Medical Regulation

Ten Key Trends Emerging from an International Review

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ABSTRACT: The licensing and regulation of physicians is an important topic worldwide and is often tied to discussions in various countries of health care system reform. We conducted a review of current practices for regulating physicians as a key group of health care professionals in eight jurisdictions in Asia and other parts of the world in order to draw implications for the development of future regulatory policies in Hong Kong. Jurisdictions studied included Australia, Canada, China, Malaysia, New Zealand, Singapore, the United Kingdom and the United States. A literature search, supplemented by interviews, was conducted. In analyzing information gathered about global regulatory systems, we used a framework for comparing regulatory typology, developed by the RAND Europe research institute. Our review found that the jurisdictions studied exhibited both similarities and differences in terms of how physicians are regulated and by whom. As a result of our search, we were able to identify 10 key trends in international medical regulation of importance to Hong Kong as it considers reforms to its health care system overall:

1. Changes in medical regulation are seen as a way of improving the quality of patient care.
2. Reform of medical regulation often requires government legislation.
3. The creation of common principles for policies, structures and the organization of regulation between professions is an emerging practice.
4. The involvement of lay people on boards and in inquiries is increasingly common.
5. Medical regulation is moving away from models of self-regulation and toward regulatory models that emphasize partnership between professions and the public, physicians and patients.
6. Health care providers and institutional regulators play complementary roles in medical regulation.
7. Regulation impacts the quality of care — not just the detection and remediation of poor performance.
8. Investigatory and disciplinary functions are increasingly separated and organized independently of each other.
9. Continuous Professional Development (CPD) is compulsory for physicians in many jurisdictions.
10. Overseas medical graduates are admitted into practice in different ways from country to country.

These trends are important for regulators in all countries to note as they assess the basic structure and effectiveness of their own medical regulatory systems.

Introduction

Regulation can be defined as "sustained and focused control exercised by a public agency over activities which are valued by a community."[1] In the health care context, it is "any set of influences or rules exterior to the practice or administration of medical care that imposes rules of behaviors."[2] There are two important linked concepts of regulation that are considered "oversight" by an external party using a specific set of commands/rules to "shape/influence the behavior" of health professionals.[3] Because of the requirement for higher levels of relevant expertise and technical knowledge in medical regulation, the first, more restricted, definition of regulation — which is limited to the commands/rules exercised by public agencies with powers from legislation, administrative decrees and judicial orders — is not sufficient. In order to ensure the quality of care provided by health care professionals — particularly physicians — the second, broader definition of regulation in the healthcare context is used in this study. According to the United Kingdom's Department of Health, this broader

AT ITS BEST, REGULATION PROVIDES GUIDANCE FOR ESTABLISHING BEST PRACTICES AND FOSTERS PERFORMANCE IMPROVEMENT THROUGH CONTINUOUS MEASUREMENT AND FEEDBACK PROCESSES.

approach to regulation includes voluntary self-regulation and employer-led regulation in addition to statutory regulation, in which professionals or providers collaborate and agree to a set of standards and code of practices independent of the statutory framework.[4] Taken together, these broad regulatory strategies represent a kind of "regulatory pyramid" that begins with persuasion via more cooperative strategies at its base and moves progressively upward to more punitive approaches.[5] Incentives are sometimes used to encourage or discourage certain institutional and individual behavior.[5] Viewed in this broad context, the basic purposes of professional regulation, including medical regulation, are to ensure quality of care through the provision and monitoring of minimally acceptable standards of care and to provide public assurance about the quality and safety of care provided to patients.[6] At its best, regulation provides guidance for establishing best practices and fosters performance improvement through continuous measurement and feedback processes.

However, there are global challenges for medical regulators, due mainly to the changing environment of medical practice — which is continuously influenced by developments in technology and scientific knowledge and the definition of the physician-patient relationship.[7] The public's trust in physicians has also changed,[8] partly because of examples of malpractice highlighted by the media. Access to electronic information and increased consumer empowerment has also contributed to changes in professional governance, reflected in an increasing desire for greater public accountability and transparency and greater lay representation on professional governing bodies.[6]

...THERE ARE GLOBAL CHALLENGES FOR MEDICAL REGULATORS, DUE MAINLY TO THE CHANGING ENVIRONMENT OF MEDICAL PRACTICE — WHICH IS CONTINUOUSLY INFLUENCED BY DEVELOPMENTS IN TECHNOLOGY AND SCIENTIFIC KNOWLEDGE AND THE DEFINITION OF THE PHYSICIAN-PATIENT RELATIONSHIP.

