

Evolving Health Care Systems and Approaches to Maintenance of Certification

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This supplemental issue to the *Journal of Continuing Education in the Health Professions (JCEHP)* on maintenance of certification (MOC)* is sponsored by the American Board of Medical Specialties (ABMS). It provides a highly useful overview of the programmatic efforts of ABMS in the United States), the Royal College of Physicians and Surgeons of Canada (RCPSC), and the General Medical Council (GMC) of the United Kingdom to maintain and document over time the competence of physicians.

Unlike most issues of *JCEHP*, the primary focus of this issue is on regulatory policies and practices adopted at the national level. Two points of intersection of MOC with continuing education are (1) the development and validation of approaches to assessing physician knowledge and competence, and (2) facilitating practice-based learning. Perhaps the most fundamental convergence is the shared goal of improving patient safety, enhancing health care quality, and reducing costs.

Researchers, practitioners, and policymakers in continuing education in the health professions need to be aware of the history, current status, and future directions for MOC in these three countries. MOC is the subject of an increasing number of research studies, creating a unique opportunity to

*Although these programs are referred to as *maintenance of certification* (MOC) in the US and Canada, and as *revalidation* in the UK, we will use the term MOC to refer generally to both maintenance of certification and revalidation, unless otherwise noted.

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learn from the work addressing MOC. In addition, whether in the United States, Canada, or the United Kingdom, MOC has a significant educational component creating both the opportunity and the need for better integration between continuing medical education (CME) and MOC.

In this editorial, we provide an overview of the contents of this supplemental issue, highlight key concepts and issues, and locate these efforts in a larger social and organizational context. To accomplish these goals, we have organized the remainder of this essay into 5 sections:

1. Forces changing health care, health care systems, and MOC
2. Studying national programs for MOC
3. Controversies regarding national programs for MOC
4. Duality of interests associated with national programs for MOC
5. Planning research to guide evolution of MOC

Forces Changing Health Care, Health Care Systems, and MOC

The forces driving change in health care and health care systems are noted in most of the articles in this issue and will be familiar to *JCEHP*'s readers:

- The increasing rate of development of new methods of diagnosis and treatment with parallel increases in the complexity of health care delivery and systems that deliver care
- Concerns that appropriate care be provided and provided efficiently, that unneeded care not be provided, and that avoidable harm be prevented
- Increasing costs of care and unsustainability of current trends in rising costs
- Increasing scrutiny of how funds are used, appropriateness of use, and accountability for use
- Increasingly sophisticated information technology providing new options to facilitate the delivery of care, care management, and accountability for care
- Ongoing debates concerning desirable benefits, affordable costs, and appropriate evolutionary choices

The joint evolution of these factors has posed ongoing and fundamental challenges to the health care industry. Just one example, is the shifting emphasis for financial payments to physicians in the United States: from fee-for-service that rewarded doing more (before mid-1990s), to fixed/capitated payments that rewarded doing less (mid-1990s to mid-2000s), to pay-for-performance and “value-based” payments that reward providing appropriate care (beginning mid-2000s).

Unsurprisingly, certification programs have not been immune to these forces. MOC is an organized and concerted response to demands for increased quality, value, and accountability in health care. Certification, recertification, and validation are at the core of national strategies for assuring the public that their physicians are competent, regularly update their knowledge and skills to stay current with scientific advances and evolving health care options, and are held accountable. However, these assurances come at a cost; they require a larger investment of time and other resources and contribute to overall increases in costs within the health care system. In addition, increasing societal pressures pose potential conflicts for physicians as they attempt to meet their commitments to professional competence, a just distribution of finite resources, and maintaining trust by managing conflicts of interest.¹ As might be expected, one result is debate about whether the costs are justified given the benefits and the lost opportunities to improve care by other means. As this supplemental issue shows, these debates are likely to continue for the foreseeable future.

Studying National Programs for MOC

Study Levels and Designs

At a national level, none of the articles in this issue report studies of the effects of current national MOC programs. Lipner et al² primarily report studies of the association of board certification in the United States with a range of other outcomes, although they also include a few studies of MOC specifically. Campbell and Parboosingh³ report studies of participant satisfaction and of volunteer participant changes in learning and practice in earlier versions of the MOC program of the RCPSC. Archer and Regan de Bere⁴ note that the GMC’s revalidation program in the United Kingdom was initiated in December 2012, so no data are yet available. Even the current MOC programs in the United States and in Canada are relatively recent—too recent for the effects of interventions with time frames of 5 to 10 years and longer to be studied easily.

