The Journal of Continuing Education in the Health Professions, Volume 21, pp. 90–96. Printed in the U.S.A.

Original Article

Value of Unstructured Time (Breaks) during Formal Continuing Medical Education Events

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Abstract

Background: *Unstructured time (breaks) at formal continuing medical education (CME) events is nonaccredited in some jurisdictions. Program participants, however, perceive this time as valuable to their learning. The purpose of this research was to determine what activities occur during unstructured time in formal CME events and how these activities impact learning for physicians.*

Methods: *A qualitative method based on grounded theory was used to determine themes of behavior. Both individual and focus group interviews were conducted. Data were analyzed and coded into themes, which were then further explored and validated by the use of a questionnaire survey.*

Results: *One hundred ninety-seven family physicians were involved in the study. Several activities related to the enhancement of learning were identified and grouped into themes. There were few differences in the ranking of importance between the themes identified, nor were differences determined based on gender or type of CME in which the break occurred.*

Findings: *The results suggest that unstructured time (breaks) should be included in formal CME events to help physician learners integrate new material, solve individual practice problems, and make new meaning out of their experience. The interaction between colleagues that occurs as a result of the provision of breaks is perceived as crucial in aiding the process of applying knowledge to practice.*

Key Words: Behavior change, breaks, collective learning, informal learning, unstructured time

Traditionally, breaks between sessions in formal continuing medical education (CME) events are not accredited. However, when we ask physicians, "What are the most valuable aspects of CME events that you have attended?," the reply is often, "I learned the most during the breaks." Intrigued by such comments, we set out to determine in more specific terms the perceived value to learning of unstructured time (breaks) during formal CME events. Personal experience validated the importance of free or unstructured time within structured learning events, but could we, with the input of physician learners, articulate exactly how it was valuable?

Several studies have reported that physicians seek confirmation and validation of current and new medical practices through discussion with their peers. Two separate studies, Curry and Putnam and Lockyer et al., reported that both formal and informal discussion with colleagues prompted change in physicians' clinical management.[1,2] In

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their study on preferred methods of physician learning, Curry and Putnam discovered that reading was by far the favored choice, but that informal discussion with colleagues was also a significant choice.[1] In fact, they claim that informal discussions with peers and colleagues contributed highly to skills updating, ranking second only to reading. Campbell et al. found that there was some variation in perceived importance of consulting with peers based on the number of years in practice.[3] Physicians who had been in practice for more than 10 years and less than 20 used consultation with peers quite frequently. Those physicians with less than 10 years in practice or more than 20 tended not to use their colleagues as often. Lockyer et al. reported that discussions with colleagues were most frequently cited as the first impetus for change.[2] Geertsma et al. reported that although any one of a large number of sources may initiate change, physicians rarely change their practice without seeking information from journals or their colleagues.[4] Similar to Curry and Putnam, Geertsma et al. illustrated that medical journals, continuing education courses, and discussions with colleagues were most frequently cited as the first agent in considering change in practice.[1,4] Parboosingh et al., in a study of how physicians make changes in clinical practices, found that once physicians see a need for change, they then seek several sources of information to facilitate that change.[5] Critiquing the medical literature and seeking collegial opinion are crucial aspects in consolidating change. Davis et al. reviewed controlled trials associated with formal continuing education events and found interaction to be central to effectiveness in affecting change in practice.[6]

Research in focus group methodology points out that a major asset of individuals talking in a group is the serendipitous information that is created.[7] This is accounted for by the fact that most of us gain more clarity in the effort to express our thoughts than in just thinking them. Not only does interaction with colleagues seem to contribute to learning, but it is also perceived by physicians as very satisfying. Gardner and Pinsky found that 56% of speakers chose "interacting with CME attendees" when asked the question "What do you find most satisfying about participating in university-sponsored CME?"[8]

The fairly recent theory of learning described by Merriam, referred to as "situated cognition,"[9] also lends credence to the need for adult learners to be able to compare experiences and draw conclusions from the experiences of others. Traditional CME provides learning that is essentially hypothetical until it is applied. Locating learning in real-life experiences is a crucial element of adult education.

