Evidence-based and Patient-centered Care: Results From an STFM Group Project

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Objectives: This study’s purpose was to identify the elements of a definition of evidence-based patient-centered care (EBPCC), the barriers to using EBPCC, and strategies for overcoming these barriers.

Methods: This research project used focus group methodology with participants drawn from Society of Teachers of Family Medicine (STFM) members who attend STFM meetings and are interested in the integration of evidence-based medicine and patient-centered care. Forty-five self-selected STFM members-participants attended one of five total focus groups between September 2004 and May 2005. Focus groups were audi-taped. Data were transcribed and analyzed using an immersion crystallization style.

Results: There was no single, consistent definition about what constitutes EBPCC. Several common themes arose, with the conceptual models of EBPCC varied across groups and individuals. The barriers to using EBPCC fell into eight categories. Participants listed substantially fewer solutions to barriers, which were not as easily categorized.

Conclusions: This research is a beginning exploration of what constitutes EBPCC. Our findings suggest that, in this sample of educators, there is no current single, shared definition or model of what constitutes EBPCC. While the variation in models may be representative of differing understandings, styles, and philosophies of EBPCC, identification of barriers is consistent. Strategies for overcoming barriers are not well developed.

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Two recent and vital trends in family medicine have been the adoption of evidence-based medicine (EBM) and the pursuit of patient-centered care (PCC). EBM has been defined as “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of patients.” PCC has been described by Stewart et al as the interweaving of six components: exploration of “both the disease and the illness experience, understanding the whole person, finding common ground, incorporating prevention and health promotion, enhancing the patient-doctor relationship, and being realistic.”

EBM and PCC are often discussed as if they were either separate entities or mutually exclusive approaches. However, there has been a growing movement toward an effective integration of both evidence-based and patient-centered approaches. Slawson and Shaughnessy argue for a “framework of information management, built on the needs of patients rather than the availability of evidence.”

Little has been published on how these approaches should interface to improve patient outcomes. STFM’s Group on Patient-centered Care and the Group on Evidence-based Medicine organized a joint meeting at the 37th Annual Spring Conference of the Society of Teachers of Family Medicine (STFM) in Toronto on May 15, 2004, to start a discussion of the concepts in to generate a collaborative model—evidence-based patient-centered care (EBPCC).

The groups decided to initiate a participative research study to identify the common elements defining EBPCC, the most important barriers to an EBPCC approach, and strategies for overcoming these barriers. The authors agreed to design the study, develop the research protocol, analyze the results, and prepare a summary report for the groups. Interest group members would be responsible for data collection. IRB approval (IRB #226-04-EX) was obtained from the authors’ institution.
Methods

This project used focus group methodology. The specific goals of the project were to (1) define EBPCC, (2) describe what barriers exist to an EBPCC approach and (3) identify strategies members use to overcome these barriers.

Focus group participants were self-selected members of the STFM interest groups. The listserves of the two STFM interest groups were used to e-mail an invitation, discussion guide, participant rights, and confidentiality statement to all members of the two interest groups in the summer of 2004. In addition, members from the larger organization (STFM) were invited to participate in the focus groups occurring at a STFM preconference session. Participants (n=45) were organized into a total of five groups, three small and two large.

Small Groups

The three small groups occurred prior to the two larger groups and were composed of two or three participants each (n=7). Each small group held an audiotaped conversation on the topic, using the discussion guide, with colleagues at their home institutions. They then sent the tapes to the researchers, resulting in three usable transcripts.

Large Groups

The two large groups (n=38) were conducted at the STFM Annual Spring Conference held in New Orleans in May of 2005. Leaders of the two STFM groups requesting the analysis included a 1-hour focus group as part of a preconference session. The organizers divided the participants into two mixed interest focus groups. Leaders of each focus group recruited a participant to take notes. These notes, along with the audiotapes, were provided to the research team. Each group had approximately 18–20 participants. It is possible that any of the seven individuals participating in the previous small focus groups also chose to participate in one of the two larger groups, but no records were kept to identify such individuals. From these two focus groups, we obtained one usable transcript with notes and one partial transcript with notes.

Analysis Methods

Interest group members organized the focus groups and audiotaped the ensuing discussions. Participants were asked to make a statement affirming receipt of the participant’s rights statement. A demographics questionnaire was developed by the authors and sent to the interest group organizers as part of their focus group packets. The decision was made by the organizers not to gather this demographic data. Group facilitators mailed the audiotapes of their focus groups to the research team at the University of Nebraska. Each tape was then transcribed for use by the analysis team.