Aware of these global challenges, and their impact on the practice of medicine, the Food and Health Bureau (FHB) of the Government of the Hong Kong Special Administrative Region (HKSAR) commissioned our team to provide an updated international review of health care professional regulation — including medical regulation — in order to help identify any areas in which Hong Kong's approach to professional regulation could be updated to strengthen the oversight of health care professionals. A full report, including international comparisons across six health professional groups in eight jurisdictions has been presented to the FHB.[9] In this paper we present ten key global trends in medical regulation, derived from the policy review that forms the basis of our recommendations to the HKSAR.

MEDICAL REGULATION IN HONG KONG IS CHARACTERIZED BY A HIGH DEGREE OF PROFESSIONAL AUTONOMY — AN ENVIRONMENT IN WHICH PHYSICIANS EFFECTIVELY SELF-REGULATE.

Medical Regulation in Hong Kong

Medical regulation in Hong Kong is characterized by a high degree of professional autonomy — an environment in which physicians effectively self-regulate. Physicians must register with and become licensed by the Medical Council of Hong Kong (which is a statutory body under the Medical Registration Ordinance) before they can practice. Hong Kong does not have a structured, ongoing assessment and monitoring system for physician performance. Only specialists, who are members of specialist Colleges collected under the Hong Kong Academy of Medicine, are mandated to participate in Continuing Professional Development (CPD) programs. For non-specialists, CPD is undertaken on a voluntary basis. Poor performance and professional misconduct is detected primarily through public/patient complaints.

Of the 28 members that make up the Medical Council, four are lay members appointed by the Chief Executive (14%), whereas the others are appointed or elected professional members.

Hong Kong has a strict entry requirement for physicians who have been trained outside the country, requiring them to pass a licensing examination administered by the Medical Council as well as participate in a supervised one-year internship before they are allowed to practice in Hong Kong with a full license. To tackle the acute manpower shortage in the public sector, Hong Kong's public hospitals have begun to recruit these internationally-trained physicians to practice in the public sector

under the Limited Registration Scheme for a fixed period of time under restricted circumstances.

Methods

In commissioning our team for its review of global regulatory trends, the FHB defined the target health professionals as those six health professional groups which were currently under statutory regulation in the Hong Kong Special Administrative Region (HKSAR) of China (see Appendix 1). Eight jurisdictions were chosen. Three jurisdictions were located in Asia (China, Malaysia, Singapore) with the remainder located in the West (Australia, Canada, New Zealand, United Kingdom, and the United States). The UK, Australia, New Zealand, Singapore, and Malaysia were chosen because they shared historical roots in the evolution of their medical education and framework for regulation of the health professions. The United States and Canada, representing regulatory systems in North America — were chosen to provide perspectives from a different system of medical education and regulation and to enable greater insight for analysis and synthesis. China was chosen for its relevance to HKSAR — since sovereignty over Hong Kong was transferred back to mainland China in 1997 — and because the regulatory system in China is of more recent origin and still developing.

The six groups of health professions targeted for our broad study included physicians, nurses, dentists, Chinese Medicine practitioners, pharmacists, and a group that included a range of other health care professionals — including occupational therapists, physiotherapists, medical laboratory technologists, optometrists, radiographers and chiropractors, which are under statutory regulation in Hong Kong (see Appendix 1). For the purposes of this paper, we have targeted our findings impacting the regulation of physicians.

Data were collected using a "4Ps" analytical framework, taking account the perspectives of policymakers, providers, professionals, and public/ patients. This framework has been adopted in other research projects conducted by our team.[10]

While we analyzed and described current regulatory practices from the perspective of each of these groups in our broader study, for the purposes of this paper our work is limited primarily to the policy aspects of medical regulation.

To identify relevant policies as we compared international regulatory systems, we reviewed available scholarly literature in Medline, documents and reports from government sources, national institutions, regulatory/professional bodies and other relevant organizations in the eight jurisdictions targeted. We cross-referenced bibliographies during our search to ensure comprehensiveness.

In addition, to enhance our understanding of the policymaker perspectives in the UK, Australia, Singapore and Malaysia, we conducted interviews with government officials and leaders of professional organizations in these countries to clarify information and to supplement our online search efforts.