Brookfield discussed the role of critically reflective practice and proposed that colleagues serve as "critical mirrors" that reflect back to each other images of practice behavior that often form a stimulus for further inquiry.[10]

There is much discussion in the CME literature about aspects of change such as the difficulties involved in adoption of innovation and perplexity concerning the use or nonuse of clinical practice guidelines. Lockyer et al. pointed out that delays still occur frequently between the time in which new scientific information is disseminated and the time in which it is incorporated into clinical practice.[2] Geerstma et al., Parboosingh et al., and others have commented that the adoption of a new practice is the end result of a complex process whereby information is needed from a variety of sources, one of the most important being other colleagues.[4,5]

Brown and Duguid claimed that professionals develop in communities of practice wherein learning occurs by access to colleagues.[11] Through discussion, exchange of information, and comparison of practice, the knowledge base of the community is increased.

Dixon discussed three levels of learning: private, public, and collective.[12] Private meaning is that meaning each individual constructs but does not make accessible. Each physician makes sense of what is happening professionally through experiences with patients, by attending CME events, reading, and so forth. Each physician plans or

strategizes new actions according to this individual meaning that has been constructed. Over time, a great deal of knowledge is accumulated, and if this is not shared, the organization or profession does not learn. The more individuals share their private meaning, the more the profession and those within it are able to learn because it is in this interchange that misperceptions are clarified and new perspectives are created. In a way, what is being shown through all of the research being conducted on how physicians learn and change is what we learn by talking. As Brookfield described, participating in conversation with peers provides a practice mirror for physicians.[10] In talking through similar dilemmas and crises, learners are able to check, reframe, and broaden the conceptual frameworks on which their practice is based.

What emerges from the literature reviewed is the apparent need for two factors as physicians are learning: (1) the need for new and expert information and (2) the need to talk with others to assimilate and apply new information. Dixon referred to this as the need to create new knowledge or meaning out of what is already known.[12] Brookfield referred to this as "checking our readings of problems, responses, assumptions and justifications against readings offered by colleagues,"[10] which allows us to determine our own path of action.

Method

The literature review revealed information that confirmed the importance of interaction with colleagues as a valuable source for learning and as an impetus for change. We were not able to find any literature that specifically addressed the use of unstructured time (breaks) in CME events for the enhancement of learning. Physicians with whom we worked were able to say that they learned through unstructured time with their colleagues, but no research was available to delineate precisely what was learned or how. As the relevant variables exceeded what could have been captured by a quantitative approach, qualitative methodology based on grounded theory was employed. The only question that made any sense to begin the research was simply "Please tell us how you spend the time available to you on the breaks provided during structured CME events."

Two individual interviews were conducted with two physicians. Data from these interviews were analyzed, and the resulting themes were used to structure a focus group interview schedule. Two focus groups were held, and the results from these were used to develop a questionnaire. After piloting the questionnaire, it was revised and distributed again. The questionnaire demonstrated that there was consistency in the perception of the value of unstructured time during CME among a large group of physicians and those physicians who were part of the interviews and focus groups. The focus groups were held and the questionnaires delivered over a 9-month period of time. The CME courses used were those to which the researchers had access.

Focus Groups

Each of the two focus groups was conducted in the evening following a day-long CME event so that the participants' activities during their breaks could be easily recounted. The first focus group consisted of 7 participants (5 men and 2 women). The participants were primary care physicians who were attending a CME event on long-term care. Ten physicians from the 120 attendees were randomly chosen during a break and individually invited by the researcher to participate in the focus group. Seven of those invited chose to attend.

The second focus group, held 1 month later, consisted of 9 participants (6 women and 3 men). The participants were primary care physicians who were attending a large University of Toronto CME event. These 9 physicians were self-selected from a group of 250 following an invitation through a verbal announcement that asked for volunteers to meet over dinner to discuss unstructured time at CME.

The questions asked in the focus group included

- How do you typically spend your time during breaks in formal CME activities?
- How do these activities vary, if at all? On what does this depend?
- How would your experience of formal CME differ if there were no breaks provided?

