The Challenges Facing Medical Regulation Around the Globe
Preventing Harm and Promoting Competence in an Era of Change

Also in this issue

Research In Medical Regulation: An Active Demonstration Of Accountability

The Patient’s Right to Know

... and three other international articles
IN THIS SPECIAL EDITION EXAMINING GLOBAL TRENDS IN MEDICAL REGULATION, THE JOURNAL OFFERS A DIVERSE RANGE OF OPINION AND SCHOLARLY RESEARCH FROM AUTHORS AROUND THE WORLD. AS GLOBAL HEALTH SYSTEMS BECOME MORE INTERCONNECTED, IT IS IMPORTANT FOR MEDICAL REGULATORS TO BE AWARE OF THESE TRENDS.

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ALTHOUGH GEORGE H. MEAD wrote this immediately following WWI, it is even more valid today, with the globalization of just about everything—including medicine and health care. Doctors move across borders at various stages of their careers, as do patients for their health care. **Medicine and systems for regulation may be becoming more similar with global communication networks, but despite similarities, differences remain in the ways other countries have resolved issues.** This creates the potential for all to learn new ideas for how to regulate. This edition of the *Journal* focuses on the manner in which several countries have resolved and are studying issues in regulation, starting with a commentary by Niall Dickson, Chair of the International Association of Medical Regulatory Authorities (page 7). Three research articles inform us about international issues in regulation: Elizabeth Wenghofer of Canada argues that a push for regulatory research and cooperation between regulators and researchers is needed (page 13). Sue Roff and her colleagues study the different commitment of faculty and students to norms of professionalism in Great Britain (page 24), while Bhaskaran Unnikrishnan and his colleagues in India examine the uneven adoption of evidence-based medicine as a strategy for diagnosis and treatment (page 18). Two articles focus on issues concerning boards: In an article by Don Malcolmson of Australia we can learn about the dilemmas created by the system of requiring referrals to specialists and to what extent referring physicians have a responsibility to protect patients (page 32). In a second article, Zafar Ullah Chaudhry describes the robust system Pakistan has developed for training and credentialing specialists—demonstrating possibilities for nations in the developing world (page 37).

**Ruth Horowitz, PhD**

*Editor-in-Chief*

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2015 FSMB Board Attorneys Workshop Scheduled for Nov. 12–13

Topics of interest to attorneys and legal staff of state medical and osteopathic boards will be considered during the FSMB’s annual Board Attorneys Workshop, to be held Nov. 12–13, 2015 in Las Vegas, Nevada.

During the two-day workshop, participants will have the opportunity to share and exchange valuable information on case experiences, best practices and current issues pertinent to board attorneys and others who handle state-board legal matters. Individuals involved with the investigation and prosecution of physician licensure and disciplinary cases are also encouraged to attend.

Featured during the 2015 workshop will be sessions on the recently introduced Interstate Medical Licensure Compact, the North Carolina State Board of Dental Examiners vs. Federal Trade Commission (FTC) U.S. Supreme Court case and an examination of trends in opioid prescribing and abuse.

Sessions will also be held on effects of the Americans with Disabilities Act (ADA) on state licensing boards, the reporting criteria of the National Practitioners Data Bank (NPDB) and working with the Veterans Administration (VA) and military physicians. Other topics will range from administrative law and expert witness selection to anti-trust litigation.

The workshop will be held at Mandalay Bay Resorts & Casino in Las Vegas. For medical board legal counsel and staff, there is no registration fee. The non-member fee is $795. There is a continuing education documentation fee for both board and non-member attendees of $15.

For more information call 817-868-4007. To register online, visit www.fsmb.org/policy/education-meetings/board-attorneys-workshop/bod2015.

FSMB Seeks Nominations for Leadership Positions

The FSMB is seeking nominations and recommendations for a variety of elected and appointed leadership positions within the organization.

Opportunities for leadership roles include:

**Elected Leadership Positions:** Nominations are open for a variety of FSMB elected positions, including Chair-elect and service on the Board of Directors or the Nominating Committee. To be eligible to serve in an elected position, an individual must be an FSMB Fellow—an appointed member on one of FSMB’s 70 member state medical boards. Fellows can be elected to leadership positions during their service on a state board or for a period of 36 months thereafter.

**Standing and Special Committee/Workgroup Appointments:** After the FSMB Annual Meeting in April 2016, appointments will be made to the Audit, Bylaws, Editorial, Education, Ethics and Professionalism, and Finance committees, as well as to any special committees and or workgroups that have been implemented by the FSMB.

Information about the FSMB’s committees is available at www.fsmb.org/about-fsmb/fsmb-committees.

Nominations should be submitted by Dec. 31, 2015. For more information, please call 817-868-4067 or send an email to pmccarty@fsmb.org.

Journal of Medical Regulation seeks manuscripts from new authors

The Journal of Medical Regulation (JMR) is seeking manuscripts from new authors – including state medical board staff members as well as academics, policy makers, legal experts and researchers. A broad range of topics of interest to state medical regulators is covered each quarter by JMR, ranging from legal and policy issues for state medical boards to evolving trends in medicine and health care delivery that impact patient safety.

Categories range from research summaries to commentaries and historical perspectives. Guidelines for authors are available at http://jmr.fsmb.org/AuthorInfo.aspx.

For more information, please contact editor@fsmb.org.
Why Internationalism Matters to U.S. Medical Regulators

J. Daniel Gifford, MD, FACP
Chair, Board of Directors
Federation of State Medical Boards

IN BRIEF Dr. Gifford discusses the growing connection between medical regulators around the world and how the FSMB is responding with initiatives and a new strategic vision for collaboration.

With its emphasis on international issues, this edition of the Journal of Medical Regulation reflects a growing awareness that we medical regulators are part of an interconnected global community.

Health care trends and medical issues don’t stop at national borders; in fact, they move faster than ever now in an increasingly mobile world connected by information technology and transportation.

At the Federation of State Medical Boards, we have long recognized the importance of sharing information with our global regulatory colleagues, and our role as Secretariat of the International Association of Medical Regulatory Authorities (IAMRA) helps us remain fully engaged with international trends.

Our involvement with the international community is more evident and important today than it has ever been.

Over the last several years, FSMB staff and elected leaders have participated in IAMRA’s international meetings aimed at enhancing the work of regulatory authorities from around the world as they strive to share information and best practices. These interactions have influenced our recent initiatives and activities. Three examples include:

Information Sharing. In 2013, FSMB staff helped facilitate IAMRA’s development and completion of an important new set of guidelines designed to improve the sharing of data between international medical regulators. Titled the Statement of Intent on Proactive Information Sharing, the guidelines protect patients and the public by encouraging the sharing of disciplinary information about physicians who move from one country to another. The statement stresses the importance of medical regulators sharing information more consistently, defining the circumstances in which information should be shared and the timing of when information should be shared. The statement also underscores the importance of due process and security of information exchanged. We believe the IAMRA statement is a strong step forward in the effort to ensure that patients are protected globally—particularly in cases where physicians who have been disciplined in one country move with the intent of practicing in another country.

Continued Competence of Physicians. Through its Maintenance of Licensure (MOL) initiative, the FSMB is also engaging with international regulatory authorities regarding the issue of the continued competence of licensed physicians—a topic of growing importance globally. During 2014–2015, the FSMB monitored the work of medical regulatory agencies in Canada, the United Kingdom, New Zealand, Australia, and other nations as they moved forward with a variety of formal systems intended to ensure that physicians are engaging in lifelong learning. (In the United States the concept is known as MOL, while in the United Kingdom and other countries it is referred to as Revalidation.) In early 2015, the FSMB published the proceedings of the 2nd International MOL/Revalidation Symposium, which it co-hosted in October 2013 with the General Medical Council of the UK. This event brought together nearly 40 medical regulators from seven countries to continue sharing experiences in developing and implementing systems to assure the public that doctors are competent and fit to practice throughout their careers. Plans are now underway for another IAMRA Revalidation Symposium, which
will be hosted by the International Association of Medical Regulatory Authorities, the Federation of Medical Regulatory Authorities of Canada and the Medical Council of Canada.

**Strategic Collaboration.** The FSMB recently completed development of its 2015-20 Strategic Plan, which was adopted by its House of Delegates and Board of Directors in April. During work sessions in drafting the plan, the FSMB’s Strategic Planning Committee identified the need for strategic collaboration and partnership building as a key imperative — noting the growth of internationalism and the global interconnection of regulatory agencies in recent years as a particularly important factor. Health care issues and policies increasingly cross national borders, and international aspects of health care delivery — including the licensing of International Medical Graduates — can impact state medical boards directly. In this new environment, connection between domestic and international regulators is valuable; it is in the best interests of all 70 of the FSMB’s member boards to be attuned to international trends as they go about their work of protecting the public. The FSMB has committed itself to adopting an international view in its advocacy for best practices and encouraging its member boards to do the same. We have added formal language underscoring the importance of this point in our new Strategic Plan, which calls for the FSMB to “strengthen participation and engagement among state medical boards and expand collaborative relationships with national and international organizations.”

Beyond these international activities, the FSMB continues to monitor a number of global health care megatrends that are gathering momentum and which we believe are likely to impact all regulators around the world. Among them:

**Rapid change in the practice of medicine and the health care delivery system overall.** In the United States, these changes range from workforce and demographic shifts to the growth of telemedicine. Similar shifts are happening around the world, and they are accompanied by the growth of newly empowered health care consumers, who have access to much more health information than ever before, thanks to the Internet. The current environment is a reality that will continue for the foreseeable future and will require flexibility and responsiveness from global regulators.

**The increasing volume of health-care-related data and the emergence of new technology platforms for the improved use of data.** Data availability and usage has emerged as a powerful factor across sectors, as technology improves our ability to gather and analyze information. Having an accurate baseline estimate of a nation’s current physician supply, for example, is a fundamental starting point for any understanding of workforce planning. As medical regulators around the world improve their data and research capabilities they will have new opportunities to use these resources to clarify their national health care needs and to strengthen patient protections. IAMRA’s recent work in advancing new guidelines for information-sharing between nations recognizes that data and technology have the potential to bring us all closer together for the good of patients.

Other environmental factors, ranging from the growth of team-based care in medicine and changes in traditional scope-of-practice boundaries to large-scale public health issues — such as the recent Ebola crisis — will also influence the policies of the international medical regulatory community for years to come. The more we can share our experiences through forums such as IAMRA, the more likely we will be able to stay on the cutting edge.

The FSMB’s engagement in these and other international issues will continue — driven partly by the demographic trends in medical practice in the United States. According to our most recent U.S. Physician Census, released this year, 23% of the nation’s licensed physicians are international medical graduates (IMGs). The actively licensed physicians identified in the 2014 census graduated from 1,933 medical schools in 166 countries.

The trend toward internationally based education among U.S. physicians is on the upswing: The 2014 census also shows that the number of actively licensed physicians graduating from international medical schools increased by 6%, with five nations contributing the bulk of these physicians. Of the 207,840 actively licensed IMG physicians, most graduated from India (48,377 or 23%), followed by the Caribbean (30,895 or 15%), the Philippines (14,211 or 7%), Pakistan (11,651 or 6%) and Mexico (10,213 or 5%).

Clearly, internationalism should be on all of our minds in the U.S. medical regulatory community. With a globally connected health care environment, and a workforce that will continue to include many internationally trained physicians, it makes good sense for us to be firmly engaged with the rest of the world — and we at the FSMB intend to be leaders in encouraging this path.
The regulation of doctors — and indeed, other health professionals — is under pressure, and arguably more under pressure than at any time in its history. The model for professional regulation that emerged in many jurisdictions during the 19th and 20th centuries is being challenged from different directions, and there is a growing recognition among regulators themselves in many parts of the world that the status quo is not an option. Partly, this arises from the simple reality that the industry in which health professionals work is itself undergoing major reform throughout the world. One of the most significant developments has been the belated recognition that health care is a safety-critical industry and that, as such, it needs systems and processes that reflect its considerable potential to do harm.

At the turn of the century, the seminal report from the United States’ Institute of Medicine (IOM), To Err is Human, placed health care 10 years behind other safety-critical industries. It may be that the gap has not narrowed much in the last 15 years, but there is a much greater commitment to measuring quality and at least a growing awareness of the damage caused by the adverse effects of medical treatment. Estimates vary but it seems certain that the quoted figures of between 140,000 to 250,000 iatrogenic related deaths worldwide are well short of the mark given the absence of accurate data.

Of course much of that preventable harm is not the result of individual incompetence but the product of flawed systems and processes, often where the science of “human factors” has been ignored or not even considered. Nevertheless, the growing awareness that doctors can do harm as well as good, that levels of competence and skill can vary enormously, and that this has a direct bearing on patient outcomes, is increasingly posing difficult questions for professional regulators.

As the pediatric nephrologist Sir Cyril Chantler noted, “Medicine used to be simple, ineffective and
departments of health and health care providers are interested in challenging traditional professional boundaries and in exploring newer roles, such as Nurse Practitioners and Physicians Associates (sometimes called Physician Assistants) and expanding existing roles.

