

THE FUTURE OF
MEDICAL EDUCATION
IN CANADA

CONTINUING PROFESSIONAL
DEVELOPMENT

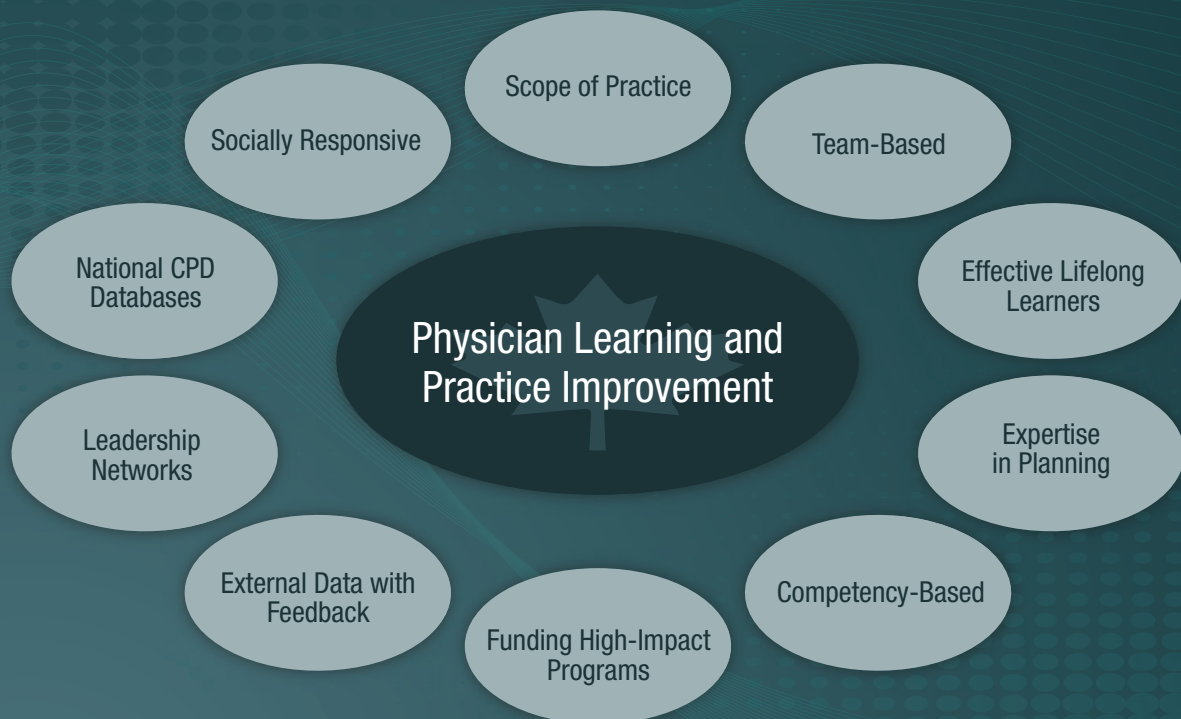


L'AVENIR DE
L'ÉDUCATION
MÉDICALE AU CANADA

DÉVELOPPEMENT
PROFESSIONNEL CONTINU

SUPPORTING LEARNING AND CONTINUOUS
PRACTICE IMPROVEMENT
FOR PHYSICIANS IN CANADA:
A NEW WAY FORWARD

SUMMARY REPORT OF THE FUTURE OF MEDICAL EDUCATION IN CANADA
CONTINUING PROFESSIONAL DEVELOPMENT (FMED CPD) PROJECT



*A Collective Vision
for CPD in Canada*

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**SUPPORTING LEARNING AND
CONTINUOUS PRACTICE IMPROVEMENT
FOR PHYSICIANS IN CANADA:
A NEW WAY FORWARD**

**SUMMARY REPORT OF THE FUTURE OF MEDICAL EDUCATION
IN CANADA (FMEC) CPD PROJECT**

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EXECUTIVE SUMMARY

This report describes a new collective vision for the development of a pan-Canadian continuing professional development (CPD) system that sustains innovation and ongoing quality improvement for the health of Canadians. Building on the strengths of our current CPD frameworks, educational support services, and CPD accreditation/certification systems, this report envisions a redesigned national CPD system anchored in the workplace, integrated within care teams, and supported by health systems. This revitalized system to support physician learning and practice improvement will be:

- responsive to the needs of patients and communities;
- informed by scientific evidence and practice-based data with feedback across a range of competencies; and
- designed to measure improvements in patient experiences of care, population health, and the work life of health care providers.

The eleven enabling recommendations set out in this report are based on the deliberations of eight expert-led working groups, who set out key strategies related to three domains: individuals and teams; institutions and systems; and infrastructure.

Key strategies related to individuals or teams will be:

- **Based on scope of practice**

An understanding of scope of practice is foundational to defining the curriculum for practising physicians. It is integral to the creation and implementation of a practice-specific plan that is responsive to the health needs of patients, families, and populations. Scope of practice will guide learning and improvement activities that sustain competence throughout a career, and is envisioned as contributing to the quality, sustainability, and safety of the national CPD system for physicians.

- **Integrated within team-based learning and improvement**

The current CPD system is oriented toward the self-determination of individual physicians in making decisions about CPD activities, with most learning taking place in the company of other physicians. A re-envisioned system for physician learning and continuous improvement will emphasize the importance of physicians learning with members of the other health professions with whom they regularly work. Interprofessional CPD will provide a foundation for the effective translation of learning into day-to-day practice, help to remove barriers to practice change, and align learning and assessment with the actual delivery of care to patients in multiple contexts.

- **Enabled by effective lifelong learners**

At each stage of the medical education continuum, lifelong learning skills are critical to ensuring professional growth. Effective lifelong learning requires physicians to acquire the skills they need to assess and incorporate new evidence; to share their knowledge and practice experiences with others; and to use practice data to improve, receive feedback, and develop a sense of community. These principles, skills, and system-related factors will contribute to the joy of lifelong learning and guide the integration of learning and improvement systems in the workplace.

Key strategies related to institutions and systems will be:

- **Developed by those with expertise in planning and delivery**

Organizations that develop CPD programs must ensure that individuals in leadership roles have the requisite competencies to design, implement, and evaluate educational interventions. This expertise is important to ensure that educational interventions are responsive to the ever-changing needs of physicians, patients, and the health care system. Collectively, these competency areas should serve as the curriculum for a professional development pathway for CPD providers.

- **Funded to enhance quality and continuous improvement**

Specifying funding sources to support the development and dissemination of high-quality educational tools, processes, and activities is currently a challenge. Given the protections provided by national standards that mitigate the influence of sponsorship by commercial interests, a mixed funding model (registration fees, sponsorship from commercial organizations, funds provided by government and employers) remains viable. However, there will be a need to identify funding to ensure that learning activities are created that address emerging public health needs, support physicians as they fulfill mandatory system requirements, and create provincial or national pooled funds to enable the design of innovative or resource-intensive activities.

- **Designed to advance competency-based medical education**

The intended outcomes of a physician learning and improvement system will require individuals, groups, and teams to access multiple external sources of data and feedback to guide the development of plans for learning and improvement. The consistent use of external data sources supports three important principles of CBME: learner-centredness, authentic assessment, and responsiveness to societal health needs. Competency-based CPD is envisioned as an educational strategy to continuously sustain quality and safety of care.