The data from the focus groups were analyzed using open coding. Conceptual categories were determined through emergent themes. These categories were tested against the focus group results, and further and more refined categories were determined.

Questionnaire

A questionnaire was prepared using the themes that emerged in the focus groups and interviews. It was piloted with a group, analyzed, revised, and delivered to a second group of subjects. Questions on type of practice, number of years in practice, number of hours of CME, and gender were included. On a scale of 1 to 5, with 1 being not valuable and 5 being very valuable, respondents were asked to choose and rank 19 activities in which they participated during their break.

The survey was administered to a total of 120 physicians following the first break at two separate CME weekend seminars. The breaks strategically followed either a workshop or a didactic learning session (to provide insight as to whether the format of the CME affected the activities during the break). It took approximately 5 minutes to complete the survey. Eighty-seven questionnaires were returned completed (72.5%).

After analysis of the 87 responses, the questionnaire was modified to reduce redundancy in the questions. Some choices were too similar to allow for distinction between them, so one of the equivalent choices was removed. Questions on type of practice, number of years in practice, number of hours of CME, and gender remained the same. The 19 activity choices were reduced to 14. They included

- Networking
- Physical exercise
- Talking through new material to clarify
- Exchanging practice tips with peers
- Talking with pharmaceutical representatives
- Collecting patient materials at booths
- Discussing medical politics
- Asking questions of the speaker
- Making telephone calls
- Sharing opinions on CME event
- Sharing opinions on the speaker
- Asking peers what they do that is specific to certain medical practices raised by the presentation
- Socializing/catching up on personal lives
- Spending time alone
- Other

Finally, respondents were asked if their learning would be affected by the absence of breaks during CME events and to provide examples.

The revised questionnaire was administered to 155 physicians following the first break at three CME weekend seminars. These seminars did not involve any of the physicians who were involved in the first questionnaire. Once more, the breaks strategically followed either a workshop or a didactic learning session. Eighty-nine questionnaires were returned completed (57.4%).

Results

Since both focus groups drew their participants from similar CME events (approved for credit and receiving noncommercial support, day-long programs with a registration fee greater than $200 and more than 100 primary care physicians in attendance), the combined results are reported.

The themes that emerged from the individual and focus group interviews fell into three major categories: content activities, professional life

Table 1 Break Activities Grouped by Themes

Content Activities	Professional Life Activities	Other Activities
Asking the speaker questions	Collecting patient education materials	Making telephone calls
Asking peers what they do that is specific to certain medical practices that were raised by the presentation	Discussing medical politics	Physical exercise
Discussing new materials with peers to clarify understanding	Networking and making professional contacts	Socializing and catching up on personal lives
Exchanging practice tips with peers	Talking with pharmaceutical representatives	Spending time alone
		Sharing opinions on the CME event
		Sharing opinions on the CME speaker

activities, and other activities. The specific aspects of these categories are listed in Table 1.

Responses from the questionnaires showed few differences in how unstructured time is used between the format of CME (break following workshop or didactic learning session), gender, or type of practice of the physician. All themes identified in interviews were confirmed through the questionnaires as important activities during unstructured time. There were no areas ranked as unimportant.

When asked if their learning would be affected by the absence of breaks during CME events and to provide examples, 80 responded that it would be negatively affected, and 9 responded that it would not.

The comments following the above question fell into three main themes. Without breaks, participants stated that they would not be able to (1) concentrate, (2) ask their questions, and (3) network with peers. A few examples include the following: "Most importantly, a few moments are necessary to review/consolidate my thoughts before starting a new session," "Taking a break helps assimilate new material," "Breaks are an important part of the learning process to keep interest up," "Keeping up with colleagues and their practices is very crucial," and "I find it useful to discuss new information."