Governments have also become increasingly interested in professional mobility, either as unwilling exporters of one of their most precious assets—the professionals that they have trained—or as importers of those health professionals. Importers may worry about quality, but are more often concerned that they may not be able to recruit enough doctors to fill shortages in remote areas or in less popular medical specialties—for example, Brazil’s Programa Mais Médicos (More Doctors Programme) and Australia’s General Practice Rural Incentives Programme (GPRIP). The capacity of regulators to make it easier or more difficult for physicians to move across borders arouses keen government interest. Regulators can be torn between their own commitment to maintaining standards and pressure from their government to facilitate the importation of more doctors.

As governments have become more worried about cost, and as data has become more widely available, they have also taken a much greater interest in quality and measurement. In many parts of the world, a new kid has appeared on the block—the system regulator. As ever, with widely different powers and ways of going about their business, the new arrivals on the regulatory scene are concerned not with individual professionals but with the quality, safety and effectiveness of the organizations and systems in which doctors work. Voluntary accreditation, such as that provided by the respected Joint Commission on Accreditation of Hospitals (JCAH) in the United States (founded in 1951) is long established, but government funded systems to regulate and inspect hospitals and other health care facilities have become more widespread. The relationship between professional and systems regulation is likely to be a significant one in the future, with demands for much greater sharing of information and intelligence. In the Kingdom of Bahrain the regulation of all health care professionals and all health care facilities (public and private) is combined into one, independent authority, which incidentally, also regulates pharmaceuticals.

As well as adapting to these wider changes, it seems certain that medical regulators will face...
a number of specific challenges that reflect the dynamic and fast-changing environment in which they operate.

So what are the specific challenges that face 21st century medical regulators? For some, the greatest in recent times has been the increase in complaints about physicians; figures vary but it seems that

...it seems that complaints against professionals are rising and that in developed countries there have been significant increases in the numbers of patients wishing to raise a concern about their medical treatment. In the UK, the number of complaints to the GMC from patients nearly doubled between 2007 and 2012.\textsuperscript{12} Data from Ireland and France also suggest that complaints made to medical regulators have also increased in recent years.\textsuperscript{13}

The cause remains uncertain; the decline in deference, access to information resulting in rising expectations and knowledge among patients and negative portrayals of the medical profession in the media all play their part. Where the local complaints resolution is poor, the regulator is also likely to attract more business from dissatisfied patients and relatives. One further factor, which has received less attention but may be a signpost for what is to come, is the impact of the Internet, which not only makes it easier for patients and relatives to learn more about the practice of medicine and find the regulator, but often makes it much easier for them to also submit a complaint.

As patients become better informed and more digitally savvy, it is hard to imagine that this trend will do anything but increase further. On the face of it, better patient access to medical regulators must be regarded as a good thing, but a significant difficulty is the fact that very often, complaints do not reach the legal threshold of the regulator, and even when they appear quite serious at the outset, when investigated they may not justify regulatory action. This is often the case when complaints are based on a single clinical incident.

If no action is taken, this may leave a dissatisfied complainant, a damaged doctor and an irritated employer, while in some cases at least it may have been a waste of time and of regulatory resources. None of this does the reputation of the regulator any good.

Secondly, the increased mobility of doctors presents a number of regulatory challenges. It is now generally accepted that while many aspects of medical knowledge and skill are transferable from one context to another, the influence of culture and the manner in which doctors are trained and practice can have a huge impact on the ability of the doctor to function well in his or her new surroundings. There is now a wealth of evidence on the challenges facing doctors moving from one jurisdiction to another. This can be exacerbated by the fact that international medical graduates are often sent to areas where it is hard to recruit home-produced doctors, leaving them isolated and vulnerable.

In the UK for example, recruiting doctors can be difficult, especially in deprived areas and more remote communities.\textsuperscript{14}

For regulators, the guardians at the gateway to the medical profession within their jurisdictions, this presents a series of challenges — apart from establishing doctors’ identities, the validity of their qualification, their disciplinary record and evidence of good standing in all the places where they have worked, the regulator also has to determine its own standard and how this can be applied to international applicants. In countries where the numbers are small, the resources and systems are unlikely to be available to undertake a good assessment, and in countries where more than one in three doctors\textsuperscript{15} have not been trained locally, the ability to triage and select well and fairly becomes a fundamental feature of patient protection.

Although not necessarily the direct responsibility of the medical regulator, for countries exporting physicians, the impact of this growing traffic in health care professionals can be disastrous. In parts of Africa and Eastern Europe there have been claims that already stressed local health systems
have been left in an even more fragile state because of recruitment by richer nations. The charity Health Poverty Action has estimated that the investment lost by source countries from health professional migration may even exceed the monies received in health aid from destination countries. In 2010, the Organisation for Economic Co-operation and Development (OECD) reported that Mozambique had an expatriation rate among doctors of more than 50%. Within Europe, doctors and other health care professional staff often move to the UK, Germany, or Scandinavia in search of better salaries and working conditions, resulting in a similar trend. A European Commission study found that labour mobility was a major contributory factor in creating shortages of health workers in newer EU member states, such as Poland. Nor is the decision to relocate confined to qualified doctors; increasingly medical students are training in one country in the expectation of practicing in another. This is coinciding with an exponential growth in medical schools, fueled by the shortage of doctors in many parts of the world and by the large profits that can be made from private medical education. New medical schools are opening in countries as far apart as China, Brazil and the UK, again presenting regulators with the challenge of how to assess the quality and relevance of the education and training that is being offered. The World Directory of Medical Schools demands that criteria are met before a school is accepted in the directory, but those responsible are clear that this is a limited test and a long way from a mark of quality. The need to better assess standards of medical education has been recognized by the United States’ Educational Commission for Foreign Medical Graduates, which is planning only to accept doctors who have qualified from schools that have been accredited by agencies approved by the Commission. Such an accreditation system may prove effective for countries willing to go with the American standards or develop their own, if they can afford to be choosy and reject unsuitable candidates. However, it may work less well in parts of the world where they are desperate for doctors and have no means of assessing the ever-expanding number of schools.

The third challenge is one that faces every regulator around the globe — how to harness and adapt to the impact of data. The digital revolution is affecting health care, just as it is affecting every walk of life; reducing the asymmetry of information between patient and doctor, revealing variation in performance within and between institutions and teams, and between individual professionals. It is creating greater transparency and demand for even greater openness. At the same time, like a tide receding, it exposes patterns and trends hitherto hidden from view.

Most regulators are awash with data but for the most part it has been impenetrable, and the analysis needed to make sense of it has been expensive and hard to execute. So, given this uncertain external environment and these specific challenges, what is the future for medical—and indeed, health care—professional regulation?

Health care is now center stage just about everywhere; political and media interest in the quality of doctors and other health care professionals is not going to go away. Quite the reverse, in fact. Professional regulation may not be a stated political priority but there will be ongoing and, very likely, increasing interest in how well it is being done.

The structure of regulation may change: A study for the Hong Kong government found pressure for reform or ongoing changes in just about every...
country it researched. Noted were moves towards greater lay involvement, some interest in multi-professional regulation (or at least in umbrella bodies and shared activities) and some moves from pure self-regulation by the professions to what the researchers described as “a partnership model.”

Whatever new or reformed structure or governance model of medical regulation is chosen, there will be a need not just for new legislation, but for legislation that is more flexible and can adapt to changing circumstances and demands. A system that was designed to manage a handful of complaints a month, or occasional applications from new medical schools, will simply not cope as the numbers and complexities mount.

And the way we do regulation must surely change. As Dr. Joanna Flynn, the Chair of the Medical Board of Australia, observed, we need to move from being predominantly “philosopher regulators to being scientific ones”23 — ethics and the values that underpin it will remain key to good and effective regulation, but to this must soon be added the study of data and trends that will enable regulators to identify areas of risk among different groups of physicians, at different points in their careers, and depending on what specialty, or where they work.

Malcolm Sparrow of Harvard University has articulated how this might be applied to medical regulation with more focus on identifying and reducing risks and harms, the development of “Regulatory Craftsman ship” using a broader range of tools than regulators traditionally employ, and mastering new organizational methods.24

Intelligence-led and risk-based regulation of this kind should enable regulators to be more proactive, seeking to prevent harm before it has occurred — helping to stop the bodies from falling into the river, rather than merely fishing them out downstream when it is too late.

The growing interest in ways to make sure physicians can demonstrate ongoing competence is one manifestation; where a physician struggles to do this it can trigger an intervention or initiate remediation, which can avoid harm to patients and a further deterioration in practice, which may be irreversible.

And all this will almost certainly test the compact between civil society and the medical profession, which the regulator seeks to operationalize. The traditional view that all the regulator has to do is register the physician at the start of his or her career, and only intervene when he or she commits some transgression, is already being challenged all over the world.

The future then must lie in a much closer — and in some ways, a less threatening — relationship between the regulator and the physician. A relationship which is less about discipline and more about regulators committed to preventing harm, promoting and defending standards of good practice and seeking ongoing assurance that every physician is competent to practice safely and effectively.

There was a time when regulators could more or less operate in isolation, but given the rapidly changing terrain in which we all operate and the shared challenges we face, doing our own thing makes little sense. In this regard, the Federation of State Medical Boards in the United States has identified six attributes necessary for regulators to retain their relevancy in our fast-changing world:

**THE FUTURE THEN MUST LIE IN A MUCH CLOSER — AND IN SOME WAYS, A LESS THREATENING — RELATIONSHIP BETWEEN THE REGULATOR AND THE PHYSICIAN.**

physician engagement, public participation, communication, transparency, innovation and collaboration.25

Never have we needed to learn from each other as much as we do now. Our structures may be different and undoubtedly our history, our laws and our cultures will create and perpetuate differences, but these differences are opportunities to share experience and to learn.

That is why at the International Association of Medical Regulatory Authorities (IAMRA) we are so committed to expanding the international community of medical regulators and those who have an interest in our work. We now have 84 members from 41 countries but we need to reach out to state and provincial boards in larger countries, to middle-income countries, and to the developing world. We are clear that we should not promote any one model or structure of regulation, but we do have a shared purpose to protect the public and a shared understanding that we are not here to judge each other but to judge ourselves.

**About the Author**

Niall Dickson is Chair of the International Association of Medical Regulatory Authorities (IAMRA) and serves as Chief Executive and Registrar of the UK’s General Medical Council (GMC).
Editor's Note: IAMRA will host international meetings of regulators in Montreal, Canada, in October 2015 and in Melbourne, Australia, in September 2016.

References


8. More Doctors for Brazil is a federal government program that will expand the number of physicians in underserved regions of the country, such as the interior counties and the suburbs of the main cities.

9. The GPRIP encourages general practitioners to practise in rural and remote communities, and promotes careers in rural medicine. The program started on 1 July 2010 as part of the 2009-10 Rural Health Workforce Strategy.

10. Examples include: The Health Regulation Department, Dubai Health Authority in the United Arab Emirates (UAE); Danish Institute for Quality and Accreditation in Healthcare (IKAS) in Denmark; The Dutch Health Care Authority in the Netherlands and the Care Quality Commission (CQC) in England.

11. The National Health Regulatory Authority (NHRA) is responsible for the regulation of all licensed healthcare facilities in Bahrain such as, hospitals, clinics, centres and pharmacies in both the public and private sectors.

12. Sam Regan de Bere, Marie Bryce, Dr Julian Archer, Nick Lynn, Suzanne Nunn, Martin Roberts. Understanding the rise in Fitness to Practise complaints from members of the public. Plymouth University Peninsula Schools of Medicine. January 2014.

ABSTRACT: To a large extent, health care regulation has been an “evidence-free” zone largely informed by anecdotal, traditional and legal considerations. Medical regulatory authorities (MRAs) are the owners of unique and valuable information regarding the performance of the medical profession. Innovative partnerships between teams of researchers and MRAs can be conducted ethically, securely and confidentially and will enable MRAs to undertake research that would otherwise be beyond their technical capabilities. Research will allow MRAs to gain a more nuanced understanding of the personal and environmental factors that impact on physician performance as well as how performance can be best maintained and improved. Additionally, the MRAs are the primary decision-making bodies able to capitalize on the results of such research activities in their policy making processes. By engaging in research, MRAs can advance the state of knowledge in medical regulation and, in doing so, actively demonstrate their commitment to accountability and transparency to both the public and the profession. Actively working to generate evidence to support accountability in decision making is a step towards making evidence-informed medical regulation a reality.

Research in Medical Regulation: An Active Demonstration of Accountability

Elizabeth F. Wenghofer, PhD | Canada
and there is “social science” research. The former is oriented toward the type of regulation that boards perform, while the latter is more suited to policy making. The research path that is followed is set by the questions each organization wishes to answer based on unique needs and challenges. So what and how you research depends on what you want to know. In some cases, the answers to those questions may already exist in the current scholarship but in other cases new knowledge will be required. One size does not fit all.