Key strategies related to infrastructure will:

- **Reflect regulatory requirements for practice improvement**

The transition to a physician learning and continuous practice improvement system must support the expectations of medical regulatory authorities as reflected in the Physician Practice Improvement (PPI) policy document of the Federation of Medical Regulatory Authorities of Canada. Physicians will require tools, guidelines, and support systems to enable them to measure their performance against established practice standards; select appropriate resources to help them achieve their learning goals;

and measure the outcomes or impact of learning on practice. PPI will require a national system that is intentionally collaborative, including physicians, CPD provider organizations, professional medical associations, health care institutions, patients, and regulatory bodies.

- **Be informed by national CPD datasets linked to health systems data**

The envisioned national physician learning and practice improvement system will require the development of a national repository of learning activities with a data infrastructure that enables the national CPD system to identify gaps in activity development; facilitates physician access to activities that address their practice needs; enables reporting (with physician permission) on completed activities to multiple organizations; supports research and outcomes analysis of the impact of CPD participation on physician performance and health outcomes; and monitors sources of funding for accredited/certified CPD programs

- **Be enabled by integrated provincial/regional CPD leadership networks**

An integrated and coordinated national physician learning and practice improvement system will require a leadership structure that facilitates collaboration and accountability among physicians, health system leadership, CPD provider organizations, medical regulators, and patients. Those tasked with guiding, implementing, and evaluating the impact of physician learning and improvement will need regular opportunities to interact. This will enable the system to meet the emerging health care needs of patients and their families, and to do so in a nimble fashion when urgent needs arise. Given Canada's health governance structure, leadership is needed primarily at a provincial or regional level, with opportunities for national collaboration. The use of a multi-layered network strategy will facilitate dialogue, planning, and evaluation across multiple stakeholder organizations, including other health disciplines (e.g., nursing, pharmacy, and rehabilitation).

CONCLUSION

This third report on the Future of Medical Education in Canada sets out a vision for a renewed and revised national system to support physician learning and practice improvement. The CPD system of the future will be nimble and responsive to changing needs at the local, regional, and national level. Rapid changes in the scientific evidence that informs health care, coupled with new technologies, artificial intelligence, and changes to models of health care delivery, require a system that supports and informs physician learning and practice improvement that is based on access to external data and feedback about practice. At the same time, this pursuit of enhanced patient experiences and improved population health cannot be at the expense of the well-being of health care providers. Given that the role for physicians in this fast-paced and ever-evolving health care environment will change, the future of CPD must not only adapt to improve the quality and safety of health care but must also help to restore the joy of learning new things with colleagues, coworkers, and patients.

RECOMMENDATIONS

Scope of practice

1. **Physicians should be provided with tools or strategies to document and periodically revise a description of their scope of practice to create, implement, and evaluate the impact of a practice-specific education plan that is intentionally responsive to patient, institutional, and personal needs.**

Team-based learning and improvement

2. **Physician learning and improvement must focus on the competencies required for physicians to function within teams and to learn from members of the health care teams in which they participate.**
3. **Accreditation and certification bodies, educational providers, and other relevant health professions organizations should collaborate to identify system changes required to implement and “certify” interprofessional continuing professional development.**

Skilled lifelong learners

4. **Prioritize and support activities that facilitate collaborative learning within formal or informal communities of practice.**
5. **Develop curricular resources that facilitate understanding and the acquisition of effective lifelong learning skills for physicians in practice.**

Developed by those with expertise in planning and delivery

6. **Create national training programs to enable CPD developers and providers to acquire the core competences required to design, implement, and evaluate educational interventions.**

Funding to enhance quality and continuous improvement

7. Collaborate with provincial and national CPD stakeholders to identify funding strategies for the development of programs, resources, and tools to address emerging public health needs, regional health priorities, and interprofessional CPD.

Designed to advance competency-based CPD

8. Each specialty should identify the core and emerging competencies relevant to all members of the specialty and use the CanMEDS/ CanMEDS FM competency frameworks to design or recommend activities, tools, and data sources for learning and practice improvement within the specialty's main scopes of practice.

Supports regulatory requirements for practice improvement

9. All physicians will be expected to participate in a continuous cycle of practice improvement that is supported by understandable, relevant, and trusted individual or aggregate practice data with facilitated feedback for the benefit of patients.
10. Establish a national repository of learning activities with a data structure to identify gaps in activity development; facilitate physician access to learning activities to address their practice needs; and support national reporting and research to enable an analysis of the impact of physician participation in CPD on performance improvement, quality and safety of care, and patient outcomes.
11. Create or strengthen provincial or regional CPD networks to facilitate the monitoring, planning, and evaluation of educational interventions required to address patient, community, and population health needs and priorities using the best available evidence.

INTRODUCTION

The Future of Medical Education in Canada (FMEC) initiative is a comprehensive suite of projects focused on ensuring that Canada's medical education system continues to meet the changing needs of Canadians now and in the future. The first two projects resulted in a collective vision for reform and innovation in undergraduate medical education (FMEC MD) and residency education (FMEC PG). This third report describes a collective vision for the development of a pan-Canadian CPD system that sustains innovation and ongoing quality improvement for the health of Canadians.

Continuing professional development (CPD) for physicians can be defined as “encompass[ing] multiple educational and developmental activities physicians undertake to maintain and enhance their knowledge, skills, performance and relationships in the provision of healthcare.”¹ This vision supports physician growth across all CanMEDS/CanMEDS FM Roles, and has generally replaced the earlier construct of “continuing medical education” (CME), which focused almost entirely on the Medical Expert Role.

Building on the strengths of our current CPD frameworks, educational support services, and CPD accreditation systems, this report envisions a cohesive system of lifelong learning and practice improvement that is *innovative* in design; *collaborative* in implementation; *responsive* to the needs of patients, families, and diverse populations; *committed* to the continuous improvement of the quality and safety of health care provided to Canadians; *integrated* within health care teams; and *supported* by health systems.

The rationale for a new national CPD system for physicians

Over the past three decades, the CPD system for physicians has been based largely on an intensive

short-course model focused on knowledge dissemination relevant to the Medical Expert Role. Despite the potential for this group learning model to improve knowledge, performance, and (to a lesser degree) patient outcomes, it was not always clear how such learning influenced the quality and safety of care provided to patients. In addition, physician learning has been based largely on individual choice without the expectation of *demonstrating* how this learning helps to sustain or enhance competence or improve performance. Despite the recent emphasis on the importance of assessments of knowledge and skills, the outcome measures of the current system are limited largely to participation in learning activities and self-reported outcomes of learning or change.

This report suggests a new understanding of this enterprise as one that supports physician learning and continuous practice improvement (Fig. 1). We argue for a transformation that facilitates our collective ability to:

1. Achieve the goals of
 - enhancing patient experiences of care
 - improving population health
 - increasing the value, appropriateness and quality of health care
 - improving the work life of health care providers.
2. Enable individual physicians, groups of physicians, and physicians as members of health care teams to access and use data and feedback on their performance across a range of competencies to achieve continuous improvement of practice and patient outcomes.

