditation assemble | None | Ministry of Health |
| **Types of approved CME providers** | Providers must be approved by the university education centers | Public and private providers, healthcare and non-healthcare providers, scientific societies, and professional associations. | Wide variety of organizations | Medical specialty societies and Norwegian Medical Association | Wide variety of organizations |
| **Types of CME formats/credits** | Multiple formats | Multiple formats | Multiple formats | Multiple formats | Multiple formats |
| **How CME credit awarded** | Credits | Credits are assigned on the basis of training methodologies (residential, field and FAD), duration, interactivity among participants and on the basis of objectives of particular national or regional interest. | Credits based on hours of training | Most often awarded as hours | Points or credits |
| **Areas of opportunity as described by SME** | Overall, high quality; increase online courses and skill-centered learning opportunities | Strengthening the skills of public and private personnel in charge of training in accredited providers; improving the training dossier so that it can truly become CPD. | Overall quality is good. Some physicians would prefer less regulation | Increase possibilities for physician to take part in CME/CPD if the system could be regulated by the authorities. | Improve the points collection system and the consequences of not meeting the requirements (200 points by 48 months); improve the opportunity of collecting points from international events; increase funding to participate; increase interprofessional collaboration |
| **Interprofessional (IPE/IPCE) opportunities** | Exists | Exists and strongly supported | Exists | Exist but not to a great extent | No |
| **Perception of industry supported CME** | Pharma can provide funding subject to the university education center requirements | Strict separation of industry from CME/CPD | Pharma can provide if it complies with accreditation standards set by scientific association | Programs offered by industry (pharma and device) are not accepted as CME | Pharma or device can support |

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|  | **Portugal** | **Spain** | **Sweden** | **Turkey** | **United Kingdom** |
| **Country populationA**  **(2021)** | 10.33 million | 47.42 million | 10.42 million | 84.78 million | 67.33 million |
| **Number of physicians in country/1000 peopleB** | 5.3  (2018) | 4.0  (2018) | 4.3  (2017) | 1.8  (2018) | 5.8  (2019) |
| **Academic preparation** | 6 years of medical school followed by 4 – 6 years of residency training; national examination to practice medicine | 6 years of medical schools followed by residency; national examination to entering to the specialize training | 6 years of medical school; residency training for 5+ years for specialists | 6 - 7 years of medical school; residency training for specialty practice is available | 5 years of medical school followed by 2 years as Foundation Trainees; residency training for 3 – 8 years |
| **Licensing or regulatory agency to practice medicine** | Portuguese Medical Council | Ministry of Education and General Medical Council | National Board of Health and Welfare (Socialstyrelsen), under the Ministry of Health and Social Affairs | Ministry of Health and Turkish Medical Association | General Medical Council |
| **CME mandatory or not (tied to licensure)** | Not mandatory | Not mandatory | Not mandatory | Not mandatory | Mandatory |
| **Number of CME credits required annually** | None | None | None | None | Regulator does not mandate a fixed number of credits; some specialties recommend 50 credits per year; appraisal revalidation process |
| **Regulatory body for CME requirements for physicians** | Portuguese Medical Council | None | None | None | General Medical Council |
| **Regulatory body for CME providers** | Self regulated and Portuguese Medical Council | None | None | Activity approval through Ministry of Health and Turkish Medical Association | No regulator; some Colleges offer CPD approval/  Accreditation process |
| **Types of approved CME providers** | Professional associations and universities | Wide variety of organizations but not approved for anybody | Universities and scientific societies | Specialty Associations and Chambers with approval of Ministry of Health and Turkish Medical Association | Wide variety of organizations |
| **Types of CME formats/credits** | Multiple formats | Multiple formats (ECMECs and Spanish credits) | Multiple formats | Multiple formats | Multiple formats |
| **How CME credit awarded** | None | Credits | For international only; 60 minutes = 1 ECMEC credit) | Credits determined by specialty associations | 1 credit = 1 hour of participation |
| **Areas of opportunity as described by SME** | Overall quality is good; CME/CPD tied to evaluation of knowledge and some practice change. Need to involve practitioners in needs assessment; campaign good practices in CPD and demonstrate theoretical or conceptual foundations; increase recognition for and organizational support for CME/CPD | Overall quality is good; CME/CPD tied to evaluation of knowledge and some practice. Need to potentiate the weight of professionals (Medical Colleges) and reduce the weight of the administration; implement a process for recertification | Regulate the CME/CPD. Employers should ensure that the employees are able to take part of CME/CPD; Individual CME/CPD plan for all doctors; Budget for external CME/CPD; External follow-up to ensure that CME/CPD activities have been offered to all the doctors; Ensuring CME/CPD in procurement of health care | Joint working group established in 2019 to evaluate CME system however COVID impacted progress; most CME focused on specialists and not general practitioners – should be more uniform; medical associations have opportunity to collaborate globally | Overall quality is high; CME/CPD tied to knowledge and practice improvement. Would explore decreasing number of approval bodies and/or more consistent criteria and processes across approving bodies |
| **Interprofessional (IPE/IPCE) opportunities** | Rare | No | Exists | Exists and supported | Exists and supported |
| **Perception of industry supported CME** | Can support but may not influence content or structure | Can support but may not influence content or structure | Regulations implemented but then opportunities for participation decreased | May sponsor and can provide in collaboration with medical associations | Can support but should not influence content or structure |