With that initial caveat in mind, my starting position is that, in an ideal world, MRAs should practice under a rubric of analysis rather than anecdote. Analysis strives to be balanced and objective and ideally allows one to assess multiple positions and interests and how they may or may not impact the implementation of a particular course of action. Analysis allows one to evaluate how different interests will react to a set of particular decisions or how they will influence the effectiveness of a particular policy. Furthermore, a good analytical approach will help to recommend a specific set of options and clearly see the pros and cons of the various options under consideration. An analytical approach is fact based rather than value or idea based, and as such, and perhaps most importantly from a regulatory perspective, is therefore also more legally defensible. Participating in research activities is part of that analytical approach and, in addition, the research in and of itself helps to provide and generate further evidence to help sustain the capacity for “evidence-informed” decision making in the future. What is research if not the active search for evidence? Regulators need to clearly distinguish between facts and values if they wish to ensure the defensibility of regulation.

In an ideal world we want to have regulatory policies and processes that are defensible and based on solid facts, however, in reality we know that policy development and success of its implementation is driven by values and ideas. So is it unrealistic to think that we can actually achieve evidenced-based policy making? It is unlikely that policy will ever be based exclusively on evidence and it probably shouldn’t be. The objectives of certain policies or programs are intended to support ideals that we think are important and foundational to the practice of medicine (e.g., ethics, professionalism, respect, compassion). However, evidence generated by research can help to avoid dogmatic or anecdotal approaches by providing us systematic data to inform specific objectives, understand the pros and cons of various objectives and to ground policy in real practice-based circumstances to maximize effectiveness. Ideally, evidence-informed approaches will help us to attain desired regulatory objectives, even if it can never tell us which objectives we should strive to achieve.

Based on the premise that informing regulatory practice with evidence is a good thing, regulators should be encouraged to ask questions, tough questions, about their regulatory practices. Asking difficult questions is essential to solving regulatory roadblocks and can help MRAs learn about what they do well and where they need improvement. As medical science evolves and grows, so too should the science of its regulation so as to avoid stagnation resulting from the chains of “good enough” or “that’s the way we have always done things.” Regulatory authorities and the public both expect and require practicing physicians to continually improve. They should also expect ever more effective regulation. Evidence-informed decision making in regulation is a no longer an option. Although each organization may have logistical (e.g., confidentiality and privacy concerns) and resource (i.e., funds, expertise, time) challenges, these challenges are not insurmountable and the ways and means to conduct research and evaluate regulatory processes exist. There are

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...EVIDENCE GENERATED BY RESEARCH CAN HELP TO AVOID DOGMATIC OR ANECDOTAL APPROACHES BY PROVIDING US SYSTEMATIC DATA TO INFORM SPECIFIC OBJECTIVES... AND TO GROUND POLICY IN REAL PRACTICE-BASED CIRCUMSTANCES.

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AS MEDICAL SCIENCE EVOLVES AND GROWS, SO TOO SHOULD THE SCIENCE OF ITS REGULATION SO AS TO AVOID STAGNATION RESULTING FROM THE CHAINS OF ‘GOOD ENOUGH.’

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really no excuses not to endeavor to do so. It is quite simply a matter of accountability.

The core responsibility of autonomy or self-regulation is accountability, and ignoring it invites someone else to manage the profession.1 Self-regulation is a privilege that must be continuously earned.2 Research is no longer a nice-to-do that is separate from the core business of regulation. It is a must-do to ensure that the core business of regulation is being conducted in a cost effective and efficacious manner. The majority of state medical boards and provincial regulatory authorities often have members of the public contributing to regulatory decisions; however, the majority of decision-making authority still typically lies in the hands of physicians. As such, MRAs are not separate from the profession; they are the profession in self-regulatory systems of governance and as such need to lead the profession by example. If evidence-informed decision making is expected of physicians in their practices, then regulators, too, must strive to meet that bar and employ evidence-informed methods themselves. Asking tough questions will help regulators meet their responsibility of accountability to both the public and to the profession. Engaging in research and evaluation demonstrates to the public that regulators are concerned with whether or not their policies and programs actually make a difference to the safety and care patients receive. Engaging in research activities, in partnership with external researchers in particular, also helps improve the credibility and transparency of regulatory activities in the eyes of the public as an insular self-review of programs and processes can be viewed as biased, self-serving and conflict-laden.

Additionally, the profession needs to feel confident that the policies and procedures that regulators follow are valid, reliable, fair and transparent, resulting in value for the dollars invested. For example, most recently mandatory maintenance of competence (MOC) programs are being implemented across the United States, Canada and United Kingdom. Understanding and investigating the effectiveness, feasibility, meaningfulness and cost effectiveness of MOC programs is important3 and it is essential for regulators to participate in research that does just that. Establishing firm fact based rationale for regulatory decisions built on research establishes a foundation for defensible decisions; it has the additional value of contributing to our understanding of the profession as a whole. Much of what we know about physician performance and competence is extrapolated from studies focusing on medical students and residents. But MRAs are the owners of the unique performance and practice data of practicing physicians. These regulatory data are longitudinal, verified, complete, and address a broad spectrum of the physician population. Regulatory data can, to some degree, be considered the long-term “practice outcomes” of the educational and remedial processes of the profession. I believe most regulators understand that the data they have help them learn about their own processes, but perhaps they underestimate how valuable these data are at a system or professional level. This is an important advantage of regulatory data, of which researchers are acutely aware. Much of the information that emerges from research on regulatory activities can be fed back to improve medical education — from undergraduate medical education through continuing professional development.

\[\text{MUCH OF THE INFORMATION THAT EMERGES FROM RESEARCH ON REGULATORY ACTIVITIES CAN BE FED BACK TO IMPROVE MEDICAL EDUCATION — FROM UNDERGRADUATE MEDICAL EDUCATION THROUGH CONTINUING PROFESSIONAL DEVELOPMENT.}\]

The potential benefits of research employing MRA data stretch far beyond regulation alone. For example, in some jurisdictions regulatory data can contribute valuable information for health human-
resource planning and overall system improvement as we continue to learn how various practice environments and systemic factors help to support good care and minimize risks equally for both patients and physicians. The ability of many MRAs to collect valuable practice information has tremendous value and may contribute to already established initiatives. For example, in Canada, the National Physician Survey (NPS) is an initiative of the collaboration of the Canadian Medical Association, College of Family Physicians of Canada (CFPC) and Royal College of Physicians and Surgeons of Canada. The information compiled covers a wide range of issues in the Canadian health care system, such as workload measures, wait times, and remuneration methods. The NPS was initiated in 2004 and has gone through several iterations, including the most recent addition in 2014. The data are collected anonymously (i.e., no physician person-identifiable level data is collected) and provide the collaborating organizations as well as administrators, leaders, researchers, policy analysts and the general public with reliable aggregate data on the medical profession in Canada. The problem is that the response rate for the NPS is decreasing. In its inaugural year in 2004, the response rate was approximately 35%. Most recently in 2014, the response rate was only 16%. The drop in response rate is concerning and has some people questioning the comprehensiveness of the datasets and reports. Many Canadian MRAs already collect data similar to that collected via the NPS with near-perfect response rates by incorporating data collection as part of their license renewal processes. Not only could anonymized data be shared and pooled to create an incredibly rich source of national data for health care system planning, but it just might reduce the terrible survey-fatigue that physicians are constantly under given the number of surveys in which they are asked to participate on an ongoing basis.

Effective collaboration between regulators and researchers is the key to overcoming many of the barriers to conducting research in regulation. Collaborations with researchers who are external to the MRA will help ensure that studies are unbiased and their results non-prejudicial, which is important for transparency. Effective knowledge transfer is an essential aspect to good research. Research funders often require the involvement of decision-makers in all aspects of applied research as investors want assurances that research deliverables are applicable, realistic and useful, and will not simply sit on a shelf. MRAs are the primary decision-making bodies to capitalize on the results of the analyses of these data. Additionally, collaboration with researchers allow regulators to potentially access grant funds to support these initiatives, which would otherwise be inaccessible if they were to undertake activities on their own and without which many regulators’ resources would be inadequate to answer their unique questions. Effective collaborations will ensure that such research is realistic to the regulatory context and not exclusively theoretical. Regulator/researcher collaboration will necessarily require that the processes for exploring of confidential data and the linking of data sets from various sources are reviewed and vetted by university research ethics boards often under additional formal confidentiality agreements* for assurances of privacy and security. Numerous studies have been published linking data from various organizations where the researchers functioned as the “neutral third party” thus allowing the regulator to do something that they could never have done on their own without compromising the confidentiality of their data or that of others.4,5,11 Lastly, for those regulatory bodies who do see the value of engaging in research, most don’t have the staff or resources to do so themselves. Innovative collaboration between teams of researchers and regulators enables regulators to undertake research that would otherwise be beyond their technical capabilities. Regulators are regulators and not researchers, and nor do they need to be. It is important that such collaborations are not simply a relationship where the researchers request data and then go off and do their own thing. Likewise, regulators must respect the needs and obligations of researchers and that they, too, have accountabilities which must be met. Truly effective collaboration

EFFECTIVE COLLABORATION BETWEEN REGULATORS AND RESEARCHERS IS THE KEY TO OVERCOMING MANY OF THE BARRIERS TO CONDUCTING RESEARCH IN REGULATION.

*Confidentiality agreements typically specify data storage requirements for information systems and paper files, access limitations to specified personnel, publication approval processes and data destruction protocols.
is a relationship where there is full involvement by all parties at each step of the process — from the formation of the research questions to the dissemination of the findings and development of implementation-evaluation cycles for ongoing improvements; it is an active, communicative and respectful partnership in which the needs and voices of all team members are valued equally.

Sharing research with other regulators and the profession at large allows everyone to learn from these experiences. By subjecting that information to external review and methodological scrutiny both the public and the profession will see that decisions are evidence-informed rather than anecdotal, based on the whim of a particular group of individuals or results of purely political motivation. Looking at oneself critically takes courage, leadership and will for any organization. Risks of “finding something bad” will always persist, but the legal and ethical implications of not finding, and fixing, something that isn’t working simply because we were too afraid to ask tough questions, poses a far greater risk to all involved. There are already many regulators who are showing leadership and completing valuable research and they need to encourage others to do the same. Sharing of findings allows the positive results to be celebrated and create best practices and the negative results to be used for quality improvement and development. In either case, both positive and negative findings serve as important lessons from which other regulators may learn and build better approaches to regulation and governance. By learning from one another, between jurisdictions and even across professions, regulators can advance the state of knowledge in medical regulation and self-governance and in doing so will actively demonstrate their commitment to accountability and transparency to the public and profession alike. Let the discussion begin.

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About the Author

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Introduction

Evidence based medicine (EBM) is gaining importance in the practice of medicine. EBM is defined as the “conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients…Integrating individual clinical expertise with patient values and the best available external clinical evidence from systematic research.” The concept of EBM was advanced by Professor Archie Cochrane and was later applied by David Eddy and David Sackett. Further, it was encouraged by the establishment of the Cochrane center in Oxford, England, by the government of the United Kingdom (UK).

While the application of EBM was viewed skeptically initially, the scenario has changed in recent times, with the practical utility of EBM now well documented. Knowledge regarding certain therapies has increased significantly, and some that were used extensively have been recognized as unworthy or hazardous.

Previously, management of clinical cases depended mainly on the clinical experience of doctors and their knowledge regarding disease. The norm was to consult local experts or textbooks to solve clinical problems. Today these are not considered reliable, as evidence may be lacking and information may be out of date. Clinical practice has become more scientific and systematic with the introduction of EBM. The main goal of EBM is to provide the best care possible to patients. Several measures have been accomplished in this regard, such as instituting Cochrane collaboration, setting up publication standards for primary and secondary research, and building a knowledge base and infrastructure for guidelines development, both nationally and internationally. The importance of EBM in general practice has been highlighted in recently reported literature. EBM also helps doctors in making better clinical decisions by providing updates regarding recent advancements through an organized and structured approach of medical education.

The gap in implementation of results in clinical trials and their utility in case management results in costly
and incompetent treatment. A majority of studies have shown that, though doctors have an optimistic attitude towards EBM, there is less awareness regarding its implementation. Few studies have been published on the perception of EBM among doctors, especially from developing countries such as India.

In view of the paucity of literature, the current study focused on determining the perception and practice of EBM among medical professionals in South India.

**Methodology**

**Study setting**

Mangalore is one of the three coastal districts of Karnataka in South India. The health care system in Mangalore is largely privatized, with the presence of six private medical colleges and many private clinics. Kasturba Medical College (KMC), Mangalore is a renowned institution and actively promotes research.

**Study design**

A facility-based cross-sectional study was carried out among doctors at three tertiary care teaching hospitals associated with KMC, Mangalore.

**Sample size estimation**

The sample size was calculated assuming that 50% of health care professionals were aware of EBM. Considering a relative precision of 15% and Confidence Interval of 95%, sample size was found to be 171. Adding a non-response rate of 10%, the final sample size was calculated to be 188.

**Sampling technique**

A list of all the doctors working in the targeted hospitals was obtained (400), and the participants were divided into two groups: surgical (105) and medical specialties (83). The required number of participants in each group was selected by using a probability-proportional-to-size method.

**Ethical consideration**

Ethical approval was obtained from the Institutional Ethics Committee (IEC) of Kasturba Medical College, Mangalore, India (affiliated with Manipal University), prior to commencement of the study.