Three **foundational principles** inform nine key strategies and the implementation of eleven enabling recommendations. Each recommendation is the result of the deliberations of eight expert-led working

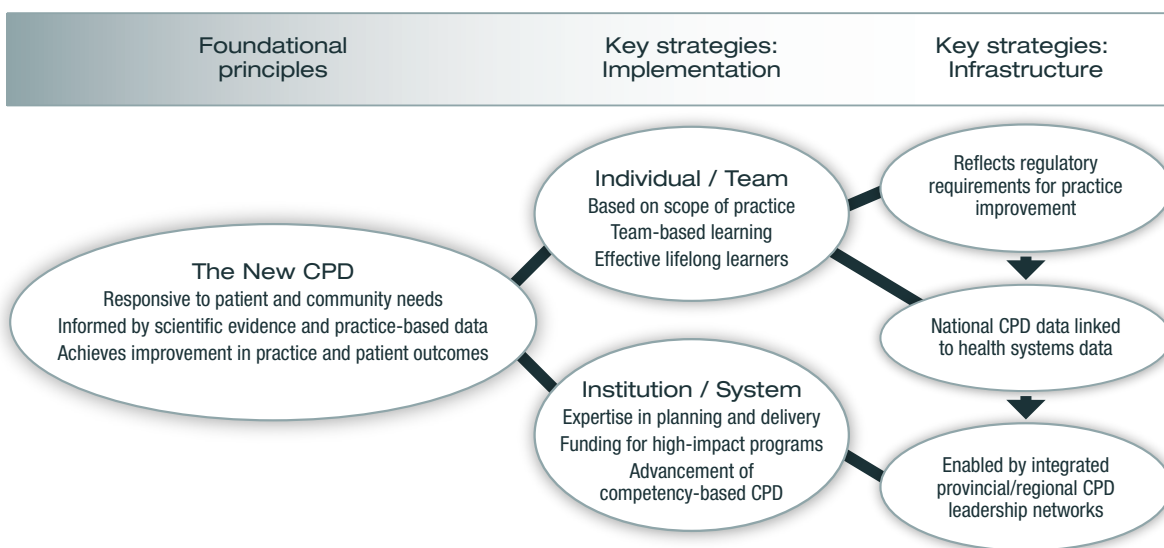
1 Kitto SC, Bell M, Goldman J, Peller J, Silber I, Sargeant J, Reeves S. (Mis)perceptions of continuing education: insights from knowledge translation, quality improvement, and patient safety leaders. *J Contin Educ Health Prof.* 2013;33(2):81–8.

groups, who addressed the priority themes established by the members of the FMEC CPD Project Steering Committee (Textbox 1). The working group

reports can be accessed through the links provided throughout this document and on the FMEC CPD web page (fmec-cpd.ca).

FIGURE 1

A NATIONAL CPD SYSTEM: SUPPORTING PHYSICIAN LEARNING AND PRACTICE IMPROVEMENT



TEXTBOX 1

FMEC CPD WORKING GROUP REPORTS

- Priority Theme 1 The role of Physician Practice Improvement in the continuing professional development system of the future
- Priority Theme 2 The role of CPD in addressing emerging or unmet health care needs
- Priority Theme 3 Scope of practice as a tool to describe practice, identify learning needs, and plan CPD
- Priority Theme 4 Understanding and rationalizing funding for CPD: a scoping review
- Priority Theme 5 CPD and the lifelong learning continuum for physicians
- Priority Theme 6 Advancing competency-based CPD
- Priority Theme 7 Addressing the knowledge and skills needed by those who develop and deliver CPD
- Priority Theme 8 Interprofessional teams as an important audience for CPD

FOUNDATIONAL PRINCIPLES

The transition to a national physician learning and practice improvement system will be based on three foundational principles.

PRINCIPLE 1

A physician learning and improvement system must be designed to be responsive to the needs of patients and the community.

The first guiding principle is a commitment of physicians to social accountability. This commitment is expressed in part through the ability of physicians, CPD provider organizations, and other health care providers to **respond effectively** to the needs of individual patients and the wider community, as well as to changes and challenges that will inevitably arise in the health care environment. Just as social accountability was a key guiding principle for the reforms to undergraduate and postgraduate medical education proposed in the previous FMEC projects, it is viewed as critical to the transformation of a system that supports learning and practice improvement for physicians throughout practice.

Being responsive to patient and community needs means addressing emerging issues that threaten the health of Canadians (e.g., the opioid crisis), integrating novel or evolving health technologies or techniques that require the acquisition of new skills or abilities (e.g., point-of-care ultrasound), and addressing the attributes expected of physicians as they fulfill their roles in a rapidly changing health care system (e.g., proficiency in indigenous health, cultural safety, and quality improvement).

The current system is organized primarily to respond to the self-identified learning needs and interests of physicians. CPD provider organizations that develop accredited or certified activities are responsive to such expressed needs. Physicians frequently base their decisions to participate in particular courses or conferences on personal or career interests, the relevance of the topics being discussed, and factors such as the reputation, cost, location, or timing of an event. As professionals, physicians are asked to assume the responsibility for choosing to participate in formal educational activities and, indeed, for assuming much of their cost.

Illustrative scenario

Responsive to patient and community need: proficiency in managing chronic pain

MR is a 50-year-old woman with a history of obesity, Type 2 diabetes (since age 32) now complicated by a painful sensory polyneuropathy, and stage 2 chronic kidney disease. In addition, she suffers from chronic low back pain and systemic hypertension. She works as an administrative assistant in a law office.

Her previous attempts to control her pain using Tylenol, non-steroidal anti-inflammatory drugs, and codeine did not provide good pain relief. She initially attempted to use alcohol to “numb the pain,” but this only resulted in her diabetes getting worse, and she has cut back. She has read on the Internet about medicinal marijuana and other approaches to pain control, but her doctor has not changed her pain management or referred her to other health professionals, despite the fact that the severity of her pain has not lessened and its impact on her life is considerable. She worries that new ways of controlling her pain are not being considered. She wonders, “Don’t physicians talk together about patients similar to me and discuss potential solutions to situations like mine? How am I going to maintain my job, care for my family, and deal with my chronic medical conditions in the future?”

Questions: Is MR’s physician up to date on current treatments for chronic neuropathic pain? Common first- and second-line medications have not been tried, nor has a referral been made to a pain specialist. Given the prevalence of chronic pain and the social importance of the opioid crisis and the increasing use of cannabinoids, should MR’s physician prioritize this area in her CPD choices?

The envisioned system acknowledges and affirms the agency or autonomy of physicians to decide which learning activities are relevant to their practice needs. At the same time, physicians will need to demonstrate how their engagement in learning and practice improvement activities is relevant to their scope of practice, helps them address patient and population health needs, and improves their practice. Among the many criteria physicians consider when selecting which learning activities to complete, the first consideration should be: What do my patients or community need me to learn to improve the care I provide in my practice? This accountability is one expression of the profession's social contract with the public.

PRINCIPLE 2

A physician learning and improvement system must be informed by scientific evidence and practice-based data.

The second principle envisions an educational system in which the strategies, processes, and tools that facilitate the continuous learning and professional growth of individual physicians are based on the best available scientific evidence and informed by data and feedback from a variety of sources – particularly physicians' own practice.