AAccessed at: <https://data.worldbank.org/indicator/SP.POP.TOTL>

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**Latin America**

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|  | **Argentina** | **Brazil** | **Chile** | **Costa Rica** | **Dominican Republic** | **Ecuador** |
| **Country populationA**  **(2022)** | 46.2 million | 215.3 million | 19.6 million | 5.18 million | 11.2 million | 18 million |
| **Number of physicians in country/1000 peopleB** | 3.9  (2020) | 2.1  (2021) | 3.0  (2021) | 2.8  (2021) | 1.4  (2019) | 2.2  (2017) |
| **Academic preparation** | 6 – 8 years of medical school | 6 years undergrad then 2 – 3 years (average) in residency | 7 years undergrad then can practice or specialize | 6 or 5 years undergrad (6 years if it is a public university / 5 years if it is a private university) then can practice or specialize | 5 – 7 years of medical school with a mandatory internship and a working year within the government umbrella (i.e. Pasantia) | 6 years undergrad then mandatory 1 year of rural training |
| **Licensing or regulatory agency to practice medicine** | Government/  Provinces | Federal Council of Medicine, a federal autarchy | Government | College of Physicians and Surgeons | Government | SENESCYT (Secretariat of Science and Technology) Recognition of titles or degrees;  CACES (Council for the Evaluation and Accreditation of Higher Education) Professional Qualification Exam. |
| **CME mandatory or not (tied to licensure)** | Not mandatory | Not mandatory for general practice; some specialty boards encourage participation | Not at present however new law passed in 2020 will require specialist physicians to recertify every 10 years through participation in CME | Voluntary | Not mandatory; CONAREM proposed 70 hours annually for recert but not accepted by profession | Not mandatory |
| **Number of CME credits required annually** | Incentives tied to participation | Based on specialty board; no official recertification exists. Primary care physicians used to receive extra credits to residencies’ selection. | None | 20 recertification credits annually; recertify every 3 years | Not required to practice; some specialty societies require members to participate | Not required |
| **Regulatory body for CME requirements for physicians** | Ministry of Health | Voluntary basis: Ministry of Health established an Open University (UNA-SUS) besides other initiatives public or private. | N/A | College of Physicians and Surgeons | CONAREM (7 member organization) | None |
| **Regulatory body for CME providers** | Scientific societies | Universities must follow Ministry of Education in order to offer specializations. Hospitals have some independence to offer informal CME | N/A | College of Physicians and Surgeons | CONAREM (7 member organization) | None |
| **Types of approved CME providers** | Universities; scientific societies; very few private companies | Universities and some Specialty boards | Universities and ASOFAMECH | Academic institutions or organizations; medical associations. | None | Private organizations and medical societies.  Faculties of Medicine grant academic endorsement. |
| **Types of CME formats/credits** | Multiple formats | Multiple formats; have country-wide database for CME/CPD system; multi-professional | Multiple formats | Multiple formats | Multiple formats | Multiple formats |
| **How CME credit awarded** | Sliding scale based on activity type | Admissions to public employment may require recognized specialization (thru residency or Specialty Board examination) and private sector tends to do the same. No formal need for medical practice. | N/A | Points system | Sliding scale based on activity type | Sliding scale based on activity type |
| **Areas of opportunity as described by SME** | Consider mandating CME/CPD; develop standards for CME/CPD providers; better link participation in CME/CPD to practice and patient outcomes; improve faculty skills; move to a competency-based model; increase IPE | Country focus has been on undergrad and residency training; more recent focus on CME/CPD; internet availability is a significant challenge in some areas; health care workforce concentrated in major cities | Need more financial support for CME | Quality of CME/CPD in country is very good and tied to increase in knowledge, practice improvement and patient outcomes. Fully controlled by the medical profession. Strong faculty skills.  Opportunity to increase more active learning opportunities. Time and cost can be barriers to participation. Perception of quality can be improved. | Political opposition to mandatory CME/CPD related to perceived discrimination against those who cannot afford to participate; requiring participation in CME/CPD will improve health care for population, improve human resource capital, standardize services, increase economic incentives for specialists | Would like to implement standard system to ensure the quality of practitioners; system could be tied to wages; would benefit from implementing a system to track participation and credit |
| **Interprofessional (IPE/IPCE) opportunities** | Limited availability | Not common but does exist | Does not exist with the exception of simulation | Exists | Uncommon | The scheduled events (courses, congresses) can be for multiprofessional audience according to the theme. Not only professionals but also students can participate. |
| **Perception of industry supported CME** | Educational activities developed by pharma are considered “low value” e.g. low credit value awarded; pharma can provide support for CME/CPD but cannot control content | Pharma cannot be a provider | Pharma cannot provide or fund or control content of CME | Pharma cannot provide CME/CPD but can support CME/CPD with funding. | Much of CME/CPD provided by pharma reps in MD offices; most education is promotional and not independent; focused on selling products and not on country level needs | Pharma may provide support but new law limits pharma influence and involvement |