Comparative Data Analysis

Content analysis was conducted to analyze the qualitative data collected.[11] We adopted the typology of medical regulation developed by RAND Europe as a framework to guide our comparative data analysis.[12] This RAND Europe review was commissioned by the General Medical Council of the UK to study the medical regulatory systems in 10 countries in Europe, Africa and South Asia — aiming to provide evidence on the registration of these non-UK qualified doctors to practice in the UK. We included six major areas in the typology of medical regulatory systems for the purposes of our study: (i) structure and nature of regulation and regulatory body (bodies), (ii) the registration process and requirements, (iii) medical education (iv) standards and ethics, (v) revalidation/ competence assurance/ recertification, (vi) fitness to practice and related disciplinary procedures and sanctions. Content analysis was performed by our primary researcher, with documents being independently reviewed by a second researcher. Results were compared to ensure their validity.

THE SIX GROUPS OF HEALTH PROFESSIONS TARGETED FOR OUR BROAD STUDY INCLUDED PHYSICIANS, NURSES, DENTISTS, CHINESE MEDICINE PRACTITIONERS, PHARMACISTS, AND A GROUP THAT INCLUDED A RANGE OF OTHER HEALTH CARE PROFESSIONALS...

Ethics Approval

Ethics approval was obtained for the study from the Survey and Behavioral Research Ethics Committee at the Chinese University of Hong Kong.

Results and Discussion

Analysis of the policy literature, supplemented with semi-structured interviews, enabled the synthesis of 10 key medical regulatory trends for the FHB, which could be mapped onto the RAND analytical framework (Table 1). Table 1 shows that there were six key trends related to the structure and nature of medical regulation, including the purpose of medical regulation and interaction between different regulatory bodies; two trends related to professional standards and the mechanisms to detect and deal with poor performance; one trend referring to investigatory and disciplinary features; and one trend related to the registration requirements for internationally-trained medical graduates.

Structure and Nature of Medical Regulation

1. Changes in medical regulation are seen as a way of improving quality of patient care.

Amidst growing demand by both public and patients for transparency about standards of care and medical practice, many jurisdictions are adopting regulatory reforms of their health care professions—including their medical professions. These changes are often triggered by scandals and political interests. The driving force behind most reform of medical regulation is the concern for ensuring better standards of care for patients and protecting the public from harmful medical practice.[13] A good example is the case of Dr. Harold Shipman, the general practitioner who was convicted of murdering more than 200 of his older patients over a 20-year period. Dr. Shipman's case was one of the triggers for significant reforms of the regulation of doctors in the UK. A series of white papers was published following the Shipman Inquiry, the Bristol pediatric surgery scandal and other events, and these developments led to significant changes in the regulation of physicians' professional practice in the UK.[14,15] More recently, the investigation in 2015 into excess maternal and perinatal deaths in the Morecombe Bay hospitals in the UK found that the clinical competence of a proportion of staff fell significantly below the standard for a safe, effective service.[16] Essential knowledge was lacking, guidelines were not followed and warning signs in pregnancy were sometimes not recognized or acted on appropriately.[16] As a result, regulatory practice for the relevant institutions and professions has been reviewed by the UK Department of Health.[16]

AMIDST GROWING DEMAND BY BOTH PUBLIC AND PATIENTS FOR TRANSPARENCY ABOUT STANDARDS OF CARE AND MEDICAL PRACTICE, MANY JURISDICTIONS ARE ADOPTING REGULATORY REFORMS...

In Hong Kong, the trend recently has been for the beauty industry to incorporate medical personnel

Table 1
Ten Key Trends in Medical Regulation from an International Review Using the Typology of Medical Regulation, RAND Europe, 2009

Typology (RAND Europe, 2009)	Key Trends
Structure and nature of medical regulation	1. Changes in medical regulation are seen as a way of improving quality of patient care. 2. Reform of medical regulation often requires government legislation. 3. The creation of common principles for policies, structures and organization of regulation between professions is an emerging trend. 4. Involvement of lay people on boards and in inquiries is increasingly common. 5. Medical regulation is moving away from models of self-regulation and toward regulatory models that emphasize partnership between professions and the public, physicians and patients. 6. Health care providers and institutional regulators play complementary roles in medical regulation.
Revalidation/competence and assurance/recertification	7. Regulation impacts the quality of care—not just the detection and remediation of poor performance.
Fitness to practice and related disciplinary procedures and sanctions	8. Investigatory and disciplinary functions are increasingly separated and organized independently of each other.
Standards and ethics	9. Continuous Professional Development (CPD) is compulsory for physicians in many jurisdictions.
Medical education; registration process and requirements	10. Overseas medical graduates are admitted into practice in different ways from country to country.