**Study instrument**

Data collection was achieved using a pre-tested, semi-structured questionnaire modified from the questionnaire developed by McColl et al after obtaining written informed consent from the participants. The questionnaire consisted of five sections: sources of information for medical professionals being utilized during their clinical decision making; their perception of EBM; their familiarity and use of electronic EBM sources; their knowledge of methodological terminology used in EBM; and their self-rated confidence in their EBM skills.

Investigators approached the study participants and explained to them the objectives of the study. A revisit was conducted on the date and time specified by the participants, during which the study questionnaire was administered after obtaining their written, informed consent. On average, the participants took approximately 20 minutes in filling out the questionnaire.

**Statistical analysis**

Data was entered and analyzed using Statistical Package for Social Sciences (SPSS) version 11.5. The results obtained were expressed in mean (standard deviation) and percentages.

**Results**

A total of 188 doctors were included in the study. The mean age of participants was 35+ 8.33 years. The majority (n=113, 60.1%) of participants were in the age group of 30-50 years. The baseline characteristics of the study participants are given in Table 1.

**Table 1**

| Baseline Characteristics of the Study Participants (N=188) |
|---------------------------------|-----------------|
| **Variables** | **Number (%)** |
| Age (Years) | | |
| <30 | 60 (31.9) |
| 30-50 | 113 (60.1) |
| >50 | 15 (08.0) |
| Gender | | |
| Male | 132 (69.8) |
| Female | 56 (29.6) |
| Qualification | | |
| MBBS | 43 (22.8) |
| MD/MS | 145 (76.7) |
| Work experience | | |
| >5 years | 105 (55.8) |
| <5 years | 83 (44.2) |
| Specialty | | |
| Medical | 83 (44.1) |
| Surgical | 105 (55.9) |
The majority of the participants referred to textbooks (n=182, 96.8%), followed by consulting their colleagues (n=176, 93.6%) or senior physicians (n=170, 90.5%) as the main sources of information for clinical decision making, as shown in Table 2.

The attitude of practitioners regarding evidence based medicine is depicted in Table 3. The majority (n=180, 95.8%) of the participants were of the opinion that EBM should be taught in medical school. Around 90% of participants agreed that EBM helps in clinical decision-making. Despite the high rates of referring to colleagues for information, more than half (n=98, 52.1%) agreed that EBM helps in clinical decision-making.

A MAJORITY OF STUDIES HAVE SHOWN THAT, THOUGH DOCTORS HAVE AN OPTIMISTIC ATTITUDE TOWARDS EBM, THERE IS LESS AWARENESS REGARDING ITS IMPLEMENTATION.

<table>
<thead>
<tr>
<th>Sources of Information</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical textbook</td>
<td>182(96.8)</td>
</tr>
<tr>
<td>Consult colleagues</td>
<td>176(93.6)</td>
</tr>
<tr>
<td>Consult senior doctors</td>
<td>170(90.5)</td>
</tr>
<tr>
<td>Electronic search engine</td>
<td>166(88.3)</td>
</tr>
<tr>
<td>Consult clinical practice guideline</td>
<td>162(86.2)</td>
</tr>
<tr>
<td>Research article</td>
<td>160(85.1)</td>
</tr>
<tr>
<td>Continuing Medical Education conferences</td>
<td>160(85.1)</td>
</tr>
<tr>
<td>Consult residents manual</td>
<td>132(70.3)</td>
</tr>
</tbody>
</table>

Table 2
Source of Information During Clinical Decision Making (N=188)

<table>
<thead>
<tr>
<th>Statements</th>
<th>Disagree Number (%)</th>
<th>Neutral Number (%)</th>
<th>Agree Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBM should be taught in medical school</td>
<td>02(01.1)</td>
<td>06(03.2)</td>
<td>180(95.8)</td>
</tr>
<tr>
<td>EBM helps in clinical decision making</td>
<td>06(03.2)</td>
<td>12(06.4)</td>
<td>170(90.4)</td>
</tr>
<tr>
<td>EBM improves patient care</td>
<td>06(03.2)</td>
<td>14(07.4)</td>
<td>168(89.4)</td>
</tr>
<tr>
<td>EBM improves patient outcomes</td>
<td>06(03.2)</td>
<td>30(16.0)</td>
<td>144(76.6)</td>
</tr>
<tr>
<td>EBM brings about quick knowledge update</td>
<td>14(07.4)</td>
<td>30(16.0)</td>
<td>144(77.0)</td>
</tr>
<tr>
<td>EBM practice can reduce health care costs</td>
<td>28(14.9)</td>
<td>60(31.9)</td>
<td>100(53.2)</td>
</tr>
<tr>
<td>EBM is equal to research activity</td>
<td>24(12.8)</td>
<td>42(22.3)</td>
<td>120(63.8)</td>
</tr>
<tr>
<td>EBM application is difficult in daily practice</td>
<td>52(27.7)</td>
<td>30(16.0)</td>
<td>106(56.3)</td>
</tr>
<tr>
<td>EBM focuses on patients value</td>
<td>20(10.6)</td>
<td>56(29.8)</td>
<td>112(59.6)</td>
</tr>
</tbody>
</table>

Table 3
Perception of Medical Practitioners Regarding Evidence Based Medicine (EBM) (N=188)

<table>
<thead>
<tr>
<th>Resources</th>
<th>Unaware Number (%)</th>
<th>Aware but Not Used Number (%)</th>
<th>Read Number (%)</th>
<th>Used Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PubMed / Medline Journal</td>
<td>00</td>
<td>18(09.6)</td>
<td>72(38.3)</td>
<td>98(52.1)</td>
</tr>
<tr>
<td>Evidence based medicine</td>
<td>14(07.4)</td>
<td>62(33.0)</td>
<td>64(34.0)</td>
<td>44(23.4)</td>
</tr>
<tr>
<td>Clinical evidence</td>
<td>22(11.7)</td>
<td>40(21.3)</td>
<td>68(36.2)</td>
<td>54(28.7)</td>
</tr>
<tr>
<td>Cochrane database of systematic review</td>
<td>28(14.9)</td>
<td>86(45.7)</td>
<td>32(17.0)</td>
<td>38(20.2)</td>
</tr>
<tr>
<td>The American College of Physicians Journal Club</td>
<td>40(21.3)</td>
<td>82(43.6)</td>
<td>40(21.3)</td>
<td>20(10.6)</td>
</tr>
<tr>
<td>Up to date</td>
<td>52(27.7)</td>
<td>42(22.3)</td>
<td>42(22.3)</td>
<td>46(24.5)</td>
</tr>
</tbody>
</table>
of the participants had used PubMed, followed by the Cochrane database (n=38, 20.2%) as shown in Table 4.

The majority of participants had a good understanding of terms such as “sensitivity and specificity” (n=146, 77.6%) and “relative risk” (n=130, 69.1%). The majority (n=158, 84%) of participants were confident in conducting literature searches followed by ability in evaluating research (n=150, 79.8%).

Table 5 shows self-perceived barriers of practitioners regarding EBM. Lack of time (n=126, 67%) and insufficient skills (n=124, 66%) were considered the main barriers for practicing EBM.

Discussion

Doctors are the major agents of health care delivery, hence it is important for them to incorporate EBM in their routine practice. They should recognize the importance of EBM in delivering uniform quality treatment to all of their patients.2

The current study revealed that the majority of doctors referred to textbooks for clinical decision making, followed by the use of research articles, or consulting their colleagues and senior physicians. These observations were similar to those reported from Denmark13 and Canada.4,15 Dependence on others’ intellectual ability leads to instinctive clinical decision making and standard textbooks reflect the approach of the author to a particular disease, which is not evidence based.13 Awareness regarding the resources related to EBM among respondents was high, however, only a few of them had applied EBM in clinical decision making. All the respondents were aware of PubMed and around half of them had used it. There might be an under-estimation of results related to utilization of databases because in a few instances respondents may have used a particular database but may not have been aware of the correct title. In comparison with studies conducted in Middle East Asian countries,8-10 the level of awareness in the present study was much higher regarding EBM. This might be attributed to increased exposure of doctors regarding EBM in the form of training and CME (Continuing Medical Education) at Kasturba Medical College (KMC), Mangalore and the teaching hospitals associated with it.

Lack of accessibility to journals and databases at a workplace, as well as lack of time during busy clinical schedules, have been the main obstacles in implementation of EBM.

AWARENESS REGARDING THE RESOURCES RELATED TO EBM AMONG RESPONDENTS WAS HIGH. HOWEVER, ONLY A FEW OF THEM HAD APPLIED EBM IN CLINICAL DECISION MAKING.

Table 5
Self-Perceived Barriers of Medical Practitioners Regarding Incorporating Evidence Based Medicine (EBM) (N=188)

<table>
<thead>
<tr>
<th>Self-perceived barriers to EBM</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of EBM sources in native language</td>
<td>96(51.1)</td>
</tr>
<tr>
<td>Insufficient basic EBM skill</td>
<td>124(66.0)</td>
</tr>
<tr>
<td>Lack of time to access EBM sources</td>
<td>126(67.0)</td>
</tr>
<tr>
<td>EBM removes the &quot;art&quot; of medicine</td>
<td>42(22.4)</td>
</tr>
<tr>
<td>New concept</td>
<td>106(56.3)</td>
</tr>
<tr>
<td>Skepticism over concept</td>
<td>70(37.3)</td>
</tr>
<tr>
<td>In most areas of medicine, there is little/ no evidence to guide practice</td>
<td>62(33.0)</td>
</tr>
<tr>
<td>EBM is impractical for everyday clinical practice</td>
<td>80(42.6)</td>
</tr>
<tr>
<td>EBM practice devalues clinical experience and institutions</td>
<td>48(25.5)</td>
</tr>
<tr>
<td>EBM de-emphasizes history taking and physical examination skills</td>
<td>54(28.5)</td>
</tr>
</tbody>
</table>
the medical school curriculum. It was the belief of the majority of doctors that evidence-based medicine will help in clinical decision making and in improving patient care. Similar views were expressed by participants in several other studies.\textsuperscript{8, 10, 17, 18}

Medical regulators can develop guidelines for training of students in medical schools regarding research methodology and bio-statistics. Regulators may also play a role in updating practicing physicians with the latest medical research, helping ensure that the best treatment is provided to the patients.

Only half of the participants in our study believed that EBM would reduce health care costs, which is in contrast to a study conducted in Iran,\textsuperscript{8} where higher proportions of the participants believed that health care costs could be reduced by practicing EBM. According to estimates by the National Health Accounts of India, 78.8\% of health care spending by individuals in India is out-of-pocket expenditure.

Considerable knowledge of technical terms is essential for the interpretation of results in EBM. Half of the participants in our study had a significant knowledge of the technical terms used in evidence-based medicine, such as “sensitivity and specificity” and “publication bias.” In conformity with this finding, understanding of publication bias was low in a study conducted among general practitioners in England.\textsuperscript{11} The findings of studies conducted in Saudi Arabia\textsuperscript{18} and Riyadh\textsuperscript{20} regarding knowledge of technical terms conforms with our findings. In contrast to our study findings, terms such as “odds ratio,” “meta-analysis,” and “likelihood ratio” were least understood in studies conducted in Saudi Arabia\textsuperscript{18} and Riyadh.\textsuperscript{20} Due to subjective assessment, there might be an overestimation of results regarding knowledge related to technical terms.

A higher proportion of participants in our study felt themselves proficient enough to use the skills related to EBM, which is in contrast to observations made in Australia.\textsuperscript{21}

Medical regulations and policies should be based on the best current evidence, and for evidence to be effectively utilized by medical professionals these individuals need to be trained and appraised periodically. The evidence should be dynamic and also should be based on the socio-cultural context.

Limitations

As the study was carried out in a teaching hospital linked with a medical college, results of the present study may not be generalized. Also, self-rated knowledge of respondents regarding EBM may differ from that of objective criteria, as demonstrated in a study conducted by Young et al in Australia.\textsuperscript{22}

Conclusion

Positive attitudes and higher awareness regarding EBM among doctors in the present study, compared to other reported literature, is an encouraging finding. Medical regulators should utilize the best available evidence and experience in formulating policy on medical education and health care.

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MEDICAL REGULATORS CAN DEVELOP GUIDELINES FOR TRAINING OF STUDENTS IN MEDICAL SCHOOLS REGARDING RESEARCH METHODOLOGY AND BIO-STATISTICS.
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References


Mapping Norms of Academic Integrity as an Aid to Proactive Regulation

Sue Roff, MA; Maralyn Druce, MBBS, PhD; Kathryn Livingston, MBA; C. Michael Roberts, MBChB, MD; Anne Stephenson, MBChB, PhD | United Kingdom

**ABSTRACT:** This study investigates whether it is possible to map norms of professionalism among medical student and faculty cohorts. The purpose is to provide ongoing information regarding the validity of this approach in multiple settings both within the United Kingdom (UK) and internationally. Its methodology is based on the *Dundee Polyprofessionalism Inventory I: Academic Integrity*, which solicits recommended sanctions as an indication of the severity with which particular lapses are regarded. The inventory was administered to cohorts in the UK, and results were compared with previously reported results from Saudi Arabia, Pakistan and Egypt. There are a great number of similarities—or congruence—between staff and students within institutions and also across institutions (and indeed countries). However there are also a number of areas in which there are notable differences between median sanctions suggested by staff and students for particular “lapses.” There are fewer areas in which there are greater than two levels of difference of median suggested sanction for students and staff across national boundaries (London and Scotland) or staff across the same national boundaries. The paper presents data from three UK schools and three other countries that indicate a broad base of congruence but also important inter-school and regional differences that may be a function of different national and ethnic cultures. The applicability of the resource needs to be further explored to confirm its usefulness as a tool in professionalism learning.