Data were analyzed by a multidisciplinary team consisting of a medical sociologist, a family physician, and two graduate students (one in counseling and one in public administration). Analysis was conducted using an immersion crystallization method. First, members of the team individually read transcripts of the focus groups and marked passages denoting definitions, frustrations, benefits, and strategies. The group then discussed the results of the individual analyses and identified the emerging themes and concepts around the three central issues. These discussions were audiotaped and transcribed to provide analysis notes. Once the themes were identified and crystallized, we presented our initial analysis to the Group on Patient-centered Care and the Group on Evidence-based Medicine at a discussion session at the 2006 STFM Annual Spring Conference (see Results section) to verify themes with the participants.

Results

No demographic data were available because of the participants’ decision not to gather this information. However, some limited information is available about the membership of interests groups and STFM in general. The Group on Evidence-based Medicine has approximately 308 members and is predominantly male (71%). The Group on Patient-centered Care has 223 members and is equally divided as to gender.

No single, consistent definition emerged about what constitutes EBPCC. Several common themes arose resulting in four conceptual models of EBPCC (Either/Or, Integrated, Continuum, or Cycle). The barriers discussion was independent of the conceptual models and fell into eight categories. The solutions were neither as numerous nor as easily categorized. Each category is discussed below.

Conceptual Models

Either/Or Versus Integrated. In the either/or model of evidence-based and patient-centered care, each approach was distinct from the other (Figure 1). Group members conceptualized overlapping spheres, creating a band of practice in which the practitioner applies concepts from both spheres. Participants frequently described the intersection of the spheres as where integration occurred (Figure 1). This integration was also described, in part, as Sackett’s Venn diagram.

Participants pointed out that the original conceptualization of EBM was not exclusive of patient preferences, as the editorial by Haynes et al clearly indicates. In some participants’ views, the overlapping of evidence, patient preferences, and clinical judgment in Sackett’s Venn diagram is the point at which EBPPCC occurs. For others, however, patient preferences are not broad enough to encompass all the elements of PCC.
Continuum (or Balance). Many descriptions of EBPCCC portrayed a continuum or balance (Figure 1). When viewed as a continuum, EBPCCC ranged from purely evidence-based to purely patient centered. When viewed as a balance, this model suggests a point at which a clinician incorporates both patient centeredness and evidence-based medicine and that the best practice involved balancing the two. As one participant put it, “Somewhere in the middle is where good care occurs. I’m not sure that there’s a real dichotomy between the two. I mean, part of what makes good practice is balancing and weighing the population risk with the individual’s value of those risks.”

While closely related, the descriptions indicated that the continuum and balance metaphors were not necessarily alternative ways of expressing the same conceptualization. One participant expressed this ambiguity this way: “We have to figure out whether [this is] two ends of a continuum or this is a precarious balance.”

Those who viewed EBM and PCC as a continuum suggested that practicing either extreme would be unbalanced. One participant explained, “I have in mind a picture...a doctor with prescription pad...since prescriptions are often how we end encounters. In a patient-centered approach, the doctor has pen poised over the paper, saying, “What would you like me to give you?” And in the evidence-based medicine approach, the doctor writes the prescription and hands it to the patient without knowing whether the patient is even going to go get that prescription filled.”

Cyclical. One participant said about the components’ relationship: “Depending on the interaction behind the patient, one may bounce back and forth, or if you’re talking about two ends of a continuum into which you’re willing to go back and forth.”

He clarified, “Think of it as a circle,” although we would characterize this model as a cycle (Figure 1). In this model, EBPCCC is a process that moves from patient-centered care through evidence-based care and then back to patient-centered care. While the original presentation was as a single cycle, the comments of the larger groups were more consistent with an iterative model.

The cyclical model differs in that it does not focus as much on integration as using both methods, alternating between EBM and PCC tasks and is inherently more dynamic. It describes a process of active movement between the two modes of operating.

Barriers to Practicing EBPCCC

The discussion of barriers was independent of the discussion of conceptual models. Barriers fell into several themes: system-related factors, complexity issues, relational challenges, ineffective communication, common ground issues, factors pertaining to roles, evidence issues, multiple morbidities and population versus individual risk assessment challenges (Table 1.) The principal barriers appear to be related to time restraints, relational challenges, and finding common ground.