Given continuous advances in the biomedical sciences, technological advances in medicine, the dynamic complexities of the health care system, and the importance of furthering humanistic aspects of patient care, physicians must constantly adapt. Physicians need to be able to reflect on their practice experiences; scan their environment for new evidence; raise and answer questions stimulated by patients, collegial discussions, or participation in

formal learning activities; discuss the application of scientific evidence with colleagues; and receive and act on data and feedback from colleagues, co-workers, and patients. The literature on reflective practice in medical education suggests that learning effectively from one's experience and practice is critical to developing and maintaining competence throughout a practice lifetime.²

At present, much of physician learning is directed by self-perceived learning needs. However, an exclusive reliance on one's own perceptions is called into question by a range of research results that cast doubt on the capacity of individuals to accurately judge their own strengths and weaknesses.³ It will be imperative for physicians to look outward, harness the value of external data, and focus on how feedback on practice data should be received and used. The FMRAC's PPI program is a national initiative that stresses the value of lifelong learning guided by practice data and of using a problem-solving approach in addressing questions and practice gaps. The health care system will be expected to support the provision of practice data with feedback to guide and motivate individuals, groups, and teams to continuously improve their practice. The motivation for physicians to pursue and use performance and practice data to improve will require a system that provides safe and collegial learning environments while promoting the protection of patients from unsafe practices.

Given that some practice needs may not be readily self-identified by physicians in their day-to-day practice, reflection and feedback can derive from multiple external sources of data, including:

- patients and patient groups;
- professional medical associations, often specialty-based;

2 Mann K, Gordon J, MacLeod A. Reflection and reflective practice in health professions education: a systematic review. *Adv Health Sci Educ Theory Pract.* 2009;14(4):595–621.

3 Davis DA, Mazmanian PE, Fordis M, Van Harrison R, Thorpe KE, Perrier L. Accuracy of physician self-assessment compared with observed measures of competence: a systematic review. *JAMA.* 2006;296(9):1094–102.

- medical regulatory authorities;
- government or health regions that oversee and fund provincial or regional health care systems;
- health quality councils;
- research and population health databases on health status, new trends, and current challenges; and
- health care institutions where many physicians work.

CPD provider organizations will be a key resource in the development of educational activities that use scientific evidence to address unnecessary practice variations, improve quality of care, and contribute to the effectiveness of health systems. CPD provider organizations should focus on designing educational interventions that enable physicians to apply knowledge or practice skills in the educational setting.

Illustrative scenario

Informed by evidence and practice-based data: planning an annual conference

Dr. Allan is the chair of his organization’s CPD committee. The committee met recently to identify core topics for next year’s conference. Although the resulting list of topics certainly reflects areas where scientific evidence is advancing, Dr. Allan wonders how the annual meeting might meaningfully address variation in physician performance or patient outcomes. He elects to hold a teleconference with members of the committee to start a conversation on how quality and safety of care are currently being measured, what sources of data on performance in practice are currently available, and what strategies the organization could use to create sessions that will meaningfully address the practice gaps of the physicians attending their annual conference.

Questions: What skills and support will this planning committee need in order to develop sessions based on practice data? How available are such data to them? How can the committee create a session that will help participants reflect on such data and convert those reflections into action plans for their own practice? What level of CPD credit should be sought to create incentives for the participants?

PRINCIPLE 3

A physician learning and improvement system must be designed to achieve improvement in physician practice and patient outcomes.

The third principle focuses on the outcomes envisioned for physician engagement in learning and practice improvement activities. Learning that does not enhance patients’ experience of care or facilitate the translation of new knowledge into practice must be seen as falling short.

Learning activities that have the greatest impact in improving outcomes are those based on a physician or team response to data and feedback on their practice. These data may be generated by knowledge assessments, multi-source feedback surveys, chart or health record reviews, direct observation of performance in practice, and patient surveys and registries. Helping physicians to interpret such data and critically analyze their own performance so that they can identify gaps and plan future actions are important steps in a practice improvement cycle. This cycle requires an evaluation to determine which aspects

have improved or what further learning or changes are required to support improvement.

Despite the transition to competency-based medical education in undergraduate medical education and residency, there has been limited discussion of how competency frameworks can guide learning and assessment to improve practice. Competency-based

medical education is one example of outcomes-based education; in this model, competencies serve as the organizing framework for curriculum development, and assessment activities provide data and feedback across multiple competency domains. This approach to using competencies to assess the performance of physicians in practice is still in its infancy.

Illustrative scenario

Focus on improvements in practice: follow-up on a hospital quality-of-care audit

Dr. Jones, who practises in a medium-sized community, regularly attends her division's rounds program and at least one conference each year. The hospital's quality improvement committee recently published data from an audit centred on seven conditions selected to monitor the quality and safety of patient care. One of the key findings was significant variation among physicians relative to established benchmarks. Three practices related to these conditions (venous thrombosis prophylaxis, use of urinary catheters, and the duration of intravenous antibiotic therapy) were a frequent part of Dr. Jones's hospital care; the audit showed that her own performance in these specific areas was below the average of her peers. These results prompted her to complete a number of online learning modules developed by her university CPD office and her local hospital. She found that these modules enabled her to make some changes in each area. She now wonders whether this learning has resulted in improvements to her practice.

Questions: What support can the hospital provide Dr. Jones to help her measure the impact of her learning on her hospital practice in these three areas? Has this activity been set up in a way to ensure that she receives assessment credits with her CPD accreditation college?

KEY STRATEGIES

The key strategies proposed to support the implementation of a physician learning and practice improvement system have been organized into those that are relevant to **individual physicians and health care teams; institutions or systems;** and the **leadership and infrastructure** required for a system to be responsive and innovative. Each strategy leads to one or more recommendations for action.

KEY STRATEGIES: INDIVIDUALS AND TEAMS

The implementation of a physician learning and practice improvement system is enabled by three key strategies relevant to individuals and teams. A physician learning and practice improvement system must be

- based on scope of practice
- integrated within team-based learning and improvement
- enabled by effective lifelong learners

Based on scope of practice

The term “scope of practice” is subject to multiple and inconsistent definitions, interpretations, and uses, each of which has different implications for guiding physician learning and improvement activities. Within the health professional literature, this term has been used to define or describe what professionals are trained to do; what they are authorized by legislation to do; what they actually do in practice; and what they are expected as professionals to do.

The expert-led working group on *Scope of Practice* reviewed 19 published articles in order to “amplify the meaning and implications of scope of practice for physicians.” An overarching finding from their review is that scope of practice is fundamental to physician learning and improvement and is integral to determining CPD needs and the content and delivery of educational activities.

The literature review highlighted the following issues:

- Various questionnaires, inventories, and scales have been produced to describe, measure, or predict the scope of practice of physicians. Tools created to capture scope of practice must carefully target and match the purpose for which they are created.
- Practice context is a key driver of how scope of practice changes over time. This includes environmental factors, practice supports, and mentoring opportunities.
- The regulatory and legal context in which health professions work can promote or impede collaboration and influence the scopes of practice of all professionals involved.
- Assessment of competence must extend beyond training and credentials to capture what physicians currently do within their current scope of practice.