**Introduction**

Nearly 60 years ago Robert K. Merton noted in his pioneering study of *The Student-Physician*:

“The profession of medicine, like other occupations, has its own normative subculture, a body of shared and transmitted ideas, values and standards towards which members of the profession are expected to orient their behavior. These norms and standards define technically and morally allowable patterns of behavior, indicating what is prescribed, preferred, permitted, or proscribed. The subculture, then, refers to more than habitual behavior; its norms codify the values of the profession.”

More recently, Lave and Wenger² (1991) have described the “community of practice” among members of specialist work forces. Within the medical profession, there has been increasing interest in the process of professional identity formation from novices in undergraduate education and training to licensed physicians within the social organizations of the medical school and residencies and their communities of learning and practice.

Merton introduced the concept and theory of “reference groups” as a way of understanding both the formation and dynamics of highly socialized social groups such as the medical and other health professions. Reference group theory “aims to systematize the determinants and consequence of those processes of evaluation and self-appraisal in which the individual takes the values or standards of other individuals and groups as a comparative frame of reference”³ (p.50) and thereby “signs on” to a particular social group. The individual accepts the personal salience of what “appear to be frames of reference held in common by a proportion of individuals within a social category sufficiently large to give rise to definitions of the situation characteristic of that category”³ (p.62).

In 1957 Merton noted that “Since the writings of George Mead were published a generation ago, there has gradually developed a socio-psychological
theory of the sources and consequences of self-images and self-appraisals. But only recently has there developed a body of inquiry which empirically tests and develops the implications of this theory, say, within the sphere of formal education. Yet it would seem important to learn how students arrive at self-appraisals, the standards they use in evaluating themselves, and the consequences of all this for professional development (p.299, Appendix B).

Merton and Kitt (1950) saw that “these frames of reference are common because they are patterned by the social structure” (p.62).

Aims

The aim of this study is to investigate whether it is possible to map norms of professionalism among cohorts. The purpose is to provide ongoing information regarding the validity of this approach in multiple settings both within the UK and internationally.

Methodology

Norms of professionalism were mapped among cohorts by using the strategy of soliciting recommended sanctions as an indication of the severity with which particular lapses are regarded in order to delineate “the development of relatively precise, statistical indices of social structure” (p.81). The recommended sanction, ranging from “Ignore” to “Report to Regulator,” serves as a proxy statement of the degree of unprofessionalism of each behavior as viewed by the respondent. In this study the relations between a respondent’s recommended sanction and his or her actual behavior are not explored, although we note the work of Papadakis and her colleagues (2014) relating student poor professionalism with likelihood of disciplinary action after licensure.

Following the initial descriptive analysis in this paper and further analysis in subsequent papers, we intend to identify where enhanced teaching and learning of professionalism should be targeted in order to facilitate the successful process of professional identity formation in medical students.

The Inventory

The Dundee Polyprofessionalism Inventory I: Academic Integrity was used. This inventory, and a related inventory for early clinical professionalism, were developed as online tools to “map” the norms of organizational culture in health professionals’ learning, from novice to fully licensed practitioners, to enable us to explore those iterative connections between organizational culture and individual praxis.

In order to generate items for the Dundee Polyprofessionalism Inventory I: Academic Integrity, Roff et al (2011) identified more than 30 research studies on undergraduate academic integrity in the health professions and their methodologies and items reviewed. One hundred items were identified by two of the researchers in the field of Academic Integrity in the Health Professions at the junior undergraduate level. Two researchers condensed these into 41 items which were reviewed by the other researchers.

The items were further reduced to 30 by amalgamating several of them. The inventory was subsequently adapted for use with UK osteopathy students by Browne et al (2014) during which process four items were added to the 30-item inventory. In administration to Scottish students and staff, of the core 30 items, one was worded slightly differently: “Exchanging information about an exam before it has been taken” (e.g. OSCE) was presented to the Scottish respondents as “Receiving information about a paper from students who have already sat the exam or providing information about a paper to students who have yet to sit it,” which may affect responses from the Scottish school.

Data collection

Following Teplitsky (2002), medical students and medical faculty were asked to recommend appropriate sanctions for a first time offense with no mitigating circumstances from the following hierarchy of options, which are theoretical rather than necessarily available within the regulations in each of the medical schools:
from London school B, 372 from a Scottish school\(^{12}\) and medical faculty (165 medical faculty: 107 from London school A and 58 from a Scottish school).

The results were compared to previous published studies using the Dundee Polyprofessionalism Inventory in three overseas medical schools comprising Egyptian (n=219),\(^{13}\) Saudi Arabian (n=96),\(^{14}\) and Pakistani (n=480)\(^{15}\) medical students.

### Results

For 15 (50%) of the 30 items in the inventory there was high congruence (no more than one level of difference) between all the median sanctions recommended by the five sets of respondents.

There were differences of two or more levels in median recommended sanctions for 15 (50%) of the 30 items.

#### Table 1

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Staff n=107</th>
<th>Scottish Staff n=58</th>
<th>London A Students n=189 1st yr</th>
<th>London B Students n=432</th>
<th>Scottish Students n=375</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting or giving help for course work, against a teacher’s rules (e.g. lending work to another student to look at)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Lack of punctuality for classes</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Failure to follow proper infection control procedures</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Removing an assigned reference from a shelf in the library in order to prevent other students from gaining access to the information in it</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Signing attendance sheets for absent friends, or asking classmates to sign attendance sheets for you in labs or lectures</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Not doing the part assigned in group work</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Damaging public property (e.g. scribbling on desks or chairs)</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Drinking alcohol over lunch and interviewing a patient in the afternoon</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Purchasing work from a fellow student or internet etc. supplier</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Inventing extraneous circumstances to delay sitting an exam</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Plagiarizing work from a fellow student or publications/internet</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Cheating in an exam by (e.g. copying from neighbor, taking in crib material or using mobile phone or getting someone else to sit for you)</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Physically assaulting a university employee or student</td>
<td>8</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Involvement in pedophilic activities—possession/viewing of child pornography images or molesting children</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 2
Inventory Items in Which There Were Differences of Two or More Levels of Median Recommended Sanction

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Staff n=107</th>
<th>Scottish Staff n=58</th>
<th>London A Students n=189</th>
<th>London B Students n=432</th>
<th>Scottish Students n=375</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchanging information about an exam before it has been taken (e.g. OSCE)</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Completing work for another student</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Claiming collaborative work as one’s individual effort</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Threatening or verbally abusing a university employee or fellow student</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Engaging in substance misuse (e.g. drugs)</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Cutting and pasting or paraphrasing material without acknowledging the source</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Resubmitting work previously submitted for a separate assignment or earlier degree</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Forgiving a healthcare worker’s signature on a piece of work, patient chart, grade sheet or attendance form</td>
<td>6</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Altering or manipulating data (e.g. adjusting data to obtain a significant result)</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Sabotaging another student’s work</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Attempting to use personal relationships, bribes or threats to gain academic advantages (e.g. by getting advance copies of exam papers or passing exam by such pressures on staff)</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Intentionally falsifying test results or treatment records in order to disguise mistakes</td>
<td>7</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Sexually harassing a university employee or fellow student</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Providing illegal drugs to fellow students</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Falsifying references or grades on a curriculum vitae or altering grades in the official record</td>
<td>9</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

There were differences of two levels in median recommended sanctions between the London and Scottish staff for four items; three levels for three items; and four levels for one item. In all but two of these responses, the Scottish staff respondents were stricter than the London staff respondents.

There were differences of two or more levels in median sanctions recommended by the London and Scottish students in relation to seven items.

There were differences of two levels in the median sanctions recommended by the two cohorts of London students in relation to two items.

The items with the lowest levels of congruence are listed in Table 6.

The median recommended sanctions reported above from UK respondents differ substantially for nearly half of the items from those reported for Egyptian, Saudi Arabian and Pakistani medical students.

For nine (30%) items non-UK respondents recommended lower median sanctions as listed in Table 8.

While there is a broad congruence between recommended sanctions for around half of the lapses in professionalism both between the UK respondents and in relation to the non-UK respondents, there are six items where there is variance both within the UK responses and with the non-UK responses as set out in Table 9.

Discussion
While there is a broad consensus around half of the examples of poor academic professionalism, Tables 6 and 9 suggest that there are specific issues on which there are different norms about poor professionalism at both individual medical schools in a country such as the UK and between different national cultures.

The medians are reported in this initial analysis but the range of recommended responses will also help us to understand the “professionalism climate” in individual schools. For instance, in the UK schools there is virtual unanimity on the severity of sanction required in response to pedophilic activities. But there is a far greater range of responses for exchanging information about an exam before it has been taken (e.g., OSCE) where 18% of one London school and 40% of the other London school student respondents recommended that this behavior
should be ignored. It is to be expected that such a range will be reflected in means at some variation from the medians. The responses will be analyzed in more granularity in a separate paper to see how the data can be used to understand differences in the culture and expectations of medical schools in relation to professionalism.

The inventory maps one domain of professionalism, namely academic integrity and attitudes to and suggested sanctions for lapses of such integrity.

AN UNDERSTANDING OF THE EXISTING VIEWS OF STUDENTS AND STAFF REGARDING APPROPRIATE PROFESSIONAL BEHAVIOR IS AN IMPORTANT STEP TOWARDS DEVISING SUITABLE GUIDANCE FOR MEDICAL STUDENTS REGARDING PROFESSIONALISM.

It is clear from the results that there are a great number of similarities between staff and students within institutions and also across institutions (and indeed countries). However there are also a number of areas in which there are notable differences between median sanctions suggested by staff and students for particular “lapses.” There are fewer areas in which there are greater than two levels of difference of median suggested sanction for students across national boundaries (London and Scotland) or staff across the same national boundaries. Nonetheless, these data — and also the results when compared to similar data collected from several institutions around the world — suggest that there are specific issues on which there are different norms about poor professionalism at both individual medical schools in a country such as the UK and between different national cultures.

Table 3
Inventory Items in Which There Were Differences of More Than Two or More Levels in Median Recommended Sanctions of London and Scottish Staff

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Students n=189</th>
<th>London A Students n=58</th>
<th>London B Students n=432</th>
<th>Scottish Students n=375</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examining patients without knowledge or consent of supervising clinician</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exchanging information about an exam before it has been taken (e.g. OSCE)</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completing work for another student</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claiming collaborative work as one’s individual effort</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cutting and pasting or paraphrasing material without acknowledging the source</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forging a healthcare worker’s signature on a piece of work, patient chart, grade sheet or attendance form</td>
<td>6</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sabotaging another student’s work</td>
<td>6</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intentionally falsifying test results or treatment records in order to disguise mistakes</td>
<td>7</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4
Differences of Two or More Levels in Median Sanctions Recommended by the London and Scottish Students

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Students n=189</th>
<th>London A Students n=58</th>
<th>London B Students n=432</th>
<th>Scottish Students n=375</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examining information about an exam before it has been taken (e.g. OSCE)</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Claiming collaborative work as one’s individual effort</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Threatening or verbally busing a university employee or fellow student</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Engaging in substance misuse (e.g. drugs)</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Cutting and pasting or paraphrasing material without acknowledging the source</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Resubmitting work previously submitted for a separate assignment or earlier degree</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Intentionally falsifying test results or treatment records in order to disguise mistakes</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Table 5
Differences of Two Levels in Median Sanctions Recommended by London Students

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Students n=189</th>
<th>London A Students n=58</th>
<th>London B Students n=432</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutting and pasting or paraphrasing material without acknowledging the source</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Resubmitting work previously submitted for a separate assignment or earlier degree</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
It is important to note, however, that the significance of “median sanction” has not been fully explored. It is an expression of an attitude towards a given professionalism lapse, but it is not clear at present whether it correlates with other features of student attitude or behavior. It may also be interesting to look at the range as well as the median, as items with a broad range as selected in responses to the inventory may reflect a degree of ambivalence or uncertainty regarding the item, compared to items with a narrow range of sanctions suggested. It should also be noted that in more demographically similar groups (such as the two cohorts of students in London), there were fewer items that were non-congruent in terms of median sanctions and these tended to be at the lower end of severity of both the type of lapse and the sanction suggested. This highlights the fact that the list of misdemeanors and scale of sanctions are not necessarily linear and there appears to be more room for doubt, discussion and variance among the items that accrued the least stringent sanctions.

The differences between UK and non-UK respondents in terms of which items had the least congruence may tell us something interesting about the normative subculture regarding professionalism in medicine across the globe.