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|  | **Mexico** | **Panama** | **Peru** | **Uruguay** | **Venezuela** |
| **Country populationA**  **(2022)** | 127.5 million | 4.4 million | 34 million | 3.4 million | 28.3 million |
| **Number of physicians in country/1000 peopleB** | 2.4  (2020) | 1.6  (2020) | 1.6  (2021) | 6.2  (2021) | 1.7  (2017) |
| **Academic preparation** | 4 years undergraduate, 1 year of Internship in hospital and 1 year on Social Service that is mandatory for graduated. | 6 years undergrad then 2-year internship; optional residency and fellowship programs | 7 years undergrad including 1 year hospital internship plus 1 year in public service | 7 years undergrad then 1-year mandatory internship | 6 years of medical school |
| **Licensing or regulatory agency to practice medicine** | Ministry of Education | National Health Technical Council of the Ministry of Health | Government and Colegio Médico del Perú | Education and Health Ministers, and the Uruguayan College of Physicians | Ministry of Health (Initial License) |
| **CME mandatory or not (tied to licensure)** | Not mandatory for general practice;  mandatory for specialists | Not mandatory for any level of license | Recent move to mandatory; validation via recertification every 5 years | Not mandatory | Not mandatory, not tied to license, neither renovation of license |
| **Number of CME credits required annually** | Specialists required to complete CME/CPD every 5 years (~ 250 – 300 points/5 years) | Not required but is recommended | Recent move to required every 5 years but no validation system | Not required | Not defined, totally voluntary |
| **Regulatory body for CME requirements for physicians** | ConACEM (Certification of Medical Specialties in Mexico) - national council and specialty boards | None; employer maintains participation record; economic bonus may be awarded for those who attend regularly. National Medical College should act as a regulatory body with the National Health Technical Council; not occurring or enforced. | None | None. The Uruguayan College of Physicians has that power by Law but has not implemented it. | None |
| **Regulatory body for CME providers** | Activity approval system; national council of specialties approves | School of Medicine CME Commission | None | National Accreditation Commission | None |
| **Types of approved CME providers** | Primarily universities and medical associations or societies | Medical societies; supervised by the School of Medicine of the University of Panama. | Many types including pharma | Public or private health related organizations such as schools of medicine, scientific societies, and health care delivery organizations | Medical Societies or Associations, Medical Institutions |
| **Types of CME formats/credits** | Multiple formats | Multiple formats | Multiple formats | Multiple formats | There is not an established type of format/credit in our country |
| **How CME credit awarded** | Sliding scale based on activity type | Sliding scale based on activity type | Sliding scale based on activity type | Sliding scale based on activity type | There is not an established type of format/credit in our country |
| **Areas of opportunity as described by SME** | Create regulations to validate CME; standardize certification exams in specialties and general medicine; certify medical specialty programs and align with recertification every 5 years; align CME/CPD requirements with licensure; it is too easy to collect CME/CPD points; education is not aligned with actual practice gaps | Implement mandatory system and quantitative assessment and audits to check progress; need to upskill faculty for CME/CPD; need focus on development of competencies; make CPD “wider and deeper” | Education provided is not aligned to needs; no validation system for participation or quality; cost of CME/CPD is cost prohibitive due to low salaries | Increase emphasis on sequential activities, and online and hybrid education; increase IPE/IPCE; increase coordination with other countries and regions; better integrate CME/CPD into health care system; increase incentives to participate | There is an opportunity to create a SME adapted to our country conditions |
| **Interprofessional (IPE/IPCE) opportunities** | Not available | Rare | Very rare | Exists and accredited CME/CPD values IPE design | Happens frequently |
| **Perception of industry supported CME** | ~ 70% of CPD in country is promotional; pharma tries to influence content and practice decisions | Pharma can be a provider if main objective is teaching; do not control content or help to develop it; bias needs to be evaluated | Pharma can provide education; may pay faculty to do promotional education; may pay physicians to attend education | Pharma can fund activities but may not develop or control content in accredited CME/CPD | Pharma can fund but not provide directly; device companies can provide; |

