

Editorial

Organizational Change: Ethics, Information, and Technology for Improved Practice

In this issue of *The Journal of Continuing Education in the Health Professions (JCEHP)*, Aherne, Lambie, and Davis review the literature that drives contemporary program planning. They also appraise the forces that draw continuing medical education (CME) into systems of health care. They assert that CME is a resource which must be anticipatory, with planners not only keeping abreast of local, regional, and national trends but also becoming more proficient in population health and epidemiology. They advocate for knowledgeable use of such data in benchmarking current and best practices to support clinical decision making.

Knox, Underbaake, McBride, and Mejicano advance the notion that CME providers can enhance preventive services to improve patient health status by promoting organizational change. Primary care clinics were randomized into four experimental treatments. Including effective leadership, priority setting, and joint planning, eight influences for change were identified. Six influences were identified as hindrances to change, including patient load and turmoil related to reorganization.

Kenny, Sargeant, and Allen report physicians: a) lack a systematic approach to the identification and analysis of ethical issues and b) feel they need neither a high level of confidence nor competence to handle ethical issues commonly encountered in practice. The investigators suggest that ethics should be included as a component of regular CME and that further work is needed to better determine the specific needs of physicians for ethics education.

D'Eon and AuYeung studied audio teleconferences as follow-up in a train-the-trainers program. Follow-up occurred every 6 weeks for 8 months. The audio teleconferences provided the

kinds of exchanges of information that enable behavior to change.

Neill, Bowman, and Wilson asked physicians what changes they planned to make as a result of reading the *Archives of Family Medicine*. The investigators found that articles dealing with complementary medicine accounted for the highest number of comments on a per-article basis. They suggest that certain types of articles are more likely to generate statements of commitment to planned changes than are others.

Manning and DeBakey review the potential for expanding effective CME, especially with regard to information technology. Technology to replicate traditional educational methods is reviewed, and the evaluation of CME in the future is discussed. They assert that medical schools have an obligation to instill in students the ideals of lifelong education and of preserving the passion for medical practice.

Mowatt, Grimshaw, Davis, and Mazmanian offer a brief history and description of the workings of the Cochrane Collaboration, a widely admired scientific review organization. The Cochrane Effective Practice and Organization of Care Group will keep readers of the *JCEHP* informed on an ongoing basis about new systematic reviews involving CME and quality assurance.

Finally, if you are looking for a shortcut to insight, spend time with Brigham's reviews of two books on the dynamics of change. One is a compilation of articles from the *Harvard Business Review*. The other addresses difficult questions of how change disturbs and confuses us. Brigham's interpretations for CME honor both concept and practice.

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Theoretical Foundations

Continuing Medical Education, Needs Assessment, and Program Development: Theoretical Constructs

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Abstract

Continuing medical education (CME) program development and needs assessment have historically been practiced within the tradition of Ralph Tyler's education model. In light of transformational social, political, economic, and technical forces that demand greater accountability and responsiveness from physicians, CME units are challenged to transform their cultures and structures from models that deliver education to models that support the facilitation of learning for enhanced competence and performance. This article describes key change forces for physicians and brings program development and needs assessment into focus for the discussion. The impact of change forces on program development and needs assessment are examined, and some techniques to move beyond the traditional approach of felt needs are presented as a way of enabling strategic administrative planning and change management.

Key Words: Competence, continuing medical education (CME), learning and change, needs assessment, performance, program development, transformation

This article is intended to raise awareness about the potential application of needs assessment for strategic continuing medical education (CME) program development and service transformation. We propose reconceiving CME needs assessment for an emerging health care environment.¹ We assert that a myriad of complex and dynamic social, political, economic, and technical forces are driving greater physician accountability and responsiveness.^{2,3} In turn, we expect that a key responsiveness issue for the CME function will involve transforming from a rather narrowly focused role as a provider of continuing education

to that of a strategic health system resource that supports and facilitates physician performance through practice-related learning and change.

In proposing a fresh perspective for CME needs assessment within this transformed role, we examine some key forces driving change in the environments in which physicians practice. We discuss established concepts of need as developed primarily through the latter half of the 20th century and analyze their utility for a changing health care environment. Finally, we suggest a fresh perspective for ways that needs assessment might be used to support broader health system capacity building and CME curriculum transformation.