into businesses in order to attract consumers. In 2012, a woman died in a beauty salon after undergoing a high-risk procedure undertaken by a medical practitioner that included auto blood transfusion with contaminated blood for the purpose of rejuvenating the woman's appearance. This raised issues of standards and scope of practice of physicians, prompting the government to propose a series of regulatory changes to improve the quality and safety of care.[17,18]

In another example of regulatory policy being used to improve the quality of care, Malaysia's efforts to encourage medical tourism have stimulated reform of the regulatory structures there, including the need to embrace both public and private sectors with common standards for quality assurance and regulatory governance.[19]

All of these examples help underscore that medical regulatory processes and policies exist on a developmental continuum, affected by a wide range of factors — from economic interests to public opinion and changing public expectations.

2. Reform of medical regulation often requires government legislation.

Regulatory systems may impose legal restrictions on, or controls over, physicians' practices through legislation, administrative decrees and/or judicial orders. Reform of medical regulation has required governments to take action either by creating new legislation or amending existing legislation. For example, the General Medical Council of the UK was reconstituted to reduce its membership from 35 to 24 in 2009, and further decreased to 12 in 2013 to simplify its governance arrangements and to focus on strategy and the management of its executives.[20]

Another example of regulation reform through legislative change is the creation of umbrella legislation to ensure regulatory consistency. Table 2 shows the different legislative models used across the jurisdictions highlighted in this paper. Australia, New Zealand and six provinces/territories in Canada have enacted umbrella health profession legislation; that is, the use of a single overarching statute that makes procedures uniform across professions in order to ensure the

Table 2
Legislative Models Across the Jurisdictions

Jurisdiction	Structure of Legislation		Notes
	Overarching Ordinance	Individual Ordinance for Each Profession	
Australia*	✓	—	• Health Practitioner Regulation National Law Act (2010) • Australian Health Practitioner Regulation Agency (Overarching body)
Canada	✓ (In six provinces/ territories only)	✓ (For the other provinces/ territories)	• *British Columbia: Health Professions Act (1996); Alberta: Health Professions Act (2000); Manitoba: The Regulated Health Professions Act (2009), Ontario: Regulated Health Professions Act (1991); Newfoundland and Labrador: Health Professions Act (2010); and Yukon Territory: Health Professions Act (2003)* • Umbrella health profession legislation co-exists alongside individual statues that regulate professions
China (Mainland)	—	✓	Single act for each profession
Hong Kong	✓ (For allied health professions only)	✓	*Supplementary Medical Professions Ordinance (Cap 359)* to regulate five allied health professions
Malaysia	—	✓	Single act for each profession
New Zealand	✓	—	*Health Practitioners Competence Assurance Act (2003)*
Singapore	✓ (For allied health professions only)	—	Allied Health Professions Act (2011) to regulate three allied health professions
United Kingdom*	✓ (For allied health professions only)	—	• *Health Professions Order (2001)* to regulate 15 health professions. • Professional Standards Authority for Health and Social Care (overarching body)
United States	—	✓	Single act for each profession, but varies state to state for physicians

Notes: *Australia and United Kingdom have overarching bodies to bring commonality to values and processes between professions, following the same procedures for registration, administration of the governing broad, and complaints resolution and professional discipline processes.

Sources: medical council/board of the relevant jurisdictions

consistency of regulation among various health care professions. Such a structure has not been proposed in the jurisdictions in Asia that we studied, although government oversight of regulation there is greater than in the Western jurisdictions.

In Hong Kong, as in other jurisdictions, if the government wishes to reform medical regulation, its Legislative Council must agree to the changes and formally pass them into law after a period of debate.

3. The creation of common principles for policies, structures and the organization of regulation between professions is an emerging trend.