The literature review also enabled the working group to identify the following challenges:

- Scope of practice is foundational to defining the “CPD curriculum” for practising physicians and integral to the creation and implementation of a practice-specific plan that is responsive to the health needs of patients, families, and populations. How can physicians best describe their evolving scope of practice so that it influences their learning intentions?
- Current approaches to the design and development of CPD activities make it difficult for physicians to find or access CPD that is relevant to their needs and practice context.
- There may be a social accountability gap between the scope of practice assumed as necessary and sufficient by physicians and the scope of practice required or expected of them by the populations, communities, and patients they serve.
- More research is needed to examine the extent to which physicians select learning activities relevant to their “scope of interests” rather than the needs relevant to their scope of practice.

In light of the issues and challenges identified by the scope of practice working group, the following recommendation is proposed.

RECOMMENDATION

- 1. Physicians should be provided with tools or strategies to document and periodically revise a description of their scope of practice. To create, implement, and evaluate the impact of a practice-specific education plan that is intentionally responsive to patient, institutional, and personal needs.**

Suggested options for implementation

- Stakeholders instrumental in creating educational programs for physicians should determine the CPD needed for physicians practising within defined scopes of practice.
- Educational activities should be categorized to support physicians seeking relevant educational activities, particularly for those who have changed or are planning to change their scope of practice.
- Generate an agreed upon, consistent terminology to make a clear distinction between scope of discipline as outlined by certification bodies (what physicians are trained to do) and scope of practice (what physicians actually do).

Integrated within team-based learning and improvement

Over the last two decades, the delivery of health care in Canada has placed increasing emphasis on team-based care in both acute care and community settings. The drivers of this change include emerging research evidence of the positive effects of team-based care delivery. These benefits include more timely access to care, improved patient safety, more effective use of health human resources, effective care provision for complex chronic health conditions, and the

prevention of health provider burnout. In acute care environments, both simulation training and “crew resource management” training have been shown to improve communication and coordination in the management of complex, high-risk cases.

The current CPD system is oriented toward individual physician autonomy in making decisions about CPD activities, and most learning takes place in the company of other physicians. A system of physician learning and improvement will place an emphasis on physicians learning together with other health professions, particularly with other members of the teams they work with day to day. Learning together with such colleagues provides a solid foundation for the more effective translation of learning into day-to-day practice in all care contexts and will help to remove barriers to practice change. In light of the report developed by the working group on Interprofessional Teams, the following recommendations are proposed.

RECOMMENDATIONS

- 2. Physician learning and practice improvement must focus on the competencies required for physicians to function within teams and to learn from members of the health care teams in which they participate.**
- 3. Accreditation and certification bodies, educational providers, and other relevant health professions organizations should collaborate to identify system changes required to implement and “certify” interprofessional continuing professional development.**

Suggested options for implementation

- A variety of methods and approaches (e.g., simulation, face-to-face sessions, workshops, online learning) should be used to tailor CPD to the specific needs and characteristics of teams (e.g., newly formed, highly functioning, co-located, dispersed networks).

- The successful integration of CPD within team-based care requires attention to relationship building, an understanding of the motivations of individual team members, engaged leadership, and organizational support at all levels.
- The planning, design, and delivery of activities should engage patients and practitioners from the team.
- Continuous quality improvement for teams should be integrated into interprofessional CPD initiatives that target both patient outcomes and processes of care.

Enabled by skilled lifelong learners

At each stage of the medical education continuum, lifelong learning as a skill and commitment undergirds the professional growth of physicians. Effective lifelong learning requires physicians to acquire and apply new evidence, share their knowledge and practice experiences with others, use practice data with feedback to improve performance and outcomes, and develop a sense of community.

Lifelong learning in medical practice involves finding and implementing solutions to everyday problems encountered in the clinic, emergency room, operating room, or inpatient unit. The enabling competencies required for lifelong learning are described in the Scholar Role of the CanMEDS/CanMEDS-FM framework. These include the ability to integrate both planned and opportunistic learning into daily work; to use data from a variety of sources to guide learning; and to engage in continuous learning as part of a community of practice. A strategic longitudinal plan will be required to establish a culture of lifelong learning and improvement.

In their review of 48 publications that reflected theoretical frameworks, research findings, and practices, the working group on *Lifelong Learning* identified the following four key themes.

1. Lifelong learning is effective when it is relevant to practice.

Informal learning in medicine is often spontaneous and unplanned, triggered by the challenges and complexities of work as well as by interactions with colleagues, patients, and trainees. Questions that arise during these interactions contextualize learning and serve as important triggers for the learning process.

The introduction of learning portfolios across multiple health professions provides health care practitioners, including physicians, with tools to identify learning goals, build personal development plans, and record, reflect on, and evaluate the outcomes of learning activities for practice. Electronic portfolios designed to support practice-based learning and improvement can be used to demonstrate the impact of targeted educational interventions in addressing identified gaps in the delivery and outcomes of care.

2. Lifelong learning requires proactive engagement on the part of learners, and their application of the skills and capacities required for lifelong learning.

Lifelong learning has been defined as “an attribute involving a set of *self-initiated activities* and *information-seeking skills* with sustained *motivation* to learn and the ability to recognize one’s own *learning needs*.”⁴ This definition emphasizes the combination of skills (information seeking), personal attributes (learning beliefs and motivation), and abilities that collectively reflect the cognitive complexity of lifelong learning. Physician motivation may very well be the single most important determinant of engagement in lifelong learning, particularly when learning is designed to address a psychosocial need for autonomy, competence, and/or relatedness.

The skills of reflective practice and “adaptive expertise” are essential to physicians’ attempts to solve problems when their routine expertise is not enough. These skills include the ability to continually ques-

4 Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians’ lifelong learning. *Acad Med.* 2009;84(8):1066–74. p. 1066.

tion one's understanding of the cases encountered and to apply knowledge to novel problems or atypical cases as they arise.

However, despite the theoretical importance of these skills and abilities, there appear to be limited opportunities for physicians to acquire and practise these skills within formal CPD offerings, or indeed for students and residents to acquire these skills as part of traditional medical school curricula or residency training programs.

3. *Lifelong learning is enhanced by working in a community of practice, acknowledging the social nature of learning.*

Many physicians work as members of groups of physicians or teams, which are often interprofessional in nature. These teams effectively function as “communities of practice” that complement individual lifelong learning activities by sharing practice concerns and enriching knowledge and expertise through ongoing interactions.

The literature highlights three features of health care teams that function as communities of practice: (1) networking with colleagues and other members of the care team as an integral part of clinical practice; (2) embedding educational interventions in the social learning activities of communities of practice to promote behaviour change and continuous practice improvement; and (3) integrating the acquisition of new competencies within the social fabric of practice in clinical communities.

4. *Lifelong learning must be supported by the collection of data about performance and enable receptivity to that data.*

Despite the readiness with which physicians form impressions of their abilities, they cannot depend on introspection as the only means of determining their CPD needs. However, the act of seeking guidance from other individuals and incorporating data from external sources into one's own impressions are

complex cognitive tasks influenced by many factors, including confidence, emotional reactions, and cognitive biases.

This perspective requires CPD developers to recognize that simply providing physicians with data will not necessarily prompt an appropriate change in behaviour. Models for delivering feedback must pay more attention to issues of receptivity – the factors that determine when the recipient deems feedback to be credible and relevant.