AAccessed at: <https://data.worldbank.org/indicator/SP.POP.TOTL>

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**Middle East/North Africa**

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|  | **Algeria** | **Kingdom of Bahrain** | **Dubai (UAE)** | **Egypt** | **Israel** | **Jordan** |
| **Country population (source: World Bank)A**  **(2022)** | 44.9 million | 1.47 million | 9.44 million | 111 million | 9.56 million | 11.3 million |
| **Number of physicians in country/1000 peopleB** | 1.7  (2018) | 0.8  (2016) | 2.9  (2020) | 0.7  (2019) | 3.7  (2021) | 2.5  (2019) |
| **Academic preparation** | 7 years for the Doctor of General Medicine degree followed by residency (avg. 4 years) | 7 years of medical school followed by one year an internship (post-secondary school) | 5 – 6 years post-secondary followed by 1 year internship | 6 years post-secondary followed by 1 year internship | Dual model (4 year baccalaureate followed by 4 years of medical school OR 6 – 7 years post-secondary school) | 6 years post-secondary followed by 1 year internship |
| **Licensing or regulatory agency to practice medicine** | Ministry of Health at the Federal and Departmental levels, and the National Board (Conseil de l’Ordre) of physicians | National Health Regulatory Authority (NHRA) | 4 regulatory bodies: Department of Health; Ministry of Health and Prevention; Dubai Health Authority; Dubai Healthcare City | Ministry of Health – Medical Syndicate | Israeli Ministry of Health | Ministry of Health, Jordan Medical Council, and Jordan Medical Association |
| **CME mandatory or not (tied to licensure)** | Not mandatory | Mandatory | Mandatory | Before 2020, voluntary; After 2020, mandatory | Not mandatory. Voluntary credit system from Israeli Medical Association’s Scientific Council | Mandatory |
| **Number of CME credits required annually** | None | 30 hours annually | 40 credits annually; 70% must be in specialty practice area | 250 CPD credits every 5 years | None | 100 points every 5 years |
| **Regulatory body for CME requirements for physicians** | Ministry of Health, Committee for Continuing Education | National Health Regulatory Authority (NHRA) | Dubai Health Authority, Health Regulation Department | Compulsory Egyptian Medical Training Authority (CEMTA) that will be renamed as the Egyptian Medical Specialties Council (EMSC) | Not applicable | Jordan Medical Council |
| **Regulatory body for CME providers** | Ministry of Health through the Directorate of Training | National Health Regulatory Authority (NHRA) | Applicable regulatory body from region | CEMTA CPD Committee | Education Committee of IMA’s Scientific Council | Jordan Medical Council |
| **Types of approved CME providers** | Private organizations | Health Training Institutes, NHRA Health Care Facilities, Licensed Companies with CR that have training activities | Activity approval system, most often from health care facilities | Academic institutions, medical associations, private education companies, governmental agencies, health care organizations, foundations and NGOs | Any medical organization can present content for CME. Pharma can apply for approval of CME as long as they comply with the rules of the Ethics Committee of the IMA | Hospitals and health care systems (Public and private), Universities (public and private), Medical Societies and associations |
| **Types of CME formats/credits** | No credit but do get certificate of attendance or participation. | Multiple formats in 3 designated categories (A, B and C); limits by category | Multiple formats in 3 designated categories (A, B and C) | Multiple formats | Multiple formats | Multiple formats |
| **How CME credit awarded** | None | Hours of participation and sliding scale | Hours of participation and sliding scale | Hours of participation | Sliding scale | Sliding scale |
| **Areas of opportunity as described by SME** | All regulatory, organizational and academic work remains to be done to allow CME activity to be developed in Algeria. | Decrease activity approval time; increase amount of required hours of credit | Implementing a more robust and efficient accreditation system; continue to improve quality including maintenance of records; benchmark system with international accreditation standards | Implementing international accreditation standards for CPD; implementing mutual recognition of CPD within region; recognizing engagement in CPD towards requirements for promotion and hiring decisions; implementing outcome-based performance improvement CPD; identifying and standardizing expected competencies; increasing IPCE; integrating CPD with QI; expanding CPD to address population and public health issues | Compensation for participation;  protected work time; believe better to encourage than to sanction; have considered prizes or recognition for physicians who engage; much discussion re: compulsory or not; no incentives or official requirements related to recertification (MDs do not generally want); workload does not allow sufficient time for CME; most physicians engage in CME without having a supervisory or mandatory requirement | Opportunity to assess impact on knowledge, practice or patient/population outcomes; laws related to CE requirements are not consistently enforced; opportunity to increase HCP engagement, particularly in rural areas; challenges with HCP motivation to participate; multiple languages can be a barrier |
| **Interprofessional (IPE/IPCE) opportunities** | An interesting aspect to develop once the regulatory aspects are well implemented. | Exists and is encouraged | Common and readily available | Not common; most often related to simulation; revalidation of license not required by other profession therefore not incentivized to participate | Some opportunities but most train within their own profession; more in simulation setting | Limited to certain teaching hospitals; encouraged but physician workforce not supportive |
| **Perception of industry supported CME** | The majority of the activity carried out each year in the framework of CME is financed by the pharmaceutical industry. This state of affairs is accepted by the organizations that provide training and is tolerated by the supervising administration (Ministry of Health). The subject is however being debated within the medical community with regard to the conflict of interest that direct/exclusive funding of CME by the pharmaceutical industry could imply. | Pharma can sponsor but not provide education | Pharma can sponsor but not provide education | Pharma can provide funding for physicians to participate but most often directed to senior staff; lack of separation between pharma and development of education (biased) | Pharma may fund conferences or courses subject to ethical guidelines; MD must declare if speaking on behalf of a pharma company; many informal contacts between pharma and MDs take place | Pharma can sponsor but may not control content |