Increasingly, consideration is being given to including medical regulation within broader umbrella legislation in order to ensure nationally consistent legislation across professions. In Australia, for example, the Australian Health Practitioner Regulation Agency was established in 2010 to bring commonality to the values and processes between health care professions, who now follow similar procedures for registration, administration of their governing body, complaints resolution and professional disciplinary processes.[21] The Agency supports the 14 National Boards that are responsible for regulating the health care professional groups in managing the registration of health practitioners and investigations into professional conduct and performance. The UK's Professional Standards Authority of Health and Social Care is another example of an overarching body that oversees diverse regulators as a form of meta-regulation.[22] The decision on whether to have an overarching body, separate regulatory bodies or self-accreditation generally involves a combination of history, lobbying and the desire of individual professions to have greater control over their own regulations.[23]

4. Involvement of lay people on boards and in inquiries is increasingly common.

Along with the demand for greater public accountability and transparency, lay representation is becoming the norm globally in medical regulation. Table 3 shows the current structure of medical

Table 3
Current Structure of Regulatory Bodies for Physicians

Jurisdiction	Composition			Notes
	Lay (%)	Professional Members (%)	Total Number	
Australia *(Medical Broad of Australia)*	36%	67%	11	Appointed professional members
Canada — *varies across provinces*				All are elected professional members°
British Columbia	33%	67%	15	
Ontario	42%	58%	33	
Hong Kong *(Medical Council of Hong Kong)*	14%	86%	28	Includes elected and appointed professional members
Malaysia* *(Malaysian Medical Council)*	0%	100% (with government officials)	33	• Director General of the Ministry of Health is the ex-officio President and Registrar • Includes elected and appointed professional members
New Zealand *(Medical Council of New Zealand)*	33%	67%	12	Includes elected and appointed professional members
Singapore* *(Singapore Medical Council)*	0%	100% (with government officials)	25	• Director of Medical Services is the Registrar • Includes elected and appointed professional members
United Kingdom *(General Medical Council)*	50%	50%	12	Appointed professional members
United States — *varies across states*				Appointed professional members in most states, some by governors others by medical society lists. Public members by governors
Florida	20%	80%	15	
Texas	37%	63%	19	

* With strong government oversight.

Note: The Ministry of Health in China (mainland) is the center of health professional regulation, and there is no lay involvement.

Sources: medical council/board of the relevant jurisdictions

regulatory bodies in our study, including membership composition. The degree of public/patient involvement in medical regulation varies from jurisdiction to jurisdiction. Lay representation on medical councils/boards in our study varied from a high of 50% in the UK to 0% in Singapore, Malaysia and mainland China, where there is greater government oversight –highlighting significant differences between jurisdictions in some of Asia compared with the West. The general global trend, however, is toward an increase of involvement of lay people on boards, review panels and inquiries in medical regulation. A UK study found that the public preferred a mix of qualified medical professionals and knowledgeable people without medical qualifications to assess physicians' performance.[24] The importance of public and patient involvement in the physician revalidation program has been

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emphasized in the UK.[25] However, providing proper training and support to lay people who serve as regulators is also considered necessary, with training provided on an ongoing basis in order to keep lay people up to date with developments in the field and to help ensure that physicians understand the aims of lay involvement.[26]

5. Medical regulation is moving away from self-regulation and towards regulatory models that emphasize partnership between professions and the public, physicians and patients.

Self-regulation is rooted in the concept of professionalism, which grants the professions the right to regulate themselves.[27] In part due to the change in societal expectations resulting from scandals and poor professional practices, there has been a significant shift away from the concept of the right to self-regulation for physicians and towards a greater openness, accountability, and engagement of lay representatives. Differing models of government oversight of self-regulation exist in the jurisdictions highlighted in our study. There is relatively strong government oversight and direct engagement in Asian jurisdictions, for example, such as in Singapore, Malaysia and mainland China. The UK, Australia and New Zealand engage in co-regulation and emphasize partnership between the government and the public. In the U.S., providers and insurers, who may require physicians to participate in credentialing or certification, are a de-facto element of the regulatory structure. Professions in Canada are self-regulated through professional colleges or associations that perform comprehensive regulatory functions. In the laissez-faire free market of Hong Kong, a high degree of professional autonomy has been retained, and physicians are largely self-regulated by the medical council and the Hong Kong Academy of Medicine, which was established by statute.

Our review suggests that health care professional regulation is moving from the current premise of self-regulation, which is often viewed as protecting its own interests, to one of partnership between professions, regulators and the public ("co-regulation").