**Conclusion**

An understanding of the existing views of students and staff regarding appropriate professional behavior is an important step towards devising

---

**Table 6**

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Staff n=107</th>
<th>Scottish Staff n=58</th>
<th>London A Students n=189 1st yr</th>
<th>London B Students n=432</th>
<th>Egyptian Students n=219</th>
<th>Saudi Students n=96</th>
<th>Pakistani Students n=480</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchanging information about an exam before it has been taken (e.g., OSCE)</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claiming collaborative work as one’s individual effort</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threatening or verbally abusing a university employee or fellow student</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resubmitting work previously submitted for a separate assignment or earlier degree</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intentionally falsifying test results or treatment records in order to disguise mistakes</td>
<td>7</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sabotaging another student’s work</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Table 7**

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Staff n=107</th>
<th>Scottish Staff n=58</th>
<th>London A Students n=432</th>
<th>Scottish Students n=375</th>
<th>Egyptian Students n=219</th>
<th>Saudi Students n=96</th>
<th>Pakistani Students n=480</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to follow proper infection control procedures</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Damaging public property (e.g., scribbling on desks or chairs)</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>8</td>
<td>n/a</td>
</tr>
<tr>
<td>Drinking alcohol over lunch and interviewing a patient in the afternoon</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Engaging in substance misuse (e.g., drugs)</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

---
Table 8
Lower Median Sanctions Recommended by Non-UK Respondents

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Staff n=107</th>
<th>Scottish Staff n=58</th>
<th>London A Students n=189 1st yr</th>
<th>London B Students n=432</th>
<th>Scottish Students n=375</th>
<th>Egypt Students n=219</th>
<th>Saudi Students n=96</th>
<th>Pakistan Students n=480</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resubmitting work previously submitted for a separate assignment or earlier degree</td>
<td>5 6 3 5 3 6 3 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forging a healthcare worker’s signature on a piece of work, patient chart, grade sheet or attendance form</td>
<td>6 10 6 6 5 4 5 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altering or manipulating data (e.g. adjusting data to obtain a significant result)</td>
<td>6 6 4 5 4 6 5 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing work from a fellow student or internet etc. Supplier</td>
<td>6 6 6 6 6 4 5 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventing extraneous circumstances to delay sitting an exam</td>
<td>6 6 6 6 6 3 4 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plagiarizing work from a fellow student or publications/internet</td>
<td>6 6 5 6 5 4 5 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempting to use personal relationships, bribes or threats to gain academic advantages (e.g. by getting advance copies of exam papers or passing exam by such pressures on staff)</td>
<td>7 8 7 7 6 4 7 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intentionally falsifying test results or treatment records in order to disguise mistakes</td>
<td>7 10 6 7 5 6 6 n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falsifying references or grades on a curriculum vitae or altering grades in the official record</td>
<td>9 10 6 7 6 7 7 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9
Items with Variance Both With UK Responses and With Non-UK Responses

<table>
<thead>
<tr>
<th>Behavior</th>
<th>London A Staff n=107</th>
<th>Scottish Staff n=58</th>
<th>London A Students n=189 1st yr</th>
<th>London B Students n=432</th>
<th>Scottish Students n=375</th>
<th>Egypt Students n=219</th>
<th>Saudi Students n=96</th>
<th>Pakistan Students n=480</th>
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</thead>
<tbody>
<tr>
<td>Resubmitting work previously submitted for a separate assignment or earlier degree</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Forging a healthcare worker’s signature on a piece of work, patient chart, grade sheet or attendance form</td>
<td>6 10 6 6 5 4 5 4</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Altering or manipulating data (e.g. adjusting data to obtain a significant result)</td>
<td>6 6 4 5 4 6 5 3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Attempting to use personal relationships, bribes or threats to gain academic advantages (e.g. by getting advance copies of exam papers or passing exam by such pressures on staff)</td>
<td>6 6 6 6 6 4 5 3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intentionally falsifying test results or treatment records in order to disguise mistakes</td>
<td>6 6 6 6 6 3 4 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falsifying references or grades on a curriculum vitae or altering grades in the official record</td>
<td>9 10 6 7 6 7 7 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

suitable guidance for medical students regarding professionalism. We note the use of survey data as part of the current review of student professional values and fitness to practise guidance being conducted by the UK General Medical Council (http://www.gmc-uk.org/Student_professionalism_our_survey_of_medical_students.pdf_60873369.pdf). Mapping existing norms, as well as those of patients and lay public, can be followed by helping students and the profession move closer towards an “ideal”
defined state of professional conduct and can also help to characterize appropriate sanctions for professionalism lapses. As Struckmann et al\textsuperscript{16} (2015) have commented, “a common understanding of definitions of what constitutes competence to practise, its impairment and its potential impact on patient safety becomes particularly important” in an era of international mobility for doctors. Longitudinal prospective cohort studies using the mapping approach outlined above could be combined with individualized feedback to enable targeted interventions to remediate poor understandings of professionalism before students become licensed practitioners, as Papadakis et al\textsuperscript{5} (2005) urged a decade ago.

This paper reports data from three UK schools and three other countries, which indicate a broad base of congruence but also important inter-school and regional differences that may be a function of different national and ethnic cultures. The applicability of the resource needs to be further explored to confirm its usefulness as tool in professionalism learning.

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References


In many ways, Australia has an affinity with the United States. Both are relatively young nations with pioneering traditions enhanced by settlers from many countries. They fought alongside each other in 20th and 21st Century conflicts, including the First and Second World Wars, Korea, Vietnam, and more recently, Afghanistan and Iraq. Both have benefited from waves of settlement and migration, which opened up both countries for mining and arable land cultivation, and migration from non-Anglo-Celtic countries has changed both countries into diverse multicultural federations with written national constitutions and a system of federal/state government and law-making.

According to the Australian Bureau of Statistics, as of June 30, 2014, Australia, with a population of 23,425,700, had 99,379 registered medical practitioners.\(^1\) Comparable figures for the United States are a population of 319,151,000 and 878,194 licensed physicians respectively.\(^2\) This equates to around one medical practitioner for 236 people in Australia compared with one physician for every 363 people in the United States.

There are also similarities in medical practitioner regulation. Both countries have systems that incorporate state bodies aimed at protecting the public by ensuring that only suitably trained and qualified practitioners are registered — though in Australia, an additional level of national regulation is included. Regulation in both countries includes the publication of registers of practitioners so that important information about the registration of individual practitioners is publicly available.

In both the United States and Australia, regulators make available a variety of physician/practitioner information on their individual websites. At a minimum, United States medical board profiles include licensure status and disciplinary history, while the Australian Health Practitioners Regulation Authority’s (AHPRA) online details displayed include registration conditions, undertakings (known in the United States as “board actions”), and reprimands.

But is there enough information on the public register in either country to enable a member of the public to make an informed choice as to a treating physician's regulatory status? Is there a duty on referring practitioners to inform patients about the regulatory status of the physician to whom they are being referred?
practitioner? Today, many patients’ expectations have changed from being a passive acceptor of doctors’ orders to being an active partner in a therapeutic relationship.

In Australia, the general practitioner is the “gatekeeper” for referral of patients from the general practitioner to consultant colleagues. A patient cannot go directly to a specialist. This is a strong point of the Australian medical system and different from the United States, where some insurance companies require referrals to go to a specialist and others do not.

In Australia, the national regulatory scheme aims to protect the public by dealing with practitioners who may be putting the public at risk as a result of their conduct, professional performance or health. This is a statutory obligation imposed on the regulating body, the Australian Health Practitioner Health Regulation Agency (AHPRA), and must be at the forefront of all activities undertaken by the regulator and its constituent members.

Unfortunately, some practitioners with practice restrictions occasionally slip through the regulatory net because of a breakdown in procedures that should alert both the public and other practitioners to problems.

A contemporary Australian example is that of neurosurgeon Dr. Suresh Nair, who was apparently able to continue to practice under conditions, notwithstanding a known history of drug abuse. According to the AHPRA website, in 2005, the Medical Board of New South Wales (NSW) imposed conditions on Dr Nair’s registration that included a health condition that he must not self-administer any substance listed in Schedule 4 or Schedule 8 of the NSW Poisons List or Schedule 1 of the Drug Misuse and Trafficking Act 1985 (NSW), which are, in short, drugs that can lead to dependency or addiction.

In 2010, Dr. Nair pleaded guilty to the manslaughter of a female prostitute who he had engaged, and two counts of the supply of a prohibited drug (cocaine). The escort died during the engagement with Dr. Nair after he had supplied her with cocaine and alcohol, and then failed to arrange urgent medical treatment for her.

In 2011, Dr. Nair was convicted of the offenses in the District Court of New South Wales and sentenced to imprisonment for eight years with a non-parole period of five years. The non-parole period was subsequently reduced on appeal to four years meaning that Dr. Nair was eligible for parole in July 2014. He was subsequently deported to his native Malaysia in August 2014.

According to local press reports, there are at least nine former patients who allege that they suffer from varying degrees of impairment after surgery performed by Dr. Nair. Some have called for an independent audit of his patient database to establish how many operations performed by Dr. Nair may have resulted in death or suspicious injury.

This case raises the question of how patients are referred by general practitioners to such specialists with imposed practicing conditions, without apparently knowing the conditions; and whether the patient would have followed through on the referral had he or she known of the conditions.

New Zealand Health Ombudsman Ron Paterson wrote in his book, “The Good Doctor: What Patients Want,” that medical boards are often risk averse, by which he means an aversion to organizational risk (such as the threat of judicial review by defense lawyers) rather than an aversion to patient risk. The voice of the doctor, amplified by legal representation, is usually stronger and more articulate than the voice of the patient, and it often seems that backing away from stronger regulatory measures is the safer approach. Harm to the practitioner, in the form of suspension, is immediate and quantifiable, while risk of harm to the public appears distant and uncertain.

Professor Paterson goes on to note that the greatest roadblock to change is not the patients, the doctors, or the medical regulators, but the culture of medicine itself, which influences the behavior of all of these players. Culture, sometimes defined as “the way we do things around here,” has become ubiquitous in any discussion of practitioner regulation and health systems more generally. Any management consultant engaged to review health (and other) organizations would need to focus on cultural change and how complex behavior patterns can be barriers to change initiatives. The same is true of regulatory authorities that pay insufficient heed to medical culture. As Professor Paterson argues, “Culture eats strategy for breakfast every time.”

Some practitioners with practice restrictions occasionally slip through the regulatory net because of a breakdown in procedures that should alert both the public and other practitioners to problems.
Medical culture is probably the most powerful influence on the way that doctors practice. It has contributed in many positive ways to the considerable advances in modern medicine. The medical miracles that patients may take for granted are derived from a remarkable culture of scientific inquiry, emphasis on teaching and learning, teamwork, audit and peer review, and commitment to patient care. Most doctors want to do the best for their patients, sometimes at the expense of a doctor’s own interests and personal needs.

However, culture can also inhibit progress. According to Professor Paterson, there is also a culture in medicine that decrees that once a doctor has been trained, he or she is competent unless proved otherwise, and that the clinician will naturally update knowledge and skills as required by a process of osmosis. Culture takes a long time to change and there is a strong resistance to rules imposed from outside the profession.

Although a medical culture may be influential, these cases must also adhere to the law. In negligence cases alleging harm arising from health care treatment, the English case of Bolam v Friern Hospital Management Committee [1957] 2 All ER 158 is often cited. In that case, it was held that a doctor is not guilty of negligence if she or he has acted in a manner accepted as proper by a “responsible body of medical men (sic) skilled in that particular art.”

In Australia, statutory provisions in some states’ Civil Wrongs legislation give the Courts some discretion in this area, particularly where there was a failure to give a warning, advice or other information in relation to the risk of harm to a person. The leading common law authority in Australia on medical negligence matters is Rogers v Whitaker (1992) 175 CLR 479. In that case, the High Court of Australia held that in cases involving the provision of information or advice about the material risk inherent in the proposed treatment:

“... the Law should recognise that a doctor has a duty to warn a patient of a material risk in the proposed treatment: a risk is material...”

The Court also noted that, when considering what information should be given to a particular patient, it is also useful to note that:

“... the duty (to warn a patient) takes its precise content, in terms of the nature and detail of the information to be provided, from the needs, concerns and circumstances of the patient. A patient may have special needs or concerns, which, if known to the doctor, will indicate that special or additional information is required. In a case of that kind, the information to be provided will depend on the individual patient concerned. In other cases, where, for example, no specific enquiry is made, the duty is to provide the information that would reasonably be required by the person in the position of the patient.”

These common law statements were made in the context of warning patients of the risks associated with surgery or other treatment. But how do they stand with regard to patients being advised of practitioners who may be putting the public at risk as a result of their conduct, professional performance or health?

Sometimes the law is cited as a reason for not being able to advance reform or change. It is certainly true that privacy constraints and procedural fairness are important legal doctrines. But what happens when these doctrines operate in a way that keeps patients from being able to access registration conditions and restrictions that impede patient decision making?

I suggest another legal direction—that of Consumer Law.

As I’ve previously noted, in Australia, the general practitioner is the “gatekeeper” for referral of patients from the general practitioner to consultant colleagues. A patient cannot go directly to a specialist. But pursuant to Divisions 3, 4, and 5 of the National Law, AHPRA maintains an online searchable register of health practitioners. Details displayed include registration conditions, undertakings and reprimands. AHPRA also circulates a monthly online newsletter that contains links to panel, tribunal and court decisions. Panel decisions are de-identified so...
as to comply with s232(2) of the National Law, which stipulates with regard to panels and responsible tribunals that the record is to be kept in a way that does not identify persons involved in the matter unless the decision was made by a responsible tribunal and the matter was open to the public.