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|  | **Kingdom of Saudi Arabia (KSA)** | **Kuwait** | **Lebanon** | **Morocco** | **Oman** | **Qatar** |
| **Country population (source: World Bank)A**  **(2022)** | 36.1 million | 4.27 million | 5.49 million | 37.46 million | 4.58 million | 2.7 million |
| **Number of physicians in country/1000 peopleB** | 2.8  (2021) | 2.3  (2020) | 2.6  (2019) | 0.7  (2017) | 2.0  (2020) | 2.5  (2018) |
| **Academic preparation** | Baccalaureate for physicians, dentists, applied medical scientists, pharmacists and nurses; diploma or equivalent for technicians | Dual model (4 year baccalaureate followed by 4 years of medical school OR 6 – 7 years post-secondary school) | Dual model (4 year baccalaureate followed by 4 years of medical school OR 6 – 7 years post-secondary school) | 5 years post-secondary school followed by internship (2 years plus thesis) or general practice (2 years plus thesis) | 7 years post-secondary school followed by 1 year of internship | Dual model (4 year baccalaureate followed by 4 years of medical school OR 6 – 7 years post-secondary school) |
| **Licensing or regulatory agency to practice medicine** | Ministry of Health, Saudi Commission for Health Specialties | Government/  Ministry of Health | Ministry of Health | Moroccan Medical Board | Government/Ministry of Health; expats must pass licensing exam | Ministry of Health, Department of Health Professions |
| **CME mandatory or not (tied to licensure)** | Mandatory | Required for most but at certain levels of physician practice it becomes optional | Not required but is recommended; required if want to hold position in Lebanese Order of Physicians | Not required | Not required but hoping to implement in 2021 | Mandatory |
| **Number of CME credits required annually** | 30 hours per year for physicians and dentists; 20 hours per year for applied medical scientists and pharmacists; 15 hours per year for nurses; 10 hours per year for technicians | 40 credits | Recommend 25 units annually for physicians; hospitals may require CME/CPD for privileges; CPD is required for pharmacists and nurses | None | There is a general guidance for each profession in terms of recommended numbers of credits in each category per cycle | 40 credits annually for all HCPs |
| **Regulatory body for CME requirements for physicians** | Saudi Commission for Health Specialties | Kuwait Institute for Medical Specializations (KIMS) | Lebanese Order of Physicians | No formal system | Oman Medical Specialty Board | Ministry of Health, Department of Health Professions |
| **Regulatory body for CME providers** | Saudi Commission for Health Specialties | Kuwait Institute for Medical Specializations (KIMS) | None | None | Oman Medical Specialty Board | The Ministry of Public Health’s Department of Healthcare Professions (DHP) -Accreditation Section (AS) formerly the Qatar Council for Healthcare Practitioners  (QCHP) |
| **Types of approved CME providers** | E- Learning Website, healthcare Administrative Entity, Healthcare Association, Healthcare Training Center, Hospital, University / College | Public (Governmental) and Private institutions. For profit and non-profit organizations. | Societies, universities, hospitals | Universities, medical associations, health institutions, private training centers (not regulated), pharma | Hospitals and health care organizations, universities, training organizations (government or private) | Academic Institutions; Governmental Healthcare Providers; Private Healthcare Providers |
| **Types of CME formats/credits** | Multiple formats | Multiple formats | Multiple formats | Multiple formats | Multiple formats | Online; Face to Face; Blended |