6. Health care providers and institutional regulators play complementary roles in medical regulation

Health care providers and institutional regulators play a greater role in external oversight in the Western jurisdictions in our study, compared with China, Singapore or Malaysia, where medical regulation is under greater governmental control. For example, in addition to the General Medical Council (GMC) in the UK, "arms-length" organizations such as the Care Quality Commission operate as institutional regulators, acting as an external party to regulate the quality and safety of care provided by professionals employed within their institutions. The health care financing system in United States includes government assistance, through such programs as Medicare for older adults and Medicaid for those lacking the ability to pay; private health insurance, which is predominantly employer-based; and via out-of-pocket payment by those who do not have insurance or qualify for government programs. As noted previously, insurance companies/employers may require that the insured consult a physician who has been credentialed and certificated in a specialty for reimbursement, thereby playing a role in medical regulation. In these settings, it makes sense for professional and provider regulators to work in partnership and to agree on standards to ensure good quality patient care — and this partnership should be open and transparent if it is to reassure the public. Hong Kong has yet to address such a partnership model.

Revalidation/Competence and Assurance/Recertification

7. Regulation impacts the quality of care — not just the detection and remediation of poor performance.

In addition to upholding professional standards, there has been an emerging emphasis amongst regulators on improving the quality of care through early intervention and remediation to address poor performance amongst physicians. Most jurisdictions have systems for identifying poor performance, but methods of detection and intervention differ. A set of standards usually determines competent practice as a starting point for assessing good/poor performance, providing a threshold against which poor practice can be assessed. For example, "Good Medical Practice" in the UK provides a basis for the principles and values on which competent practice is founded.[28]

Varying assessment approaches are used in the jurisdictions we studied, including not only assessing health care professionals who have received complaints about their practice, but also periodically assessing and screening all physicians, or at least those who pose a high risk.[29] For example, revalidation in the UK uses a periodic-assessment approach through its revalidation system to ensure physician competence, while Canada uses a screening-assessment approach — identifying specific groups (e.g. physicians over 70 years old in Quebec) for assessment using a set of screening indicators.

Mechanisms such as recertification and revalidation are in place in the United States and the UK to assess and monitor physicians' continuing competence. A large amount of evidence has shown that recertification is related to improved performance.[6,30] In the United States, physicians can choose to be certified by the American Board of Medical Specialties and its 24 member boards

IN ASIA, THERE HAS BEEN LITTLE MOVEMENT TOWARD INDIVIDUAL RECERTIFICATION OR REVALIDATION. THIS MAY IN PART BE DUE TO THE GREATER LEVELS OF PRIVATE PROVISION OF CARE...

to show that they have achieved more than the minimum standards required for licensure. They can be recertified through the Maintenance of Certification (MOC) program, which was initiated in 2000 and requires most certified specialists to periodically seek recertification based on four-part assessment tests of their medical knowledge, clinical competence and communication skills with patients. However, physicians have criticized the MOC as an expensive and time-consuming exercise, particularly in terms of the examinations it requires.[31] Practicing physicians are not required to be specialty certified. In the UK, the General Medical Council (GMC) launched a revalidation effort in December 2012 after nearly 15 years of discussion with the profession. For the first time, revalidation now asks physicians to demonstrate that they are up to date and fit to practice on a five-year cycle informed by annual appraisals. Revalidation is espoused to be a process that will identify poor practice and benefit all physicians. However, it initially received strong objections from some individuals in the medical profession, who criticized the proposal as impractical and too costly and called it a breach of self-regulation.[25]

IN ADDITION TO UPHOLDING PROFESSIONAL STANDARDS, THERE HAS BEEN AN EMERGING EMPHASIS AMONGST REGULATORS ON IMPROVING THE QUALITY OF CARE THROUGH EARLY INTERVENTION AND REMEDIATION TO ADDRESS POOR PERFORMANCE AMONGST PHYSICIANS.

In Asia, there has been little movement toward individual recertification or revalidation. This may in part be due to the greater levels of private provision of care, itself a challenge to medical regulation. In Hong Kong, for example, it is difficult to assess primary care practitioners when they work alone and regulatory structures are lacking. This leads to the question of how best to regulate providers in the out-of-pocket payment system of primary care commonly found in Asia.