In Australia, panel proceedings are not open to the public, thus only some information is available to the public—by way of de-identified online AHPRA records.

While the regulatory body operates within the statutory framework of the National Health law, that framework is not the only legal basis for the regulation of practitioners. Doctors who practice privately in Australia are regarded as carrying on a business and are subject to the provisions of consumer protection legislation. As previously noted, doctors are obliged by common law and professional practice obligations to provide sufficient information to ensure informed consent by patients.

S29 of the Australian Consumer Law (ACL) prohibits false or misleading representations in connection with the supply of goods or services.

Many, if not most, patients lack the time, energy or desire to seek out information about the ongoing registration of specialist medical practitioners and they rely on the advice provided by the referring practitioner.

**WHEN REFERRING PATIENTS, HOW MANY PRACTITIONERS CHECK THE PUBLICALLY AVAILABLE PROFESSIONAL RECORDS OF THE REFERRED PRACTITIONER AS A MATTER OF ROUTINE?**

In providing such advice, as well as providing the patient with a letter of referral to a named specialist, I suggest that it is incumbent on that referring practitioner, therefore, to be fully acquainted with the status of the specialist’s registration and qualifications.

In my view, both a referring and referred medical practitioner has an obligation to advise patients of all information likely to be significant to them in determining whether or not to undergo treatment, most particularly surgical treatment. I think this includes an obligation to inform patients of any imposed limits on their capacity to practice medicine and in relation to the range of services offered.

From speaking with a broad range of the community, as well as with health care consumer associations and interest groups, I have no doubt that the overwhelming majority of patients would say that the fact their proposed specialist is not permitted to perform particular surgery or other specified procedures would be very significant issues to them in deciding whether to proceed with treatment at the hands of the specialist concerned. This would be the case whether the proposed specialist is under specified supervision requirements or has been suspended from practice at a particular hospital because of an investigation following a notification.

Under the ACL, the conduct of the referring practitioner will likely be considered misleading if specific representations about the specialist are inaccurate, or the overall impression conveyed is likely to mislead the patient. A representation need not be verbal and may arise out of conduct. This may also apply to silence.

A key issue for referring practitioners is how they acquaint themselves about the registration status of specialists. When referring patients, how many practitioners check the publically available professional records of the referred practitioner as a matter of routine? Is this a duty or task that the ordinary skilled practitioner would be expected to undertake as part of a duty to keep up to date with the current state of professional knowledge? Even if the record is checked, is there sufficient information to enable the patient to make an informed decision as to choice of referred practitioner? Is there an implied duty of care or requirement pursuant to the ACL on a referring practitioner to check the records and advise the patient of any practice conditions?

A further question here is whether there is a duty on the referred practitioner to inform the patient before commencing a treating relationship of any imposed limits on their capacity to practice medicine and in relation to their range of services so as to enable the patient to decide whether to enter into a treating relationship. From a patient’s point of view, such information is highly relevant to any decision of choice or informed consent being taken as to the choice of practitioner and to treatment options.

Also, is there an implied duty on the regulating body to advise all registered practitioners of practitioners whose registration is subject to conditions, has been suspended or who have been the subject of concluded disciplinary action?

Is there a possibility that the public interest in preventing harm to another or others may be the basis for disclosure of confidential registration information?

Even though disclosure may cause distress to the practitioner, who may prefer that the information
should not be disclosed, this does not mean that disclosure would necessarily be unfair. From a doctor’s perspective, the fear is always that the public’s expectation about doctors becomes unrealistic and that the more “open” doctors are to the public, the more defensively they practice. This may make doctors more “safe” but probably less effective and has the potential to further erode the doctor-patient relationship. Nevertheless, the protection and safety of the public is paramount, and, as I said before, must be at the forefront of all activities undertaken by the regulating body and its constituent members.

The key question should be “is there a legitimate public safety interest in disclosure?” In answering this question, the interest in disclosure must be a public one and not merely a superficial inquiry interest of a possibly vindictive individual. There is a balance to be struck between the rights of the individual practitioners and the broader legitimate public expectation of safety, competency and currency.

If medical ethics and law so highly value patient autonomy and choice with regard to informed consent to medical treatment, why deprive people of the information they need to make a prior and possibly significant decision about their choice of treating specialist or any other practitioner? The generation and supply of information to the public ought to be the way in which the medical profession holds itself accountable to the public.

And finally, I believe that there is a cogent quality-improvement argument for full disclosure and publication of all details, including identified panel decisions, relating to the registration and practice conditions of all practitioners. Prospective patients are likely to want to know individual instances of complaints, discipline, malpractice and even compensation payouts.

It should be easy for members of the public to search a doctor’s history and find adverse findings that are in the public domain. While locating the public register may not be difficult for patients with basic computer literacy, access to less than complete information arguably falls short of meeting “duty of care” tests.

In conclusion, using the Nair case as an example, was there a duty on the part of the regulating body to advise registered medical practitioners of conditions imposed on Dr. Nair’s practice? Should the referring GPs of the patients concerned have known, or ought to have known of any practice conditions on Dr. Nair? Are they under a duty to inquire and advise their patients appropriately?

Even if the referring GP did inquire, was there sufficient information on the public register to acquaint both the GP and the patient so as to enable an informed referral decision to be made by the patient? And was Dr. Nair under a duty to disclose his practice conditions to referred patients?

Medical boards need to become much more outward looking, providing clear information to the public about the steps being taken to promote patient safety and ensure that doctors remain competent.

GREATER TRANSPARENCY FROM REGULATORS ... WILL HELP MAINTAIN PUBLIC CONFIDENCE IN THE MEDICAL PROFESSION.

Greater transparency from regulators and more rigorous recertification and competence review processes will help maintain public confidence in the medical profession and its watchdogs.  

This article was adapted from a paper delivered at the 11th International Conference on Medical Regulation, “Evaluating risk and reducing harm to patients,” convened by the International Association of Medical Regulatory Authorities and the UK General Medical Council in London on Wednesday, September 10, 2014; and to the Medical Board of Australia’s National Conference, Adelaide, Australia on Friday, May 15, 2015.

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Don Malcolmson is a community member of both the Australian Capital Territory Board of the Medical Board of Australia and the Australian Medical Council’s Prevocational Standards Accreditation Committee. He is also an attorney at law in Canberra, where he practices in civil, criminal and military law.

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2. U.S. Medical Regulatory Trends and Actions, Federation of State Medical Boards, July 2014, p.27.
5. Ibid, p.70.
6. For example, s60 of the Wrongs Act 1958 (Vic).
8. Rogers v. Whitaker (1992) 175 CLR 479 per Gaudron J.
9. Paterson, op cit, p.XV.
Establishing a System of Postgraduate Medical Education in Pakistan

Zafar Ullah Chaudhry, FRCS | Pakistan

ABSTRACT: Postgraduate Medical Education (PGME) and specialist care made a late beginning in developing countries and has progressed quite slowly, compared to the developed world. Historically, medical graduates in developing countries desiring to pursue PGME had to travel to Western centers to acquire specialist qualifications; and after having spent a significant time period it became difficult for them to return from those settings, resulting in “brain drain” from the developing nations and a loss of national resources. The status of overall medical education in Pakistan was dismal at the time of its independence in 1947. Pakistan inherited only a few undergraduate medical colleges, and none offered any postgraduate qualification. The majority of doctors seeking postgraduate education preferred to go to England and the United States. In this situation, the College of Physicians and Surgeons, Pakistan (CPSP) was established in 1962 as an autonomous corporate body to cater to the needs of PGME and to provide specialists for the health care needs of the country. The college started offering fellowship and membership programs in different fields of medicine and dentistry — a hallmark of the College System of PGME, which focuses primarily upon rigorous clinical training. It has succeeded in achieving high standards in PGME and specialization, making its qualifications at par with the institutions of the developed world. This paper describes the policies and strategies adopted by the College to earn recognition for its qualifications, both within the country and in the international community.

Introduction

The organization of specialist care and postgraduate medical education (PGME) began initially in the developed world as a by-product of the Second World War, which underscored the need for better treatment modalities for surgical and medical ailments. Postgraduate medical institutes and colleges were developed to oversee specialist training and to award postgraduate qualifications after medical students completed their training and passed specialty examinations. PGME and specialist training emerged as two important elements in designing an efficient health care delivery system that provides high quality care. The reputation and high standards of PGME institutions in developed countries not only attracted native graduates but also many others from neighboring nations — mostly the developing countries — for specialization. In the recent past, many developing countries have made significant progress in this field of medical education and Pakistan is one such example.

The status of medical education in Pakistan was dismal at the time of independence. Pakistan inherited only a few undergraduate medical colleges, and none offered any postgraduate qualification. The majority of doctors seeking postgraduate education preferred to go to England and the United States. This was harmful, resulting in the loss of trained medical manpower — so-called “brain drain” — but also causing a substantial loss to national treasuries.

The CPSP: Establishment of PGME Institution

The elite of Pakistan’s medical profession were not oblivious to the issue and took timely measures to develop an indigenous institution for PGME in the country. The establishment of the College of Physicians and Surgeons of Pakistan (CPSP) was an important step in this direction. The college was established in 1962 through an Act of Parliament,
fifteen years after the tumultuous events of Pakistan’s independence. In fact, Pakistan was the first among developing countries to establish a high-quality PGME institution, offering membership and fellowship programs in different specialties of medicine and dentistry comparable to those of the developed world.

**CPSP Qualifications, Academic Program and Training**

The CPSP introduced the academic qualifications of membership (MCPS) and fellowship (FCPS) based on the pattern of the Royal Colleges of the United Kingdom (UK). As an autonomous corporate body, it organized and oversaw the development of an apparatus for introducing “needs based” postgraduate academic programs and a system of governance based on democratic principles and collective wisdom. Financial self-reliance that could keep it free from the clutches of a bureaucratic system was one of the cornerstones that helped ensure its academic autonomy.

The success of CPSP programs has been achieved by the relevance of its programs to the health needs of the country and flexibility in duration of training. The specialist care needs of the country vary with the level of care-delivering facilities. The secondary care hospitals, for example, need specialist coverage that can effectively deal with common and simple ailments, for which CPSP offers two-year MCPS programs. But the tertiary care hospitals require specialists who can manage all sorts of disorders — common or uncommon, simple or complex — and are able to carry out academic work, such as teaching undergraduates and residents and conducting research. The primary — or first fellowship — programs are designed for main specialties with these goals in mind and are of four to five years in duration. The second fellowships are offered in subspecialties and consist of two to three years of training. The roadmap to the award of primary fellowship begins with completion of a one-year mandatory staff position after graduation in Medicine (MBBS) or Dentistry (BDS). A medical/dental graduate desiring to enter into the CPSP residency program has to pass the FCPS Part-I screening examination in one of the relevant groups of 11 allied specialties. Success in the FCPS Part-I examination makes a graduate eligible to undergo residency training in a CPSP-accredited institute under the supervision of approved personnel and to register with the Registration, Training and Monitoring Cell (RTMC) of the college, which oversees the training of the candidate. Following two years of training, the resident becomes eligible to participate in the Intermediate Module (IMM) examination. The seamless training allows the resident to progress to the next phase of training, irrespective of the result of the IMM examination, which, however, must be successfully passed before the FCPS Part-II examination. The successful completion of the entire period of training, completion of research requirements and passing of the FCPS Part-II examination leads to the award of a fellowship diploma by the college (Figure 1).

Currently, the college is offering fellowships in 73 specialties and subspecialties, and memberships in 22 disciplines, including Health Professions Education and Healthcare Systems Management. The extensive network of training is spread all over the country and abroad, comprised of accredited institu-

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**Figure 1**
**Roadmap to FCPS**

- **MBBS** (Medical Degree)
- 1 Year Staff Position (Mandatory)
- Pass FCPS I Exam
- Register with RTMC CPSP
- Training Years 1 & 2
- Take IMM Exam
- Training Years 3 & 4
- + Training Year 5
- Pass FCPS II Exam
tions imparting training to large numbers of doctors under thousands of approved supervisors (Table 1).

Data regarding the number of examinees who have participated in the last five years shows a gradual increase in number of female candidates, as indicated in Table 2.

**Achievements**

The college has, to date, produced more than 16,500 fellows and 8,800 members, thereby providing more than 26,000 specialists for Pakistan. In addition, the college has awarded approximately 150 non-clinical diplomas in the fields of healthcare systems management and health professions education. These numbers account for 90% of the specialist manpower of the country. This large number of specialists is due to the joint efforts of the health care system’s various departments, faculties, supervisors, examiners and fellows. In this regard, the Examination Department, which presently conducts 184 examinations every year, deserves a special mention. This number is likely to increase in the future as the number of fellowships and accredited institutions are increasing rapidly.

The college is continuing to make steady progress both in Pakistan and abroad. Although it was difficult to establish an institution of PGME in a developing country, it is even more challenging to maintain its standards. The progress of the college and the credibility that it has earned internationally highlight the vision of its founders and dedication of its fellows, as well as its consistent policies,

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THE COLLEGE HAS, TO DATE, PRODUCED MORE THAN 16,500 FELLOWS AND 8,800 MEMBERS, THEREBY PROVIDING MORE THAN 26,000 SPECIALISTS FOR PAKISTAN. IN ADDITION, THE COLLEGE HAS AWARDED APPROXIMATELY 150 NON-CLINICAL DIPLOMAS.