There are many examples of low-stakes assessment strategies being developed by various organizations to provide an alternative to self-assessment. These include practice reports from electronic health records; computer-based tests and simulation-based activities tailored to the contents of formal CPD activities; longitudinal assessments of knowledge; multi-source feedback; direct observation; practice improvement modules; and various other peer review strategies.

There is also a growing body of research evidence regarding the potential benefits of incorporating social media technologies in adult and continuing education. This can support a learners' ability to acquire knowledge and stay up to date, share their knowledge with others, effectively and quickly communicate with others, receive feedback, and develop a sense of community.

In light of the report developed by the lifelong learning working group, the following recommendations are proposed.

RECOMMENDATIONS

- 4. Prioritize and support activities that facilitate collaborative learning within formal or informal communities of practice.**
- 5. Develop curricular resources that facilitate understanding and the acquisition of effective lifelong learning skills for physicians in practice.**

5 Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. *Acad Med.* 2009;84(8):1066–74. p. 1066.

Suggested options for implementation

- Leverage social media and other communication technologies to facilitate interaction and enable the inclusion of physicians working in isolation or in remote settings.
- Promote supportive coaching by trusted advisors or peers.
- Establish electronic resources that actively prompt physicians to establish learning plans and guide them in documenting evidence of learning and improvement.
- Equip facilitators with the skills required to help individuals and practice groups engage to share their everyday practice needs with one another and to identify relevant educational interventions.
- Invest in specific coaching supports to facilitate physicians' determination of what data are relevant to their practice needs, and how to collect, understand, and act on them.
- Devote adequate resources to the development of national standards for the use of digital, social, and mobile technologies to ensure their trustworthiness for education and practice, and to safeguard the confidentiality of patient and physician data.
- Build a reward structure that recognizes the value of participating in social learning initiatives, using evidence-based, performance data and other practice-relevant metrics in planning learning activities and measuring the achievement of related goals.

KEY STRATEGIES: INSTITUTIONS AND SYSTEMS

The implementation of a physician learning and practice improvement system is enabled by three key strategies relevant to institutions or systems. A

physician learning and practice improvement system must be

- developed by those with expertise in planning and delivery
- funded to enhance quality and continuous improvement
- designed to advance competency-based medical education

Developed by those with expertise in planning and delivery

Over the past several decades, practitioners and researchers have shown that physician performance can improve when educational interventions target learner needs, involve multiple exposures and varied methods of instruction, address challenges to implementing changes in practice, and focus on outcomes that health professionals consider to be important. Although accreditation/certification standards for CPD activities were developed to ensure that CPD programs are based on sound educational principles, health professionals who design and implement CPD programs are currently not expected to have completed any professional development or training in program design, delivery, or evaluation. Given the anticipated need for innovative educational interventions that are responsive to the ever-changing needs of patients, physicians, and the health care system, organizations that develop CPD programs must ensure that individuals and teams are equipped with the requisite ability to support the development and implementation of effective educational interventions. Collectively, these competency areas should serve as the curriculum for a professional development pathway for CPD providers themselves.

The expert-led working group on Knowledge and Skills for CPD Development and Delivery completed a review of 20 articles selected to address one of following questions:

1. How can the competencies of individuals involved in the development and/or delivery of CPD activities be defined?
2. How can the performance of individuals involved in the development, delivery, and evaluation of CPD activities be assessed?
3. How can the performance of the planning committee or team involved in the development and/or delivery of the CPD activity be assessed after program delivery?

The following key findings resulted from the summary of the literature.

1. *CPD providers and developers require general and specialized knowledge and skills to design, deliver, and evaluate CPD curricula.*

Based on the conceptual framework proposed by Srinivasan and colleagues,⁵ the Alliance for Continuing Education in the Health Professions proposed eight competency areas or domains. These are the ability to:

- understand and utilize adult learning principles and accreditation standards to guide the development of CPD programs;
- design education interventions on the basis of best evidence for program development;
- measure the effectiveness and impact of a CPD activity;
- collaborate with interprofessional partners and stakeholders to meet the CPD mission;
- collaborate with health systems to integrate QI, patient safety, and knowledge translation with CPD;
- utilize tools and processes to aid in the development, delivery, and dissemination of CPD activities;
- engage in self-assessment and lifelong learning to improve individual performance; and
- facilitate practice-based CPD and team-based learning.

Collectively, these competency areas should serve as the curriculum for a professional development pathway for CPD providers.

2. *CPD providers and developers require access to formal training and faculty development opportunities in CPD.*

CPD providers and developers can benefit from targeted professional development initiatives that align with the competencies outlined above. Establishing formal training programs will help to standardize the knowledge and skills required to support the practice-specific and system-level changes necessary to improve patient care.

3. *CPD providers and developers require training and opportunities to enable reflection and self-assessment to improve their own performance.*

CPD providers and developers would benefit from opportunities to reflect on their own performance and skill level using facilitated feedback to develop individual learning goals and track their achievement of the identified CPD competencies over time.

In light of the report of the working group on knowledge and skills for CPD development and delivery, the following recommendation is proposed.

RECOMMENDATION

6. **Create national training programs to enable CPD developers and providers to acquire the core competences required to design, implement, and evaluate educational interventions.**

Suggested options for implementation

- Use a framework of competencies to develop specific resources and training opportunities necessary to enhance the quality of CPD programs developed by a wide range of CPD developers and providers.

5 Srinivasan M, Li ST, Meyers FJ, Pratt DD, Collins JB, Braddock C, et al. "Teaching as a competency": competencies for medical educators. *Acad Med.* 2011;86(10):1211–20.

- Establish a national CPD certificate for individuals who complete the requirements of such training programs.
- Create national guidelines that describe best practices for how committees perform needs assessments, create clear learning objectives, develop content, select those who will facilitate or deliver the content, and perform evaluations of the program delivered.
- Develop a facilitated coaching model to support the provision of feedback to CPD providers to enhance their competence and performance.
- Ensure individuals tasked with developing CPD activities are trained in the principles of quality improvement, patient safety, the use of best evidence, and the translation of evidence for complex health systems.
- Promote the inclusion of individuals with training in CPD best practices or instructional design as members of planning committees to aid in program development and provide ongoing feedback.

Funded to enhance quality and continuous improvement

One of the key challenges in redesigning a national system focused on learning, improvement, and the quality of care is to identify funding sources to support the development and dissemination of high-quality educational tools and activities. Traditionally, accredited/certified CPD activities (face-to-face or online) and assessment tools have relied on a combination of registration fees supplemented by sponsorship from pharmaceutical companies, medical supply companies, or other governmental or non-governmental sources. Reliance on external sources of funding for CPD has raised significant ethical concerns and debates regarding, among other issues, the potential for bias in educational activities sponsored by commercial interests. These

concerns have underscored the need to ensure that medical education is not used as a marketing strategy and that the content and intended outcomes of CPD are based on the best available evidence.