Fitness to Practice and Related Disciplinary Procedures and Sanctions

8. Investigatory and disciplinary functions are increasingly separated and organized independently of each other.

All of the jurisdictions we studied have systems in place to detect and deal with professional misconduct by physicians, usually based on complaints or referrals. The power of regulators to investigate

cases varies between jurisdictions, however. To decrease conflicts of interest in the regulators' investigatory and disciplinary functions, the functions tend to be separated and organized independently of each other. For example, in New Zealand, the independent Health Practitioners Disciplinary Tribunal (HPDT), comprising lay members, was established to hear complaints brought against health practitioners and to determine disciplinary actions. The Health and Disability Commissioner must be notified of a patient complaint first. It then makes a preliminary assessment of the complaint and decides to either proceed with an HPDT hearing or refer the case to the Professional Conduct Committee of the regulatory body for further investigation and to recommend/determine an appropriate course of action. In the UK, a similar unit known as the Medical Practitioners Tribunal Service (MPTS) was launched in June 2012 as an independent-hearing service for medical practitioners separate from the investigatory role of the UK's GMC. The MPTS is funded by the GMC but is accountable directly to Parliament. After the GMC investigates a complaint about a physician, it decides whether to refer the physician to a fitness-to-practice panel hearing with the MPTS. The MPTS holds such hearings and makes impartial decisions about a physicians' fitness to practice, which it measures against the professional standards set forward by the GMC. The MPTS panels, which are composed of people with both medical and non-medical backgrounds, include a legal assessor, who sits with each panel and advises them on points of law and of mixed law and fact. The composition of the MPTS provides better separation between the GMC's investigation and adjudication functions and strengthens professional and public confidence in the impartiality, fairness and transparency of the hearings.

Standards and Ethics

9. Continuous Professional Development (CPD) is compulsory for doctors in many jurisdictions.

There is an increasing trend toward implementing CPD for all doctors to enable them to maintain their professional competence and demonstrate that their practices meet professionally agreed-upon standards. Until now, continuing medical education (CME) in the form of formal lectures or seminars with time-based credit points has traditionally been used to signify the maintenance of one's professional competence. However, CME is increasingly considered to be a more passive form of learning, leading to an international shift away from CME and toward CPD, which includes the development of medical, managerial, social and personal skills.[32] Numerous studies have demonstrated that CPD can improve patient health outcomes.[33-36] CPD programs focus mainly on professional development to keep physicians' knowledge up to date.

Table 4 shows the CPD requirements for physicians in the jurisdictions we studied. Nearly all of the jurisdictions require physicians to undertake compulsory continuing education programs to maintain their professional competences. CPD is not compulsory for all physicians in Hong Kong, although the Hong Kong Academy of Medicine requires specialists to engage in CPD. Malaysia has passed a law to require compulsory CPD, but it has not been implemented.

CME IS INCREASINGLY CONSIDERED TO BE A MORE PASSIVE FORM OF LEARNING, LEADING TO AN INTERNATIONAL SHIFT AWAY FROM CME AND TOWARD CPD, WHICH INCLUDES THE DEVELOPMENT OF MEDICAL, MANAGERIAL, SOCIAL AND PERSONAL SKILLS.

Table 4
Legislative Models Across the Jurisdictions

Jurisdiction	CPD Requirements (mandatory)	Notes
Australia	✓	—
Canada	✓	—
China (Mainland)	✓	—
Hong Kong	Mandatory for specialist only	—
Malaysia	—	Passed the law to require compulsory CPD which is yet to be implemented
New Zealand	✓	—
Singapore	✓	—
United Kingdom	✓	Revalidation started for physicians in December 2012
United States	✓	Certification and recertification in place — only of specialists

Sources: medical council/board of the relevant jurisdictions

Medical Education, Registration Process and Requirements

10. Overseas medical graduates are admitted into practice in different ways from country to country.

The importation of physicians, trained outside the country in which they practice, is often related to physician shortages in particular specialist areas, often in more developed jurisdictions.[37] Western jurisdictions such as the UK, United States, Australia and Canada have histories of physician shortages that have led to the development of a variety of systems that allow foreign medical graduates to practice. Requirements for these medical graduates vary, (Table 5), though language proficiency assessment is necessary for all of the jurisdictions. The United States, Canada, and Hong Kong also require licensing examinations as one form of competency verification. Some other jurisdictions, such as Malaysia and Singapore, have a recognized list of qualified overseas institutions from which overseas-trained physicians may be accepted. However, these graduates may still need some form of professional supervision before working in health care institutions. Some jurisdictions, such as Australia and New Zealand have different pathways for internationally trained physicians—depending on their qualifications—and might require them to complete a specified period of supervised training in lieu of, or in addition to, qualifying/licensing examinations or internships.