Taking Stock of Key Forces

As we move into the early 21st century, there is general awareness that our world is dramatically changing with unprecedented speed.⁴ On reflection, one can see many of the tangible ways in which this is influencing medicine. Complex social, technical, political, and economic forces⁵ are redefining health care.

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In the United States, the evolution of managed care fundamentally changed the landscape of clinical practice.¹ In Canada, shifting demographic data mean that fewer physicians are seeing more patients. There is greater rural migration of an aging population.⁶ The demographics associated with the aging population are placing unprecedented demands on an already stressed public health system. As a result, highly demanding medical practices increasingly impede broad-based physician participation in “traditional” CME as a professional activity.⁷ Throughout the world, there is more pressure to adopt evidence-based medicine⁸ practices, and the growth in biomedical literature seems to continually outstrip the ability of busy physicians to keep up to date. Converging information and communications technologies are positioned to be a major transformative driver in health system reform and lifelong learning.⁹

Two key forces drive fundamental change in the physician-patient relationship. At a recent National Leadership Development Conference of the American Medical Association, management guru Tom Peters and health care futurist Ian Morrison emphasized the dramatic influence of the Internet and frustrated patients who are becoming “reluctantly empowered” health consumers. In separate presentations, Peters and Morrison both suggested that patients of the future are more likely to view physicians as partners in health care rather than ultimate authorities. William C. Richardson, Chief Executive Officer of the W.K. Kellogg Foundation, also has commented¹⁰ on the need for universities and medical centers to understand that consumer psychology has expanded beyond the consumer products and services marketplace to encompass all areas of public life.

Moreover, consumerism and health system accountability are converging as a public policy concern. The Institute of Medicine (IOM) Committee on Quality of Health Care in America recently issued a provocative report entitled *To Err is Human*.¹¹ It suggests that errors in health care professional practice comprise the fifth largest cause of death in the United States. And although

some have suggested that the problem of health professional error leading to unnecessary morbidity and mortality may be overstated, the widespread mass media coverage that the IOM report received has framed the safety of the health system as a prominent consumer confidence matter.

Within this context of great change, there is more focus on the quality of performance in practice¹² and accountability for outcomes.² To this end, it seems that CME planners are challenged to consider new roles, characterized as strategic, supportive, and facilitative, in achieving larger health system goals.¹

CME Program Development at a Crossroads

Conceiving CME as a strategic health system resource has profound implications for how we approach program development and needs assessment as a foundational program planning activity. First, there are clear and logical links between accountability, responsiveness, and performance. In CME scholarship, the field has demonstrated great interest in effectiveness and its close relationship to performance, as evidenced by the efforts that have gone into examining linkages between CME interventions and desired changes in physician practice behaviors.^{13,14}

Starting from an assumption that an overriding *raison d'être* for CME is to help physicians learn and change¹⁵ for enhanced competence and performance,¹⁶ the most important question for CME planners is do we want to be in the *education* business or in the *facilitation of learning* business? This question has profound implications for strategic administrative decisions and the range of tools available to support learning and change that are conceived as being within the legitimate domain of the CME function.

Most contemporary CME program development practices find their roots in Tyler's education model¹⁷ (also referred to as the curriculum or programming model).^{18,19} Accordingly, CME planners have traditionally responded to a new “need” through an educative/instructive experience, such

as a new (and usually didactic and static) program, course, or seminar. In contrast to Tyler's education model, we are reminded^{18,20} that professionals learn to solve professional problems in a variety of ways, only one of which is participation in formal instruction.

The authors are reminded of the old planning adage, "if the only tool you have is a hammer, then every problem becomes a nail." If the tools used by "traditional" CME providers for influencing physician learning and change remain solely instructional/educative in nature, then the market is vulnerable to poor service, new competitors, and "disruptive technologies."²¹ This scenario may very well play out as physicians look to an expanded range of learning resources, many enabled by technology, to maintain competence and manage performance. Although it remains unclear in what forms and to what extent, it is likely that these learning resources will supplement, displace, or replace traditional CME providers and courses.

