

Original Article

Skills and Knowledge Needed by the CME Professional in the Twenty-first Century

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Abstract: *Attendees at the 19th Annual Alliance for Continuing Medical Education (ACME) meeting in February 1994 were asked to respond to a survey identifying skills and characteristics needed by the continuing medical education (CME) professionals of the twenty-first century. Ninety-one attendees responded, representing an estimated response rate of 15%. Respondents identified educational skills, particularly those related to educational technology, and self-directed learning as key skills needed by CME professionals of the future. In addition, management skills related to quality improvement were identified as important. These findings have many implications for curricular development and education of CME professionals.*

Key Words: Continuing medical education professional skills, educational technology, learning changes, needs assessment, self-directed learning

Pressured by health care reform, the increase in managed care, and related changes in medicine and medical education, the field of continuing medical education (CME) must realign its priorities and services to meet the changing needs of health care providers.¹ The idea is not new that CME will be a strategic resource in meeting the twenty-first century's challenges of managing and using an exponentially expanding pool of information and fund of technology.^{2,3} Without specifically addressing the skills needed by continuing medical educators in the next century, others have recognized that traditional approaches to CME will be inadequate to prepare physicians for the twenty-first century.³⁻⁷ Models of organizational development and private foundations interested in medical education have been cited as tools for strategic development of CME professionals.^{3,7} Little information is available, however, regarding the educational activities and

resources needed to support continuing medical educators during a period of rapid transition. At the 19th Annual Meeting of the Alliance for Continuing Medical Education (ACME) in February, 1994, these issues were addressed. As the meeting attendees represented CME providers from North America, as well as from some international sites, it seemed appropriate to seek their impressions of the skills and knowledge they will need in the future. The purpose of this brief communication is to present the results of a survey of registrants attending this meeting and to suggest implications of our findings for the CME professional community.

Methods

Persons registered to participate in the February 1994 Annual Meeting of the ACME were eligible

to participate in this survey. All registrants were informed about the survey, including how and where to obtain a survey form. They were instructed to complete the instrument during the meeting, between the Wednesday and Friday, and to return the completed surveys to a central location at the meeting registration desk. This time period was selected to ensure that registrants had an opportunity to attend the first 3 days of meeting sessions when changes in the educational needs of CME professionals were discussed. Data from the surveys were transferred into a computer database for analysis.

Participants were asked to respond to the following open-ended question: "As a result of your participation in the plenary sessions and workshops of the 19th Annual Meeting of the Alliance for Continuing Medical Education, please list the skills or characteristics you feel will be necessary for the CME professions and organization of the future." Participants were not limited to a specific number of responses. Also, they were asked to rate the importance of each skill or characteristic they identified using the following scale: most important; moderately important; and less important.

Data were analyzed: (1) by creating empiric categories, which represented groups of frequent responses to the question, (2) by coding each response into a category, and (3) by ranking responses according to the level of importance (e.g., 1, 2, or 3) that the respondent placed on it. The categories were organized arbitrarily under broader headings to facilitate analysis and discussion. These headings included: (1) knowledge and (2) skills (personal, educational, and management). The knowledge categories included knowledge related to health care system reform and accreditation of CME. Personal skills included flexibility in change and communication skills. Educational skills included self-directed CME, educational technology, and adult learning. Management skills included quality improvement, facilitation of change, leadership, and alliance development.

Results

There were 952 persons who registered and attended the 1994 ACME meeting. As some registrants did not attend all 5 days of the meeting, we were unable to determine precisely how many participants were in attendance during the survey collection period. Based upon plenary and workshop evaluation forms received during the 5 days, however, we estimated that 600 registrants could have submitted a survey form. We received 91 surveys; 84 of the 91 surveys were evaluative; seven could not be evaluated because of incomplete data. The overall response rate of 91 out of a possible 600 was 15.1%. A total of 255 individual responses (mean = 3 responses for each participant) were categorized for analysis. All responses were tabulated.

Participants included 33 with MD or PhD degrees and 51 with other degrees. The 84 participants represented the following institutions: large teaching hospitals (21), medical schools (18), community hospitals (17), and other institutions, including specialty societies, communication companies, pharmaceutical companies, and state medical societies (29).

The skills and types of knowledge identified by respondents as important to CME professionals in the future are shown in Table 1.

Discussion

The results of this limited survey indicate that CME professionals perceive the need for a broad range of knowledge and skills in order to practice their profession during the twenty-first century. Of the top three skills identified by CME professionals as being most important to CME professionals and organizations of the future, two were educational skills, including skills in educational technologies and self-directed learning. The third skill was in the area of quality improvement. These results are consistent with others who have noted the need for the field of CME to move beyond traditional approaches to those directed at

Table 1 Survey Results Showing Skills and Knowledge Anticipated as Necessary for Future CME Professionals

Category of Response	Frequency of Response	Mean Importance (1 to 3)*	Frequency X Mean Importance	% of Total Frequency X Mean Importance
<i>Knowledge</i>				
Knowledge of accreditation	18	2.28	41	6
Knowledge of health care reform	12	2.58	31	5
<i>Personal skills</i>				
Flexibility in change	21	2.76	68	9
Communication/interpersonal skills	17	2.35	40	6
<i>Management skills</i>				
Quality improvement	30	2.93	88	14
Facilitation of change	20	2.75	55	9
Leadership	22	2.45	54	8
Alliance development	21	2.43	52	8
<i>Education skills</i>				
Self-directed learning	26	2.46	65	10
Educational technologies	44	2.38	105	16
Adult learning	24	2.29	55	9
Total	255		643	100

*Participants were asked to rate the importance of each skill on a scale of 1 to 3.

the lifelong learning of physicians.^{1,3-8} As suggested by these authors, in order to move beyond traditional approaches, CME professionals will need new skills in developing, implementing, and evaluating new educational interventions as well as in new educational delivery systems.

The top three skills identified as needed by CME professionals in the twenty-first century (educational technology, self-directed learning, and quality improvement) also reflect broad trends in both health care and education. Reflected trends in health care include a strong movement toward continuous quality improvement and continued reliance on new technologies. Reflected trends in education include movements toward distance learning as a lifelong learning strategy and toward individualized self-directed learning. In the near future, reform efforts and other rapid changes in medicine and medical education will significantly escalate these trends toward stronger reliance on

continuous quality improvement tools as well as on innovative educational delivery systems.¹ These pressures will leave little time for CME professionals to develop and practice new skills.

The abilities of CME professionals to develop the skills needed to be successful in the twenty-first century may well determine not only the individual success of each professional, but also the success of institutions and of the field of CME in addressing new challenges. Because interpretation of our results is limited by the small number of respondents and a low overall estimated response rate of 15%, development of a computer database and procedures for periodic surveys would facilitate the systematic evaluation of learning needs of CME professionals. As there are no university-based programs that offer degrees for CME, it will be up to leaders within CME's professional organizations to continue to identify the key components of a curriculum

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to train CME professionals for new roles in the twenty-first century. ACME developers of a core competency curriculum, as well as the planning committees for meetings and educational institutes of the national Alliance and the Society of Medical College Directors of CME will also be challenged to provide leadership in developing curricula to meet the needs of CME professionals attempting to adapt to the future. Not only must a curriculum be identified, it must be implemented, evaluated, and revised. As CME professionals, we will also need to move beyond the traditional educational formats to continue to develop innovative and effective methods and delivery systems for delivering our own professional education.

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