Several of the articles report studies of factors affecting individual and group learning and performance change and groups demonstrate types of interventions likely to be useful in designing national programs for MOC. Sargeant

et al⁵ provide a review of evidence for principles of effective assessment and feedback. Hawkins et al⁶ review evidence at the individual and group levels that is generally consistent with the ABIM MOC program in the United States. Campbell and Parboosingh³ discuss principles and the evidence at the individual level that are the basis for the current MOC program of the RCPSC.

Although studies at the individual level provide important guidance, they are essentially hypothesis generating for the design of national-level programs and policies for MOC. The effects of national MOC programs may or may not result in desired effects. Sargeant et al,⁵ for example, point out that the process of accessing and using performance data is complex and influenced by many factors.

Sequence of Questions Studied Regarding MOC

The types of evidence generated on initiatives such as MOC tend to address a sequence of questions regarding a hypothesized cause and effect:

- *Feasibility*: Can the desired intervention be performed practically?
- *Effectiveness*: Does the intervention produce the desired outcome (statistical significance for reliability of effect)?
- *Meaningfulness*: Is the size of the effect practically meaningful in its context?
- *Cost*: What resources are required to produce the change and at what cost?
- *Cost-effectiveness*: Does the value of the outcome outweigh the costs of the intervention? Are alternative approaches available for lower cost or that are more effective for the same cost?

In addition, the unit of analysis frequently progresses from individuals to groups/organizations to national levels.

When we used this sequence of questions to examine the contents of this issue, we found the following:

- *Feasibility*: At the level of MOC programs, a few studies have demonstrated their feasibility, including the three described in this issue.^{2–4,6} At the individual and group levels, a variety of interventions have been demonstrated to be feasible.^{3,5,6}
- *Effectiveness*: Little systematic evidence is available concerning the effects of current national MOC programs, although some indirect evidence is available from studies of associations with board certification, ABMS MOC exam scores,² and the earlier voluntary system of the RCPSC.³ At the individual and group levels, a large number of studies demonstrate the effects of interventions.^{3,5,6}
- *Meaningfulness*: We were unable to find mention of studies examining the effect size and meaningfulness of MOC programs²; however, Lipner et al conclude that studies of impact of board certification show that certification “can have modest effect sizes and are not unequivocal.”² At the individual and group levels, effect size is often not addressed or is small, although

some moderate effects have been demonstrated in specific circumstances.⁵

- *Cost:* None of the studies of MOC programs address the issue of direct and indirect costs of the program. One direct cost is known: the fees physicians pay to participate in 10 years of ABIM's MOC program range from \$1250 for the American Board of Surgery to \$4820 for the American Board of Plastic Surgery.⁷
- *Cost-effectiveness:* None of the articles in this issue mention studies that address the issues of cost-effectiveness at any level.

MOC Program Differences Between Countries and Over Time

The 3 national MOC programs described in this issue differ in many ways. Some important differences include:

- *Participation:* Voluntary in the United States and Canada, required in the United Kingdom.
- *Content:* Differences in content and activities required participation in performance improvement and ongoing examinations in the United States, a focus on learning activities in Canada, and individual portfolios of supporting information for the revalidation process the United Kingdom.
- *Consequences:* In the United States, not being certified can limit some opportunities for employment. In Canada, not participating in MOC results in no longer being a member of the Royal College of Physicians and Surgeons and in some provinces, failing to meet relicensure requirements. In the United Kingdom, not participating in the "revalidation" process will result in not being able to practice.

Other important differences include:

- The American Board of Internal Medicine (ABIM) MOC program provides a general framework that is operationalized differently by each of 24 independent specialty boards, resulting in qualitative and quantitative differences in requirements across specialties.
- The RCPSC includes all specialties except family physicians, for whom the College of Family Physicians of Canada operates the separate Mainpro MOC program.
- The GMC revalidation program involves appraisals of portfolios, which will vary by specialty.

The 3 MOC programs are evolving in the context of related changes in their national health care systems:

- The ABIM MOC program's emphasis on performance measurement and improvement is consistent with the evolution of several other US national initiatives, the Physician Quality Reporting System of the Centers for Medicare and Medicaid and the competencies shared with the Accreditation Council for Continuing Medical Education.
- The RCPSC MOC program's evolution is linked to the relicensure requirement for physician revalidation, developed by the Federation of Medical Regulatory Authorities of Canada.

- The development of the GME revalidation program in the United Kingdom was shaped by high-profile medical scandals and has a particular focus on identifying doctors in difficulty and supporting their remediation.