| **How CME credit awarded** | Awarded by accredited CPD provider who provide accredited activity by SCFHS.  Or health practitioner how submits attending document of international activity directly to SCFHS. | Sliding scale based on activity type (Category 1 and 2) | Sliding scale based on activity type | None | Category 1 – by hour  Category 2 – by scale | Category 1: accredited group learning activities = 1 credit per hour.  Category 2: self-directed learning activities =varying credit ratings depending on the specific self-directed learning activity  Category 3: assessment activities = credit rating of 2 credits per hour; the total credit value of activities varies depending on the length of each activity. |
| **Areas of opportunity as described by SME** | Overall quality of CPD provider performance is improving; working to link engagement in CPD to improved knowledge, practice and patient/population outcomes; faculty skills in CPD growing; opportunity to promote a positive CPD culture, encourage interprofessional CPD, and inspire HCP to lifelong learning | Need to transform from didactic to engagement delivery style; need more influence on active learning strategies; need faculty development; increase emphasis on health vs medicine; need more collaboration with other specialties; need to engage more professions in system | Mandate periodic recertification; mandate CME/CPD for recertification; establish central body to identify CPD needs and implement steps to address; coordinate common content for HCPs; convert live to online; implement more practice-based activities to close care gaps | Implement structured system for CME/CPD; implement standards for CME/CPD; tie CME/CPD requirements to licensure; increase faculty development support; develop funding sources; develop infrastructure to reach SME resources; implement system to evaluate effectiveness | Independent regulation of CPD: need a central fund to support education; needs to be more individualized to the learner; needs to be more developmental; need faculty development to more contemporary teaching skills; feedback not commonly accepted; need more resources to improve educational design; need data to evaluate performance of individuals and teams; need to develop lifelong learning skills; need to implement more contemporary model of CME/CPD | Some professions need more options for CPD; align digital activities to permit Category 1 credit (asynchronous is Category 2 only); majority of employers are unwilling to pay for CME/CPD and do not give release time for staff to participate |
| **Interprofessional (IPE/IPCE) opportunities** | Emerging and encouraged | Available and encouraged | Regularly offered | Essentially absent unless in clinical area where physicians and nurses work closely together | Rare; not traditionally accepted; uniprofessional model of education is a barrier; lack faculty skills to teach IPE/IPCE | IPE/IPCE dominates single profession; more frequent in governmental and academic institutions and less in private organizations |
| **Perception of industry supported CME** | Aligns with ACCME standards | Phama can support but cannot provide or control content | 80 – 90% of education is funded by pharma; physicians have little interest in self-pay; recently obtained ACCME accreditation and comply with those standards | Pharma can be a provider of CME/CPD; directly finances physician training; impacts CE opportunities (e.g. very developed in some clinical areas like oncology but absent in other clinical areas) | Physicians often request pharma support to attend | Aligned with ACCME standards; documentation requirements are disincentive for pharma funding; lack of employer support increases engagement in pharma-supported CPD |

AAccessed at: <https://data.worldbank.org/indicator/SP.POP.TOTL>

BAccessed at: <https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=PH>