A scoping review was conducted by the working group on *Funding for CPD* to explore the “range and extent of funding models in relation to the creation and dissemination of CPD activities” for physicians. The results from this scoping review were based on data abstracted from 63 articles published since 2000. The review yielded the following conclusions:

- Despite the significant polarity of opinion on the appropriate role for commercial interests in funding individual CPD activities or assessment strategies, a mixed funding model was viewed as viable. This means funding derived from registration fees, sponsorship from commercial organizations, and support from government and employers. This model was viewed as viable on the basis of (a) the confidence expressed in the protections provided by national CPD accreditation standards that address issues of bias and conflicts of interest; and (b) the view that ongoing physician learning is an integral component of a high-functioning, publicly funded, health care system and is a “social good” worthy of public investment by government.
- The creation of provincial (for physicians) or national (for providers) CPD funds was proposed as a means of providing physicians with financial support to participate in learning or assessment activities relevant to their needs, and as a means for CPD provider organizations to develop innovative CPD interventions that address patient and population health needs.
- Regardless of the source of financial or in-kind contributions, the predominant focus of funding is on formal, accredited, group learning activities that are centred mainly on knowledge dissemination strategies, with a limited emphasis on supporting practice change.

- There were limited examples in the literature of funding strategies for the development of a program of CPD (including assessment activities) provided through partnerships among physicians, health professionals, CPD provider organizations, and health systems at a regional, provincial, or national level.
- An approach to funding focused on individual activities will continue to impair the ability of the CPD system to develop content that responds to patients' needs and that addresses the competencies required to enhance health care delivered by physicians individually or as part of small group interventions or interprofessional teams.
- Grappling with the various facets of the funding model for CPD is important to ensure the integrity of the curriculum produced by a broad range of CPD provider organizations.
- Encourage all national or provincial pharmacare programs to provide funding for the development of learning activities on appropriate prescribing.
- Integrate funding opportunities for innovative learning activities within existing national or regional CPD grants or awards programs.

Designed to advance competency-based medical education

In response to recommendations that undergraduate medical education and postgraduate medical education should transition to a competency-based medical education (CBME) model, the Competence by Design initiative of the Royal College of Physicians and Surgeons of Canada is intended to apply the principles of CBME in practice. The working group on *Advancing Competency-based CPD* designed a scoping review to support the development of recommendations that will “advance competency-based CPD tools, assessment strategies, and data” for the CPD system of the future.

The scoping review, based on 49 articles, led to the following conclusions.

This scoping review should serve as a stimulus for a collective conversation among CPD system stakeholders on how to achieve an appropriate balance in funding the development of CPD activities. This balance should include the creation of pooled funds at a provincial or national level.

In light of the review of the working group on funding for CPD, the following recommendation is proposed.

RECOMMENDATION

7. Collaborate with provincial and national CPD stakeholders to identify funding strategies for the development of programs, resources, and tools to address emerging public health needs, regional health priorities, and interprofessional CPD.

Suggested options for implementation

- Collaborate with provincial/territorial medical associations to promote provincial funding for licensed physicians to engage in CPD activities that are aligned with quality improvement goals, patient needs, or health care system priorities within their practice settings.
- There is a need for greater clarity with respect to how competencies can be used to guide learning and improvement in practice and the development of CPD interventions by providers, and to inform regulatory decisions related to licensure.
- External sources of data and feedback were envisioned as a means of guiding changes to individual physicians' performance or practice, with the desired outcomes intended to respond to the health needs of patients.
- The main external sources of data reported were multi-source feedback; charts or health records; or measures of competence or performance. Less than half (41%) of the articles included an explicit description of the process or type of feedback provided, usually through formalized written reports.

- The consistent use of external data sources, as described in the foundational principles, would support three important principles of CBME: learner-centredness, authentic assessment, and responsiveness to societal health needs.
- Reducing unacceptable variation in the provision of quality health care and demonstrating the link between learning and patient care outcomes will require a strategy focused on the collective competence and performance of health care teams (see also working group report on Interprofessional Teams).

In light of the report of the working group on advancing competency-based CPD, the following recommendation is proposed.

RECOMMENDATION

8. **Each specialty should identify the core and emerging competencies relevant to all members of the specialty and use the CanMEDS/CanMEDS FM competency frameworks to design or recommend activities, tools, and data sources for learning and practice improvement within the specialty's main scopes of practice.**

Suggested options for implementation

- Collaborate with CPD provider organizations to develop educational strategies and tools to sustain the core competencies relevant to all members of each specialty.
- Develop tools, resources and programs to enable individuals, groups, or teams to use CanMEDS/CanMEDS FM competency framework to demonstrate improvements to the quality and safety of the health care provided to patients.
- Use the CanMEDS/CanMEDS FM competency framework to create an assessment model that ensures flexibility in providing multiple options for assessing performance or health outcomes relevant to a physician's practice.

KEY STRATEGIES:

LEADERSHIP AND INFRASTRUCTURE

The current CPD system for physicians is a diverse enterprise involving multiple providers that are loosely connected. The implementation of a physician learning and practice improvement system is enabled by key strategies relevant to leadership and infrastructure. Specifically, a new national physician learning and practice improvement system must be

- developed to support regulatory requirements for practice improvement
- informed by national CPD activity datasets linked to health systems data
- enabled by an integrated provincial or regional leadership network

Support regulatory requirements for practice improvement

The FMRAC's Physician Practice Improvement (PPI) policy document views physician practice improvement as a collective responsibility of multiple organizations. This document provides a regulatory foundation that supports many of the elements of the physician learning and improvement system proposed in this report. The overarching vision of PPI is for Canadians to be "assured of the competence of physicians" and for physicians to be "supported in their continuous commitment to improve." This vision reflects the increasing emphasis on continuous quality improvement (CQI) in today's health care and sets out a revised approach to assessing and enhancing competence.

The PPI System is based on the assumption that each physician has unique learning needs that are largely determined by the nature of his or her individual scope of practice. In the PPI System, individual physicians will be expected to apply the principles of CQI in their approach to learning and improvement.

Physicians will require support and guidance to (1) understand their practice; (2) assess their practice (through self-assessment and external assessment); (3) identify their learning needs; (4) undertake appropriate educational activities; and (5) evaluate the results.

The recently formed FMRAC Working Group on Physician Competence (WGPC) is a multi-stakeholder group whose draft mandate is “to develop strategies to assist medical regulatory authorities and stakeholder organizations in implementing a pan-Canadian Physician Practice Improvement System.” A phased implementation of PPI is envisioned. On the basis of their deliberations, the following recommendation is proposed.

RECOMMENDATION

- 9. All physicians will be expected to participate in a continuous cycle of practice improvement that is supported by understandable, relevant, and trusted individual or aggregate practice data with facilitated feedback for the benefit of patients.**

Suggested options for implementation

- CPD provider organizations, specialty groups and certifying Colleges should develop tools and support systems to enable physicians to measure their performance against established practice standards, select appropriate activities to achieve their learning goals, and measure the impact of learning on their practice
- Include patients in the development and implementation of practice improvement processes, including the provision of data and feedback on their experiences of care and the outcomes of care.
- Integrate PPI within daily medical practice to maintain integrity and enhance relevance to accommodate evolving needs and approaches

National CPD datasets linked to health system data

A national physician learning and improvement system will require the ability to capture and link data about participation in CPD activities with data on the impact of these activities on physician performance and patient outcomes (see working group report on *CPD and Emerging Health Care Needs*). Equally, information and reports from national and provincial/territorial quality councils, health research agencies, and medical regulatory colleges, among others, must be available to identify emerging patient and population health needs that can be addressed by CPD developers. This will ensure that the content of CPD is aligned with the needs of patients, the health care system, and the regulatory bodies that govern the practice of medicine.