The convergence of rapidly evolving technologies in information and communication, learning, and knowledge management is driving and enabling a transformation in continuing professional development^{9,22} generally and particularly in CME.²¹ Perpetuation of the status quo also represents a missed opportunity to support reflective, practice-based learning²³ and fails to fully incorporate understandings about knowing-in-action and reflection-on-action as sources of legitimate professional knowledge.^{24,25}

The resulting transformations occur largely by a shift in focus from providing professional education and instruction to facilitating professional learning and change however, wherever, and whenever this can and may occur. Consequently, the options for CME units to promote, enable, and support physician learning and change are dramatically increasing. For example, interventions can be designed to support inquiry and practice and instruction modes of learning.²⁶

Despite the promising prospects on the road ahead, CME history, practice, and organizational

culture are deeply entrenched in the education model. This may be one reason why, despite more recent insights from the field,^{15,27} planners continue to pursue educational strategies as an end rather than as part of a larger means. Another contributing factor may be a perception that the cost-recovery/revenue-generating business model of most CME units does not easily afford unit-level flexibility to invest in the planning and change management activities necessary to transform to a facilitator of learning orientation.

A transformed CME enterprise is sensitive to and sensible about physician learning and change being supported in various settings. Interventions can be targeted to workplace, home, community, or institutional settings or a mix thereof. Interventions can be heavily structured planned educational experiences, with highly specific goals, or less formal in nature to more effectively capture and legitimize the valuable kernels of new insights and "wise action" that arise from informal and incidental learning.²⁸

As concerns about quality of performance in practice¹² continue to appear among CME scholars, planners, and physician licensing bodies; in medicolegal circles; and among an empowered public, as accountability and responsiveness issues, there is an opportunity for the CME unit to make valuable contributions. To this end, a pressing role for senior CME officials within senior academic medicine and health system leadership circles is as advocate and chief spokesperson for CME business transformation.

Needs and Needs Assessment: Taking Stock of Concepts

In order to capitalize on the full potential of a transformed approach to CME, program development initiatives must be based on a thorough and accurate assessment of needs, opportunities, prospective responses to internal/external forces, and an understanding of and respect for stakeholder interests.²⁹ In positioning the CME unit to be accountable and responsive, needs assessment

studies are better focused on the actual and anticipated professional practice requirements, related enabling competence and capabilities, and corresponding learning and change requirements. Indeed, a transformed approach to CME requires a transformed approach to needs assessment.

The concept of need is one of the most widely used and poorly understood in adult and continuing learning.³⁰ It is the most deceptively complex, basically significant, and far reaching in its implications of all major terms in the vocabulary of the adult educator.³¹ Needs and needs assessment are often confusing and rife with similar or synonymous constructs with different labels. It is an understandably difficult area of theory and practice to navigate. The confusion has been attributed to lack of a generally accepted, useful, and substantive definition of need.³² In this section, we endeavor to demystify some of the field and point out how needs assessment theory and practice might support transformed CME program development.

The concept of need emerges from adult education practice, where the generation of empirical information highlights the necessity for value judgments relative to the allocation of scarce resources for program development.^{33,34} A review of major needs assessment approaches illustrates that program planning models in adult education are based on Tyler's belief¹⁷ that a need is the difference between an individual's current state of knowledge or skill and a specified norm.³⁵ Moore² suggests that a concept of need that may have more utility for the CME planner is that of a gap between current practice and a more desirable practice.

At its most basic level, needs assessment provides justification for allocating resources to program development³⁶ and is decision oriented.¹⁹ There are many recent contributions to the field on tactics and techniques for CME needs assessment.³⁷⁻⁴⁰ The challenge for CME planners is no longer only to assess whether topics, location, time, and format are right but also to ask whether selected methods enable learning to accommodate, adjust, redirect, or transform physicians' practices.¹⁵

Moreover, in an age of consumerism, where stakeholder interests²⁹ have unprecedented social, economic, legal, and political status, needs assessment is much more than an exercise in rationing and allocating resources. It is, in effect, a "dance" between program planners and internal and external stakeholders.³⁷ This dance is an interactive process of seeking insights and inputs, negotiating interests, and engaging in the early market/service development processes.⁴⁰⁻⁴² This metaphor of the dance reflects the dynamic and interactive nature of responsive needs assessment practice and acknowledges the embedded symbolic power of needs assessment. Pearce³⁵ notes:

The symbolic aspect of needs assessment has less to do with needs being evaluated than with validating, or enhancing, the value of the program or the sponsoring institution... The value of symbolic power is of particular importance to those organizations (such as universities, colleges, some public agencies, and hospitals) that produce no tangible product, but rely on public perceptions and beliefs about their value to society (p. 417).