Strategies to Overcome Barriers

Participants did not have well-developed strategies to overcome the barriers. Discussions of the solutions to barriers were neither as numerous, as easily categorized, or as detailed as the discussion of the barriers themselves. The participants discussed the need to continually improve patient outcomes and described EBPCCC as a journey: “I’m striving toward EBPCCC. I’ll never actually reach it, but I feel that I’m along the pathway to improve outcomes for my patients using the best available resources.” Two prominent “markers” on this journey were the development of strong and trusting relationships with patients and the pursuit of open and honest means of communication.

Participants highlighted the empirical need to start with the patient and the relationship and then to add the evidence into the existing context. “Know the patient well enough and know the evidence well enough and make the connection—put the two together.” They encouraged longitudinal relationships with a focus on continuity of care. “I think the continuity of care relationship gives you a chance to test out the efficacies of a particular treatment in a particular person.”
Communication strategies included consulting with the patient, listening to the patient’s agenda, negotiating treatment options, and providing alternatives in the light of existing evidence. “It’s a dialogue—the patient’s agenda may not be what the MD assumes.”

Participants stressed recognition of the differences between population and individual risk assessments as a potential solution to some of the evidence issues. In particular, they mentioned the need to weigh the potential harm versus benefit for each individual. They also discussed the importance of applying evidence within the context of the particular patient and the complexity of multiple disease processes. “Good practice is balancing and weighing the population risk with the individual’s value of those risks . . .”

Another suggested strategy was improving patient education through availability and accessibility of information (such as through handouts, Web sites etc). Some mention was also made of group visits and schedule restructuring, yet these concepts were not discussed in greater detail. Participants also referred to a need to teach physician learners about appraising and using evidence.

**Member Check**

The session at the 2006 STFM Annual Spring Conference promoted a lively discussion of the results and the basic definitions of both EBM and PCC. Attending members agreed that the models adequately represented various ways of describing EBPC and PCC but could not say that any one model fit better than another. Notably, responses included a position statement that the EBM model encompassed patient-centered care principles and a statement that patient-centered care included EBM principles. Specifically, some of those with primarily an EBM perspective argued that EBM’s patient preference represents PCC. Several individuals pointed out, however, that PCC is more than simply patient preferences. From the PCC perspective, the diagram by Stewart et al encompasses the principles of EBM.2

Members felt that one reason there was no clear definition or single model of EBPC was because most

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**Table 1**

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<thead>
<tr>
<th>Listed Barriers</th>
<th>Clarifying Comments/Quotes</th>
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<tbody>
<tr>
<td>1. System-related factors:</td>
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<tr>
<td>a. Time</td>
<td>“It takes more time to do both than to do one or the other.”</td>
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<td>b. Money</td>
<td></td>
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<td>2. Complexity:</td>
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<tr>
<td>a. Language and cultural differences</td>
<td>“Sometimes it’s difficult in a cultural sense where a family has a great influence on your patient . . . but their grandmothers have taped [a quarter to their belly]. So I tell them it’s going to get better. You can fight with your grandmother, or leave it, because it’s going to get better . . . So, here you may have evidence, but you have such cultural strength with other people that make a difference in their lives. I’m not going to change that, so as long as it does no harm, I will go along with that.” Cultural beliefs can be supported when not in opposition to patient-centered care. However, if family members are codependent on the patient’s illness or supportive of unhealthy practices, evidence-based medicine or another model should dominate.</td>
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<tr>
<td>b. Multiple agendas (physician/patient)</td>
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<td>c. Ethical principles</td>
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<td>d. Multiplicity of barriers and prioritization of care</td>
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<td>3. Relational challenges</td>
<td>“. . . they [patients] want someone who knows them.”</td>
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<td>a. New/unfamiliar patients</td>
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<td>b. Mismatch of perspective and explanations</td>
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<td>c. Difficult-to-establish relationships with challenging patients</td>
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<td>4. Ineffective communication</td>
<td>Patients who are illiterate or medically illiterate</td>
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<td></td>
<td>Auditory versus visual learners</td>
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<td>5. Finding common ground</td>
<td>“My worst experiences are when what the patient wants is very different from what the evidence suggests we ought to do.” Rejection of care plan or lack of adherence to mutually agreed upon plan.</td>
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<td>6. Lack of role assumption</td>
<td>Lack of patient engagement or willingness to participate in care decisions. Failure of physician to assume the role of consultant.</td>
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<td>7. Accessing appropriate evidence in a timely fashion/uncertainty in evidence</td>
<td>“Neither the physicians nor the patients wanted to face the extent of uncertainty that we have in evidence-based medicine.”</td>
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<td>8. Multiple morbidities</td>
<td>Patients who have multiple comorbidities present greater challenges.</td>
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<td>9. Population risk versus individual risk</td>
<td>Translating the risk from population to individual was deemed complex and potentially paradoxical: Will the patient benefit from an intervention or a test?</td>
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individuals did not have a clear understanding of what defined either EBM or PCC, thereby leading to an inability to define what constitutes a combined model. They suggested that a future session be held to review the most recent definitions of EBM and PCC before allowing workshop participants to use those formal definitions to identify the components that constituted EBPCC.