The College of Family Physicians of Canada (CFPC) and the Royal College of Physicians and Surgeons of Canada (Royal College) have developed systems that support the development and reporting of accredited/certified learning and assessment activities. The Collège des médecins du Québec oversees similar provincial accreditation and reporting systems for CPD providers and physicians in Quebec. However, there is no coordinated approach to create a comprehensive view of educational activities for physicians or teams and no process to link CPD activity data with health systems data to explore the impact of learning on measures of quality, safety, and health outcomes. A national learning and improvement system requires data infrastructure that captures detailed information regarding educational interventions and links these data with physician performance measures, patient outcomes, and quality of care measures, in order to:

- identify gaps in activity development and support a call to action to fill them;
- connect physicians with learning events that meet their identified needs and those of their communities;

- enable research and outcomes analysis through linkages between CPD activities, physician performance, and patient outcomes; and
- monitor and describe sources of funding for accredited CPD programs.

On the basis of these considerations, the following recommendation is proposed.

RECOMMENDATION

10. Establish a national repository of learning activities with a data structure to identify gaps in activity development; facilitate physician access to learning activities to address their practice needs; and support national reporting and research to enable an analysis of the impact of physician participation in CPD on performance improvement, quality and safety of care, and patient outcomes.

Suggested options for implementation

- Establish a network to identify trustworthy sources of performance data and metrics on patient outcomes.
- Develop, pilot, and implement systems to provide aggregate data, and facilitate the interpretation of performance and patient outcomes data for individuals and groups, e.g., electronic medical records, scope-of-practice assessment tools, point-of-care tools, and feedback practices.
- Establish the necessary safeguards and regulatory frameworks to ensure confidentiality and appropriateness of access to data.
- Develop educational support programs to enhance physician familiarity with data systems and how to use practice data and feedback to improve.

Integrated provincial or regional CPD leadership networks

An integrated national physician learning and practice improvement system will require a leadership structure that facilitates collaboration and accountability among physicians, health system leadership, CPD provider organizations, medical regulators, and patients. Those tasked with guiding physician learning and improvement will need regular opportunities to frame strategies, processes, and tools to enable the system to meet the emerging health care needs of patients and their families. Given Canada's health governance structure, leadership is needed first at the provincial or regional level. The use of a network strategy is proposed to facilitate dialogue and planning and to establish strong links across multiple stakeholder organizations, including other health disciplines (e.g., nursing, pharmacy, and rehabilitation).

Provincial CPD leadership structures currently exist in Quebec, Ontario, and British Columbia. A strategic network of expert groups or communities would complement these leadership structures by considering implementation opportunities to address provincial strategic directions and priorities, identifying and responding to unique regional health needs, and coordinating the development and adaptation of CPD programs that meet these needs.

These networks and leadership structures can be supported by a national **CPD Leadership Forum** (see working group report on *CPD and Emerging Health Care Needs*) held in conjunction with the annual National CPD Accreditation Conference, an event organized by the CFPC and the Royal College. This forum would offer opportunities to

- present and discuss emerging needs and priorities for physician learning in Canada
- facilitate feedback from providers on system performance measures
- establish coalitions of CPD providers to pursue needed program development

Between these annual events, CPD stakeholders and leaders would also be supported as a “Community of Interest” in an online networking platform to share best practices and discuss common challenges. Other communities can be task-oriented groups supported through virtual meetings. Such groups could be formed to advance some of the strategies of this report.

On the basis of this summary, the following recommendation is proposed.

RECOMMENDATION

11. Create or strengthen provincial or regional CPD networks to facilitate the monitoring, planning, and evaluation of educational interventions required to address patient, community, and population health needs and priorities using the best available evidence.

Suggested options for implementation

- Utilize the current provincial leadership structures to identify core elements and tasks for the development of new provincial or regional networks.
- Use a network strategy to support collaborative planning, knowledge and resource sharing, and the design of provincial or regional needs assessment and evaluation strategies.
- Identify metrics to monitor and coordinate timely and effective CPD responses to emerging health care issues in each province or region.
- Promote the allocations of new sources of funding to support specific provincial or regional initiatives.
- Create networks that establish strong links with other health disciplines (e.g., nursing, pharmacy, rehabilitation) to support interprofessional learning.
- Convene a one-day meeting of provincial or regional CPD system leaders in conjunction with the National CPD Accreditation Conference to advance physician learning and practice improvement.

IMPLICATIONS

The strategic directions described in this report have a number of important implications for physicians, CPD provider organizations, and health care institutions.

Why should these recommendations matter to physicians? First, the envisioned national system is committed to providing physicians with the tools, educational resources, practice data and support systems to effectively learn and continuously improve the quality of care they provide to patients. Second, the renewed focus on addressing patient and community health needs aligns CPD with workplace and team-based learning opportunities to pursue meaningful outcomes (competence, performance, patient outcomes) relevant to a physician's scope of practice. Third, the national system will simplify reporting by establishing one set of requirements that will meet the expectations of medical regulation (licensure), the health system (privileging), and the national colleges (certification).

Why should these recommendations matter to CPD provider organizations? CPD provider organizations will be able to access regional, provincial, or national practice and performance data to assess and address gaps. CPD provider organizations will be linked with regional leadership councils that will coordinate how physician learning can respond to health challenges. CPD providers will be supported by online communities of practice to enhance the quality and enjoyment of their work. The envisioned national system will recognize and place a higher value on the skills and competencies that leaders working in CPD provider organizations need to design and evaluate educational interventions.

Finally, CPD provider organizations will be provided with opportunities to partner with health care institutions, knowledge translation experts, and quality improvement organizations to support the translation of learning into improved performance and quality of care and better experiences for patients.

Why should these recommendations matter to health care institutions? The envisioned national system, with its emphasis on workplace learning embedded within interprofessional health teams or communities of practice, will support health care institutions in their mandate to deliver high-quality and safe care. In addition, health systems will play an important role in promoting a culture of continuous improvement by facilitating and supporting the provision of reliable performance data and feedback to individuals, groups, or teams.

Why should these recommendation matter to patients? This envisioned CPD national system will encourage physicians to maintain their competence in relation to societal need. Physicians will focus their ongoing learning and practice improvement activities on emerging patient and population health needs and ultimately achieve the results that matter most to Canadians: improved quality and safety of care. This system will focus on ensuring that medical practice is based firmly on scientific evidence and on the practice data and feedback physicians receive about their day-to-day work. It will also engage patients in sharing their experience of medical care so that communication and collaboration with the physicians and other health professionals with whom they work are continuously improved.

CONCLUSION

This third report on the Future of Medical Education in Canada sets out a vision for a renewed and revised national system to support physician learning and practice improvement. The CPD System of the future will be nimble and responsive to the changing needs of Canadians at the local, regional, and national level. Rapid changes in the scientific evidence that informs health care, coupled with new technologies, advances in artificial intelligence, and changes to models of health care, require a system that supports and informs physician learning and

practice improvement through the use of external data with feedback. However, the pursuit of enhanced patient experiences of care and improved population health cannot disregard health care provider well-being. Given that the role of physicians in this fast-paced and ever-evolving health care environment will change, the continuing professional development of the future must not only adapt in order to improve the quality and safety of health care but must also restore the joy of learning new things with colleagues, coworkers, and patients.

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