Discussion

As is common with qualitative data, the information yielded by this research is rich and complex. If each category is looked at separately, some interesting conclusions can be drawn about the perceived value of unstructured time. First, in the section labeled "content activities," two theoretical constructs emerge. One is the opportunity that additional time allows to clarify the material that has been presented, and the second is the comfort of asking questions without revealing ignorance to the entire group. The opportunity is also present to hear a variety of responses from peers before one's personal meaning from that discussion is established. Comments in this category illustrate the findings of Parboosingh et al.[5] The speaker presents the theory or knowledge, which may indicate a need for change in clinical practice for the participant. The break in formal activities allows for the opportunity to seek other sources of information to facilitate a change. Participants often ask each other "How do you handle this particular situation?" or "Is this some-

thing you have tried or are going to try in your own practice?" "Professional activities" relate to activities that are important to the profession as a collective. The category describes a forum for gathering information, and the activities seem to relate more to the profession as a whole than learning associated with specific practice problems. It is a time to make new connections, talk about the larger picture of medical politics, and catch up with other sources of information not available in the formal lecture or seminar. "Other activities" point to needs for socializing, revitalizing, and tending to personal needs and responsibilities.

Familiarity with colleagues may help determine which of the above categories may be the focus of conversation within a given group. This was a theme discussed in the focus group interviews that was not asked in the survey. Physicians reported that they tend to talk about different things in breaks based on how well they know each other. Medical politics and comments on the CME event were not threatening and were likely to occur in the polite zone of conversation. When there is greater familiarity within the conversation circle, more of the content and actual practice problems are discussed.

The real challenge of CME is to provide ways for physicians to resolve practice problems. Professional practice is constantly presenting practice problems out of which the professional must learn. To learn the way out of a problem, a physician must gather the information needed and create meaning for himself or herself. In other words, an expert speaker can provide information but not the relevance or practical steps necessary for making a change in practice. When new material is presented, the learner must make it personally problem based to make use of it.

The reason unstructured time is so important in the process of resolving practice problems is that it provides certain ingredients that are rarely present in a formal setting. These include ample time for discussion, equal and uninhibited participation, presentation of multiple perspectives on a given issue, lack of hierarchy, presentation of problems that are currently being experienced by learners, and creation of shared experience. The creation of new meaning is done in interaction. For effective learning to occur, new information must be integrated with existing information for any change in knowledge, skills, or practice to occur. Expert information may be perceived by learners as valid but not necessarily possible when applied to their own practice conditions. Interaction with peers is one way in which physicians are able to explore the implications of new information for their practice. The literature and this research would imply that interaction with others is perceived as a valuable learning aid.

To quote Brookfield once more,

> Talking to colleagues about what we do unravels the shroud of silence in which our practice is wrapped. As they describe their own experiences dealing with the same crises and dilemmas that we face, we are able to check, reframe, and broaden our own theories of practice. Talking to colleagues about problems we have in common and gaining their perspectives on these increases our chances of stumbling across an interpretation that fits what is happening in a particular situation.[10]

Strengths, Limitations, and Further Research

Three methods of data collection were used including interviews, focus groups, and questionnaires to obtain a breadth of qualitative data. Subjects were able to articulate for themselves how unstructured time enhances their learning. No concepts were imposed, and this speaks to the face validity of the study.

It is difficult to assess whether geographic location or specialization would make a difference regarding the responses of participants. The study was limited to family physicians practicing in Ontario.

Further research is recommended to learn more precisely how individuals influence each other and how the collective of medicine learns as an organization. Does a problem-based longitudinal

course facilitated by peers accomplish similar effects as the learning that occurs during unstructured time?

Implications for Practice

Formal CME events should provide participants with time and a means of interacting informally with one another for the purpose of discussing CME content, professional life, and other issues that influence learning. Unstructured time provides an environment that allows participants to share freely with less inhibition, comparing their own practice realities with those of their colleagues. This frees up information that is normally held privately and enables the profession to learn as a collective. Practice problems are thus addressed, and the likelihood of change in practice increases through such critical reflection.

Most CME events allow for at least a cursory break to accommodate physical comfort needs. Planners should be conscious of the need to create times in which participants can structure their own activities and thinking. The key is to provide opportunities for physicians to interact, sharing their own learning agendas with peers.

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