During the member check, we became aware that individuals were discussing integration on the basis of the theoretical relationship between EBM and PCC: exclusion and inclusion. The first position views the models as mutually exclusive; the second position sees the models as intrinsically integrated. Among those adopting the first position, an individual currently operates under either an EBM or a PCC perspective but not both. From this perspective, while the models may be compatible, neither model fully encompasses the precepts of the other. Among those adopting the second position, the precepts of one model are encompassed by the other. It is our observation that those who view the models as mutually exclusive compose a greater number of the participants in this project.

Discussion
This research was an exploration of what constitutes care that is both evidence-based and patient centered. It is obvious that there is not consistent operational definition of either the EBM or PCC philosophy of care. While both EBM and PCC are defined within the extant literature, our member check highlighted the diversity of how those definitions are perceived, leading to important questions about the practice of any particular model. Both EBM and PCC are models that have been in existence for some time, yet the discussion in the member check indicated substantial variation in how clinicians defined the elements of each model. Further, although it was thought that both Sackett’s Venn Diagram of EBM and the Stewart et al model of PCC encompassed the principles of the other model, this concept was not accepted by all members of the groups.

In reviewing the definitions of EBM in the literature, we realized that the difference of opinion over inclusion of elements of the other model may be the result of variations in emphasis within the literature itself. For instance, while Straus and Sackett and Sackett’s Venn Diagram contain values/preferences, other articles on how to practice EBM neglect to include any way to ascertain and allow for patient preferences.

Hegel’s dialectical tension may lead to confusion about what is included in a particular approach. The art of healing is the original thesis against which scientific medicine (McWhinney’s ontological approach) became the antithesis, resulting in what Weston and Brown refer to as the conventional medical model. EBM and PCC then became antitheses to the conventional medical model. The confusion over whether EBM encompasses PCC or PCC encompasses EBM may well arise from whether an individual conceptualizes EBM and PCC as antitheses to the same thesis. If EBM and PCC are inclusive, they become antithesis to the synthesis between the art of healing and the conventional medical model. If EBM and PCC are mutually exclusive, one may be antithetical to the other. Under either condition, the synthesis of EBM and PCC is the logical outcome. This project demonstrates the value in bringing together the practitioners of EBM and PCC to start the discussion that will eventually lead to the synthesis and improved patient care.

Limitations
Because this was a participatory research project, these results are from a self-selected community of STFM members who attended meetings and are interested in the integration of EBM and PCC. The lack of demographic data on the focus group participants makes it impossible to determine to what extent our focus group results represent the views of the larger interest groups or STFM. However, participation in the member check session was open to the membership and provided opportunity for disagreement and additional views. We don’t believe this is a serious shortcoming. Participatory research studies have a different purpose than do those that attempt to determine the prevalence of attitudes or conditions.

There may not be a single correct model for EBPCC. The variation in models may represent differing understandings, styles, and philosophies of EBPCC. The conceptualizations themselves may need refinement. During our discussions, we became aware that redrawing and relabeling the patient portion of the conceptual model of EBM might make it more acceptable as an integrated model of EBPCC.

This particular project also has limitations regarding saturation (which is the point at which there are no new themes identified in each succeeding case). There may be other themes and models that might have been uncovered had we been able to collect data from other focus groups.

Conclusions
We believe that the results of this project imply that there is room for an integrated model of EBPCC that will be acceptable to practitioners of both EBM and PCC. For some, it may simply mean being clearer about how the existing models encompass each other. For others, it may mean working to integrate the precepts of both philosophies. This project opens the door for future discussions and studies on an emerging philosophy of care that is both evidence-based and patient-centered. As physicians attempt to perform EBPCC, it may be
useful for them to consider what model they are seeking to implement and to analyze their own philosophy of what constitutes EBPPCC.

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References