WESTERN JURISDICTIONS SUCH AS THE UK, UNITED STATES, AUSTRALIA AND CANADA HAVE HISTORIES OF PHYSICIAN SHORTAGES THAT HAVE LED TO THE DEVELOPMENT OF A VARIETY OF SYSTEMS THAT ALLOW FOREIGN MEDICAL GRADUATES TO PRACTICE.

Implications for Asia and Hong Kong

The regulation of medically qualified professionals is a significant topic of discussion for many global jurisdictions for a variety of reasons—ranging from political, financial, legal, professional pressures to emerging concerns about medical quality and patient safety. This can make medical regulation a key factor in discussions of overall health care reform. The global network of those involved in reviewing and changing medical regulatory processes is growing and rapidly changing the terrain for discussion of these issues worldwide.

Jurisdictions vary in how they are regulated and by whom. Regulatory practices are culturally defined within each jurisdiction and there is no one-size-fits-all solution. Levels of regulatory autonomy, for example, vary from jurisdiction to jurisdiction, based on historical context, socio-political environment and public interests. Other factors, such as a government's regulatory objectives, the incentives for and behavior of those regulated, and the costs

Table 5
Requirements for Internationally Trained Physicians

Jurisdictions	Requirements			
	Language Proficiency Assessment	Recognized List/ Area of Overseas Education Institutions	Compulsory Licensing Examinations	Specified Period of Supervised Work Before Full Registration
Australia	✓	✓	—	✓[a]
Canada	✓	—	✓	✓
Hong Kong	✓	—	✓	✓ Internship
Malaysia	✓	✓	—	✓
New Zealand	✓	✓	—	✓[a]
Singapore	✓	✓	—	✓
United Kingdom	✓	✓	—	✓[b]
United States	✓	✓	✓	✓ Internship

Notes: [a] Depends on the pathway
[b] Only for those outside European Economic Area (EEA) countries
[c] Information not available for Mainland China

Sources: medical council/board of the relevant jurisdictions

of regulatory failure, also play contributory roles.[38] In general, government oversight of regulation is greater in the Asian jurisdictions (e.g. China, Singapore and Malaysia) and there has been little movement toward individual recertification or revalidation in these countries. Hong Kong remains an outlier as it retains medical self-regulation.

Our review of the regulatory frameworks for physicians in several jurisdictions provides an important insight for Hong Kong and its efforts to reform current health care professional regulation, while taking into account local context and values. Compared with the British and North American regulatory models, medical regulation in Hong Kong is characterized by a high degree of professional autonomy. The ten key trends we have identified highlight the emerging challenges to be addressed in Hong Kong as it considers its future regulatory structure. Given the global trend of moving away from depending on self-regulation, Hong Kong policy makers should consider enhancing the role of lay representatives in medical regulation, and they should revisit the appropriate degree of lay representation in the regulatory process to increase accountability and transparency and to account for the views of diverse stakeholders. Consideration of compulsory CPD programs for all physicians should be discussed with the medical profession and the public, and further ways to enhance the detection and management of poor performance should be considered in order to improve the quality of care, particularly in the private primary-care sector. Hong Kong also needs to consider how to better engage internationally trained medical graduates to address its health manpower shortages — a step that could also promote internationalism and enrich professional experiences. Our study provides a framework and context for further discussion of an effective system of medical regulation in Hong Kong. ■

GIVEN THE GLOBAL TREND OF MOVING AWAY FROM DEPENDING ON SELF-REGULATION, HONG KONG POLICY MAKERS SHOULD CONSIDER ENHANCING THE ROLE OF LAY REPRESENTATIVES IN MEDICAL REGULATION.

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Appendix

Jurisdictions and health care professionals included in the analysis:

Eight jurisdictions: Australia, China (Mainland), Canada, Malaysia, New Zealand, Singapore, United Kingdom, United States.

Six types of health professions: (a) Western medical doctors, (b) nurses, (c) dentists, (d) Chinese Medicine practitioners, (e) pharmacists, and (f) other health care professionals, including occupational therapists, physiotherapists, medical laboratory technologists, optometrists, radiographers and chiropractors, which are under statutory regulation in Hong Kong.