All 3 programs are evolving and an evaluation of a program at a current point in time may have limited generalizability to the program in the future:

- The ABIM MOC program was formally approved in 2000, revised in 2009 with more frequent requirements, and is scheduled for further revisions in 2015.
- The RCPSC MOC program has evolved from a voluntary program in 1994 to a mandatory program in 2001 and is scheduled for a major transformation in 2015.
- The GMC "revalidation" program was established at the end of 2012 and an evaluative framework is to be implemented in 2014.

Controversies Regarding National Programs for MOC

The extent of controversy regarding MOC programs depends on the question being asked:

- No controversy exists regarding the need for physicians to maintain ongoing competence.
- Some controversy exists concerning the need for physicians to demonstrate their ongoing competence through formal MOC programs. For example, an RCPSC survey of its members found that most but not all (70%) agreed with a MOC program being a regular requirement to maintain their specialty certificate.³
- Much controversy exists around how to develop and demonstrate competence. For example, the ABIM requirement for passing an examination at least every 10 years is of sufficient concern that the House of Delegates of the American Medical Association in June 2013 passed a resolution to determine if mandatory ongoing reexaminations are needed and to explore alternatives to the exams.⁸ The debates leading to GMC's revalidation program were divisive on questions of policy, professional governance, and leadership.⁴
- Major controversy exists regarding the costs and cost-effectiveness of MOC programs. All of the programs require physicians to document their activities and performance for external review. In the United States and Canada, physicians pay fees to support the costs of operating the MOC program. The American Medical Association has focused on the burden that MOC places on physicians. Burden on physicians was part of the controversy delaying the development the GMC program. The absence of data on either the meaningful effectiveness of MOC programs or costs associated with MOC programs results in judgments based on personal views.

If MOC programs reduce burdens on physicians, the changes are likely to be less controversial. If they increase burdens on physicians without clear demonstration of benefit, or if the consequences of losing board

certification become more substantial, controversies are likely to increase appreciably.

Duality of Interests Associated with National Programs for MOC

The groups and individuals involved with MOC programs inherently have multiple and sometimes conflicting interests. We want to highlight 2 important conflicts faced by organizations operating MOC programs.

One conflict is balancing pressures from individual physicians and from national governments. Physicians are reasonably reluctant to take on burdens of uncertain benefit, limiting their acceptance of MOC requirements. However, if a national government views an MOC program as inadequate, it could bypass (or in the United Kingdom, require changes in) the MOC program and institute a more regulatory approach.⁷ Organizations operating MOC programs, especially in the United States and Canada, confront the sometimes difficult task of maintaining a common ground across both stakeholder groups.

Another conflict is balancing advocacy and transparency. As advocates for change, organizations operating MOC programs tend to emphasize the positive aspects of changes and deemphasize the negative aspects. Advocacy for taking actions that are as yet unsupported by robust evidence may involve emphasizing the likely magnitude of change over the probability of change (the modest effect size demonstrated). There is incentive to downplay issues of cost until effectiveness has been shown and strategies for reducing costs can be developed and deployed. As MOC programs make further changes, they will be under increasing pressure to produce and transparently share information concerning the meaningful effectiveness and cost-effectiveness of activities.

Planning Research to Guide the Evolution of MOC

All 3 MOC programs have ongoing plans for program evaluation and research, which are noted at a general level in this issue. The sequence of questions studied noted above may provide a helpful framework in planning the research agenda and monitoring progress on its accomplishment.

An important limiting factor is the availability of resources to carry out program evaluation and research. What entity is sufficiently interested in knowing the effectiveness and cost-effectiveness of MOC programs to fund the required studies? Are governments willing to reallocate limited resources from competing needs? Are physicians willing to

put additional personal resources into funding and participating in an evaluation component of an MOC program? Neither source appears likely to provide substantial funding for ongoing research initiatives.

If only limited resources will be available, MOC programs will continue to evolve without the benefit of an extensive evidence base beyond questions of feasibility and acceptability. Therefore, MOC programs will need to develop strategic priorities for research. The success of the programs will likely depend on identifying questions that are most important to the MOC program itself, to government overseers, and to and participating physicians. Limited resources should be used to collect information that addresses key questions regarding the program and assures the continued support of key stakeholders.

In conclusion, we want to thank the many authors who contributed to this special issue and the much larger group of individuals whose work is cited. We have learned a great deal from reading the contents of this issue and hope that you, the reader, will also find value in the pages that follow. The past and future efforts of these authors and many others will be needed to develop intellectual innovations, scientific evidence, and cost-effective programs that will ensure that physicians are and continue to be well prepared to fulfill their role in their health care systems and to demonstrate their ongoing worthiness of public trust.

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