Needs assessment is a value-laden, messy²⁴ process involving the management of real and symbolic power.⁴³ And although it might surprise and frustrate the technical-rational sensibilities that permeate health science cultures, informed planners acknowledge that in addition to being a technical exercise, needs assessment studies are inevitably value expressions and social constructions of the planners and the stakeholder communities they engage.

Philosophy of Needs Assessment

There are also at least two philosophical orientations in needs assessment: functionalist and subjectivist.³⁵ The functionalist approach is the dominant of the two. It is positivistic in nature and assumes that needs can be identified objectively

and are measurable. The functional approach is based on scientific empiricism and predicated on an assumption that sources of knowledge lie beyond the learner. The role of educators is to help people access that knowledge, usually through instruction. This is also known as the “how to” approach. That is, a need is identified as a discrepancy leading to doing something better than what you are doing now.

The subjectivist orientation is embodied in an empowerment perspective. In this philosophical orientation, the goal is empowering individuals, communities, or societies with the idea that the goal of any educational undertaking is to reduce the power and influence that various systems have on our lives. The ultimate goal in the empowerment perspective is to change the system itself. This orientation is predicated on the assumption that social reality is constructed and constantly changing. The outcome of the needs assessment is a process, not a product.

Some scholars have cautioned^{34,35,43} that planners be aware of the philosophical orientation that underlies their work. They advocate critical reflection and awareness as our philosophical orientation invariably influences how we determine needs and our beliefs about needs themselves.

Most constructs of need focus on a discrepancy^{31,44-46} between an existing state and a desired state. Felt needs are most often expressed as a gap or deficiency perceived by a person, group, or institution that is the “owner” of the need.⁴⁴ Pennington³² suggests that a need is a gap between a current set of circumstances and some changed or desired set of circumstances, where the circumstances can be described in terms of knowledge, skills, attitudes, performance, and situations.

Scriven and Roth⁴⁷ mitigate the pejorative connotation of the term *deficiency* by suggesting that a need is a gap between an actual and satisfactory situation, but they are clear that no state of deficiency or deprivation is implied. This latter definition may, in fact, be very helpful when planning and implementing CME needs assessments. The term *deficiency* may trigger particular

sensitivities in the learner community, particularly given the perception of excessively litigious behavior in a contemporary medicolegal risk management context. That is, the perception may be deficiency = incompetence = culpability/liability.

Other selected constructs of needs that the CME planner may find helpful in understanding a range of needs that may present include

- *Real needs*—a deficiency that actually exists as opposed to one that is thought to exist. The deficiency may exist in an individual, group or institution, or community and may or may not be recognized by those who have the need.⁴⁴
- *Blind needs*—identified through audits, records, reports, and key informant interviews with authority sources/decision makers. These are needs of which learners are initially unaware until the needs are presented following analysis of the data.⁴⁸
- *Shared needs*—identified by both learners and authority sources/decision makers.⁴⁸
- *Hidden needs*—reported by learners or needs assessment inputs that are not readily known or identified by authority sources/decision makers.⁴⁸
- *Comparative needs*—comparing the characteristics of those in receipt of a good or service with those who are not.³³

A Fresh Perspective on Needs Assessment

What might CME needs assessment look like in the new health care environment? A broader vision of need and legitimate needs assessment techniques may be helpful in addressing this question. There is an excellent base on which to build. If the goal of a transformed CME unit is to help physicians to be accountable and responsive through the facilitation of learning and change, then the following techniques may prove useful in gathering context-rich data to deal with the challenges of contemporary CME program development:

- *Early warning systems.* Environmental scanning³⁸ is anticipatory and proactive in nature and is essential for responsive CME needs assessment. Environmental scanning refers to many methods and resources that can be established to monitor and assess internal and external social, political, technical, and economic forces. Sources of data may range from purposive scans of local, regional, and national newspapers to regular scans of emerging Internet-based news services such as Medscape.com and Individual.com.