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strategies and efforts to constantly review and update its systems with emerging national needs and international trends.

**CPSP Policies**

The college, in its journey spread over 50 years, has adopted policies to:

- Provide an indigenous, yet credible system of PGME.
- Produce competent and caring specialists.
- Strive for continuous quality improvement through exchange of knowledge and expertise with other institutions.
- Utilize collective decision-making.
- Achieve financial self-reliance.

**The Strategies: Accreditation, Monitoring and Standardization**

The strategies used for implementing its policies include regulation of the accreditation processes, along with monitoring and standardization of training. The strategies, however,

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### Table 1

**CPSP Network of Training**

<table>
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<th></th>
<th>Pakistan</th>
<th>Overseas</th>
<th>Total</th>
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<tr>
<td>Institutes</td>
<td>192</td>
<td>86</td>
<td>278</td>
</tr>
<tr>
<td>Supervisors</td>
<td>2976</td>
<td>168</td>
<td>3144</td>
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<tr>
<td>Trainees</td>
<td>21,011</td>
<td>256</td>
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</tbody>
</table>

### Table 2

**Male/Female Examinees, 2010-2015**

<table>
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<th>Year</th>
<th>Number of candidates appeared</th>
<th>Total candidates appeared</th>
<th>Percentage appeared</th>
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<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>3192</td>
<td>1889</td>
<td>5081</td>
</tr>
<tr>
<td>2011</td>
<td>3493</td>
<td>2185</td>
<td>5678</td>
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<tr>
<td>2012</td>
<td>3577</td>
<td>2153</td>
<td>5730</td>
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<tr>
<td>2013</td>
<td>3907</td>
<td>2536</td>
<td>6443</td>
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<tr>
<td>2014</td>
<td>4718</td>
<td>3161</td>
<td>7879</td>
</tr>
<tr>
<td>2015</td>
<td>5175</td>
<td>3712</td>
<td>8887</td>
</tr>
</tbody>
</table>
keep evolving as new challenges and needs emerge, knowledge and skills expand and the programs and experiences grow.\textsuperscript{6,10}

The CPSP council, in consultation with the Specialist Faculties (drawn from all over Pakistan), has developed an elaborate system for regulating accreditation and re-accreditation and defining its standards, processes, instruments, and appeal procedures. This system has been documented in its Guide for Accreditation.

The monitoring of training in such an extensive network is not an easy task. The college has experimented with many methods and has found an e-logbook system very practical and useful. The electronic system allows trainees to enter their work in a timely manner, and supervisors to validate it promptly. It also generates electronic reports on the performances of the trainees and their supervisors.

Standardization is an essential element for guaranteeing uniformity and equity in training and examinations. This is achieved for CPSP training programs through the development of and strict adherence to the criteria for accreditation of programs and supervisors, competency-based training and CPSP competency framework, development of a curriculum for each phase of all fellowship programs, competency charts, and uniformity in induction. In addition, the College regularly conducts workshops for trainees and supervisors. The elements used in standardizing examinations include blue-printing, item banking, uniform examination, multiple assessment tools, guidelines for examiners and rubrics for scoring, panels of examiners, foreign examiners, and post hoc analysis.

The CPSP has developed a competency model centered on patient care, which involves professionalism, pedagogy and advocacy on the part of specialists. It requires integration of knowledge with research, critical thinking, teamwork and communication skills to offer the best possible patient care, as shown in Figure 2.

**Conclusion**

In conclusion, the establishment and maintenance of an institute of postgraduate medical education in Pakistan represents a role model for other developing countries to emulate. Its continued success speaks of the vision of its founders, dedication of its fellows and efforts to remain abreast of the latest developments in the field both within the country and internationally.

**About the Author**

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**References**

INTERNATIONAL BRIEFS

ECFMG Transitions to World Directory of Medical Schools for IMGs

The Educational Commission for Foreign Medical Graduates (ECFMG) has announced that international medical students and graduates (IMGs) must use the World Directory of Medical Schools to determine their eligibility to apply to ECFMG for ECFMG Certification and the United States Medical Licensing Examination® (USMLE). Previously, ECFMG required IMGs to use the International Medical Education Directory for this purpose.

In order for a medical school’s students and graduates to be eligible to apply to ECFMG for ECFMG Certification and examination, the school must be recognized by the appropriate agency in the country where the school is located. The World Directory includes medical schools that do not meet ECFMG’s eligibility requirements. ECFMG, a major sponsor of the World Directory, has now included information in the World Directory for schools that meet ECFMG’s eligibility requirements.

Before applying to ECFMG for ECFMG Certification or USMLE, IMGs must consult the World Directory, which is available at www.wdoms.org, to confirm that students and graduates of their medical schools are eligible.

The World Directory is a joint venture of the World Federation for Medical Education and the Foundation for Advancement of International Medical Education and Research, in collaboration with the World Health Organization and the University of Copenhagen.

More information is available at www.wdoms.org.

Source: ECFMG news release, June 20, 2015

Ireland

Medical Council of Ireland Publishes Five-Year Review of Complaints

The Medical Council of Ireland (MCI) has published its first-ever comprehensive public review of complaints it has received about physicians. Titled “Listening to Complaints, Learning for Good Professional Practice,” the report chronicles approximately 2,000 complaints over a five-year period. A key finding from the report is that male physicians in Ireland are twice as likely as female physicians to have a complaint made against them.

In commenting on the report’s findings, Medical Council President Freddie Wood, FRCSI, said: “I hope that by reflecting on the findings and looking at the most common causes of complaint, we can work with our partner organizations to reduce such instances in the future, and improve the collective response to concerns about doctors’ practice for the benefit of both members of the public and doctors.”

According to the MCI, many factors were involved in complaints against physicians in Ireland. While questions about medical knowledge and skill featured in many complaints, physician attitudes and behaviors commonly motivated those who registered complaints, including poor communication skills and providing compassion and empathy.

The MCI reported that male physicians were more than twice as likely to be the subject of a complaint in comparison to their female counterparts.

“It is crucial now that we work with the wider health sector to collectively learn from complaints so that they are handled at the right level and dealt with in the most appropriate manner,” Dr. Wood said.

According to the MCI, a “mixed method” approach was used to produce the report, combining quantitative and qualitative methods in order to identify the trends in complaints by source of complaint and demographic background of those involved, while highlighting common factors in physician practice that led to the complaints.

The Medical Council of Ireland regulates physicians in the Republic of Ireland. The Council is made up of 25 regulators, including both elected and appointed members. More than 19,000 doctors are registered with the Medical Council. The Medical Council is funded by the annual payments of registered physicians—it does not receive public funding.

Source: IMC news release, July 13, 2015
California

**MBC Adopts New Regulations Regarding Hormonal Contraception**

Starting in October 2015, pharmacists will be able to furnish self-administered hormonal contraception to women without a physician’s prescription in accordance with a protocol approved by the California State Board of Pharmacy and the Medical Board of California.

The authority was established by California Senate Bill 493, which passed in 2013, amending sections of the state’s Business and Professions Code.

The new protocol requires women to fill out a brief health questionnaire to be reviewed by the pharmacist; answers are clarified if necessary. The pharmacist is then required to measure and record the patient’s seated blood pressure. If it is determined that a self-administered hormonal contraceptive is not appropriate for the patient, the pharmacist will refer the woman to her primary care provider or a nearby clinic for further evaluation.

If the woman is suitable candidate for birth control, the pharmacist will review use of the product with the patient. The new law applies to all hormonal contraceptives approved by the Food and Drug Administration.

Source: Medical Board of California Newsletter, Summer 2015

Iowa

**Iowa Board of Medicine Denies Petition to Amend Rule on Sexual Misconduct by Physicians**

The Iowa Board of Medicine has denied a petition to amend the Board’s administrative rule that defines sexual misconduct by a physician.

The petition, filed by Jill Cirivello of Bettendorf, Iowa, on July 10, 2015, asserted that the rule, Iowa Administrative Code 653–13.7(4), was overly broad and overreaching and that the Board was not able to provide substantial evidence that the rule is necessary for the protection of patients.

The petition also called for the prohibition of polygraph testing in Board investigations. In statements made to the Board on July 10 and August 28, 2015, and in information contained in the petition, Cirivello referenced action taken by the Board in 2005 concerning her late husband, who was investigated for allegations of sexual misconduct and ordered to submit to a sexual misconduct evaluation. When the physician refused to submit to the evaluation because it included polygraph testing, the Board suspended the physician’s medical license.

The Board’s rule maintains that it is unprofessional and unethical conduct, and is the grounds for disciplinary action, for a physician to engage in any sexual conduct with a patient, the patient’s guardian if the patient is a minor, or a former patient unless the physician-patient relationship was completely terminated before the sexual conduct occurred.

The Board issued a formal order on September 10, 2015, setting forth the reasons for the denial. The Board said the rule is consistent with national ethical standards on physician-patient relationships and recognizes that because physicians have a superior position of power in the physician-patient relationship it is difficult for the patient to give meaningful consent to a sexual relationship with the physician. Further, the Board expressed that it does not use polygraph testing, but utilizes nationally recognized evaluation programs that determine the appropriate testing.

Source: Iowa Board of Medicine news release, September 16, 2015

North Carolina

**North Carolina Adds Position for Physician Assistant Member on State Medical Board**

Governor Pat McCrory of North Carolina has signed HB 724 into law, adding a dedicated seat for a physician assistant member to the North Carolina Medical Board and bringing the total number of Board seats to 13.

Previously, state law dedicated one North Carolina Board seat for either a physician assistant or a
nurse practitioner. Under HB 724, each profession will have a dedicated seat. The current makeup of the Board is eight physicians, one nurse practitioner and three public members.

Source: North Carolina Medical Board website announcement, August 12, 2015

Oregon

Oregon Legislature Passes New Law on Insurance Coverage for Use of Video in Patient Visits

Starting January 1, 2016, health insurance companies must pay for any two-way video medical and mental health visits for Oregon patients if the service would be covered when provided in person. The new law was passed by Oregon’s state legislature in June.

To be eligible for coverage, the visit must be medically necessary and meet generally accepted health care standards and privacy and security laws.

Coverage is subject to the terms and conditions of the benefit plan and reimbursement specified in the contract between the plan and the provider.

Previously, video consultations were only required to be reimbursed when the patient was in a clinic or hospital video conference facility.

Source: Oregon Medical Board Update, Summer 2015

Texas

Occupational Regulatory Programs Transferred to Texas Medical Board

Four occupational regulatory programs are being transferred to the Texas Medical Board this fall from the Department of State Health Services in Texas. Two programs, medical radiologic technologists and respiratory care practitioners, will have oversight from advisory boards appointed by the governor. The other two programs, medical physicists and perfusionists, will have oversight from two advisory committees appointed by the Texas Medical Board president.

These changes stem from Senate Bill 202, which includes recommendations on occupational regulation from the Sunset Commission to the 84th Legislature in Texas.

Source: Texas Medical Board Newsletter, August 2015

Washington

Mindfulness Training Now Being Offered for Physicians in Washington

The Washington Medical Quality Assurance Commission (WMQAC) reports that physicians in the state who are impacted by professional burnout have a new resource to help: special workshops to help them develop coping skills, improve resilience and limit their susceptibility to the factors that result in burnout.

Research has consistently shown that hours worked, number of patient visits/day, and call frequency are all correlated with the prevalence of physician burnout feelings of dissatisfaction with one’s professional work life. The American Medical Association calls it a major issue for U.S. physicians.

To address the problem, the WMQAC is promoting new workshops hosted by the Washington Physicians Health Program (WPHP) that equip health care providers with new burnout-reducing skills centered on the concept of “mindfulness” — a coping mechanism that evolved through eastern spiritual traditions.

According to the WMQAC, learning and implementing the practice of mindfulness meditation can combat and prevent the development of burnout in health care providers. The WPHP “Mindfulness for Healthcare Professionals” course is designed to promote mental health by engaging the mind and the body through experiential learning. The WPHP program incorporates five behavioral components: breathing awareness, body scan, walking meditation, eating meditation, and yoga.

To learn more please call 206-583-0127.

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2. The title page should contain only the title of the manuscript. A separate list of all authors should include full names, degrees, titles and affiliations.

3. The manuscript pages should be numbered, and length should be between 2,750 and 5,000 words, with references and tables attached. Please ensure that references adhere to the AMA Manual of Style. For more information, visit www.amamanualofstyle.com.

4. The manuscript should include an abstract of 200 words or less that describes the purpose of the article, the main finding(s) and conclusion. Footnotes or references should not be included in the abstract.

5. Any table or figure from another source must be referenced. Any photos should be marked by label on the reverse side and “up” direction noted. Tables and figures can be supplied in EPS, TIF, Illustrator, Photoshop (300 dpi or better) or Microsoft PowerPoint format.

6. The number of references should be appropriate to the length of the text, and references should appear as endnotes, rather than footnotes.

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