Some Internet online services offer free medical conference summaries and news services fed by sources such as *Business Wire* and *PR Newswire* and can be valuable sources of competitive intelligence. For example, it was through the latter services that one of the authors learned of management consulting giant Andersen Consulting's May 2000 move into CME-related knowledge management through its strategic alliance and multimillion dollar minority equity position in *mediconsultinc.com*. Internet-based news services can be valuable sources of information about disruptive technologies. These are simple, convenient-to-use innovations that are initially only used by unsophisticated customers at the low end of the market but pose a significant threat to the programs and profitability of leading CME units.²¹ Other key sources of early warning data come from nurturing broad-based, active personal and professional networks and effective engagement and input from planning or advisory committees.³⁸ Early warning systems can be helpful for identifying blind needs, emerging needs, and prospective opportunities.

- *Identification and interpretation of key forces/drivers/issues.* Periodically engaging authority sources in academic medicine, the health system, and the community in key informant and/or focus group⁴⁰ interviews can be a valuable source of qualitative information.^{2,37} Authority sources often

have a very good sense of policy issues and stakeholder priorities. This can be invaluable to CME planners when they are trying to sort through difficult public policy issues as they try to determine which emerging needs might be best met. Authority sources can be helpful in identifying real, blind, and shared needs. Focus groups are also an excellent source of qualitative data for blind, shared, and hidden needs.

- *Use of population health/epidemiologic data.* Population health data provide an excellent, relatively neutral, but underused source of CME planning information. It can be a helpful CME impact evaluation and public assurance resource as rates of change in health status may be studied in populations served by health care professionals who are able to influence outcomes through their interventions.⁴⁹ Lockyer⁵⁰ notes several US-based examples where initiatives are under way to provide better population health data for planning purposes. The Agency for Healthcare Quality and Research, for example, is involved in several databases, including the Healthcare Cost and Utilization Project, which is a federal-state-industry partnership to achieve standardized, multistate health data and provide patient-level information in a uniform format. Population health/epidemiologic data can be used to identify real, hidden, blind, and comparative needs.⁴⁹
- *Use of quality improvement/quality assurance data.* Linking patient satisfaction, complaints, and quality processes and data is another helpful source of CME planning information. The Harvard Community Health Plan developed an automated client feedback system with the intent of using analysis of complaints' trends to point leaders toward problems rooted in the way the system operates.⁵¹ Where robust quality improvement and assurance feedback systems exist, CME planners can work with

health system stakeholders to identify those areas where CME interventions may improve service standards, such as morbidity and mortality, and clients' perceptions of quality, such as patient-physician communication. Quality data from health system sources may be used to identify real, blind, and hidden needs.

- *Benchmarking current state and best practice.* The emergence of evidence-based medicine introduces a new opportunity for the CME unit. Physicians expect, and are expected by others, to access information they need to support clinical decision making, quality improvement, and learning and change. Benchmarking and brokering of clinical practice guidelines, careful synthesis of biomedical literature in selected specialty areas for primary care audiences, and reporting of best clinical practices in selected areas are also emerging opportunities for the CME unit. Benchmarking can be used to identify real, blind, hidden, and comparative needs.
- *Alignment with existing tools.* The techniques outlined in this section can integrate and support other CME planning data based on felt needs, such as questionnaires to prospective learners and course evaluation data.

Conclusions

CME units that are interested in surviving and thriving must re-examine their program development and needs assessment practices. Particular attention ought to be paid to assumptions related to accountability and the ability of the CME unit to respond to organizational changes that permeate the structure and culture of the CME unit.

By extension, informed and focused efforts of CME units lead to meaningful learning supports for physicians who continually learn and change, with or without us, and who are able to demon-

strate greater accountability and responsiveness with minimal disruption in their personal and professional lives.

Needs assessment related to contemporary professional practice can be an involved but not unduly burdensome responsibility if carefully thought through. A better understanding of needs assessment theory and practice can enable CME planners to be more strategic with their limited time and resources and lead to program development solutions that are more closely aligned with supporting physician learning and change.

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