

A qualitative study of evidence in primary care: what the practitioners are saying

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Abstract

Background: Little is known about the impact of evidence-based medicine in primary care. Our objective was to explore the influence of evidence on day-to-day family practice, with specific reference to cardiovascular disease.

Methods: A total of 9 focus groups were conducted in rural, semi-urban and urban settings in Nova Scotia. The participants were 50 family physicians who had practised in their communities for more than 1 year and who were treating patients with cardiovascular disease.

Findings: Two major themes emerged: evidence in the clinical encounter and the culture of evidence. The family physicians reported thinking about evidence during the clinical encounter but still situated that evidence within the specific context of their patients and their communities. They appreciated evidence that had been appraised, summarized and published as a guideline by an independent national organization. Evidence remained in the forefront of consciousness for a limited time frame. Local specialists, trusted because of their previous successes with shared patient care, were important sources and interpreters of evidence.

Interpretation: Day-to-day family practice offers both obstacles and opportunities for the application of evidence. Although evidence is an important part of clinical practice, it is not absolute and is considered along with many other factors.

The term “evidence-based medicine” entered the lexicon in 1992.¹ Proposed by a group of academic physicians as a new way of teaching the practice of medicine, it was based on their belief that a paradigm shift was occurring, from “intuition, unsystematic clinical experience and pathophysiological rationale” to an emphasis on “evidence from clinical research.”¹ Nearly 10 years later, it is time to explore the role of evidence in the daily practice of primary care and to reflect on that paradigm shift. This paper reports family physicians’ views on the application of evidence in caring for patients with cardiovascular disease in the context of community practice.

Although much has been written about the development, implementation and evaluation of practice guidelines, little has been published that focuses on evidence itself. A literature search of MEDLINE, CINAHL (Cumulative Index to Nursing and Allied Health Literature) and Sociological Abstracts for the period 1992 to 2001 with the terms “evidence-based medicine,” “EBM” or “evidence” and “family practice” (or synonyms of these terms) yielded predominantly prescriptive articles, opinion pieces and editorials such as a series in *The Lancet*.²⁻⁵ Given the short time frame since the publication of the original article in the *Journal of the American Medical Association*,¹ perhaps it is not surprising that research papers pertaining to the adoption and application of evidence-based medicine in primary care settings are just now appearing, most of them describing the UK and Australian experience. Several studies have reported that family physicians and general practitioners have a positive attitude toward evidence-based medicine⁶⁻⁸ and a belief that it improves patient care.⁶ General practitioners interviewed individually reported that they lacked the time and the skills to appraise scientific papers, and instead put their trust in journals “that were seen to have integrity.”⁹ They considered hospital consultants, both local and of national stature, to be credible sources of evidence.⁹

Research

Recherche

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We sought to gain additional insight, in the Canadian setting, into family physicians' current perspective on evidence and its influence on their daily practice, as part of a larger study exploring cardiovascular recommendations.

Methods

This study was approved by the Research Ethics Committee of the Queen Elizabeth II Health Sciences Centre in Halifax.

Nine focus groups were conducted throughout Nova Scotia, 3 each in rural (population less than 10 000), semi-urban (town; 10 000 to 50 000) and urban (more than 50 000) settings. Family physicians were eligible to participate if they had practised in their community for more than 1 year and were confident that they had sufficient patients with cardiovascular disease to allow them to discuss the topic thoughtfully. We used criterion sampling¹⁰ to ensure an appropriate mix of men and women and of those in earlier and later stages of their careers. Of the 76 eligible physicians approached, 50 (66%) participated in the focus groups (Table 1). Eight groups ranged in size from 4 to 9 participants; in one instance, because of the small pool in that rural locale, the interview was conducted with just 2 participants (Table 1). Participants were paid an honorarium consistent with the Medical Society of Nova Scotia fee schedule.

Table 1: Recruitment of Nova Scotia physicians for 9 focus groups on use of evidence-based medicine in primary care

Location	No. invited	No. eligible*	No. (and % of eligible) who attended
Rural			
1	7	4	4 (100)
2	4	4	2 (50)
3	8	4	4 (100)
Total	19	12	10 (83)
Semi-urban (towns)			
1	22	12	8 (66)
2	19	11	8 (73)
3	14	10	6 (60)
Total	55	33	22 (66)
Urban			
1 and 2†	26	23	14 (61)
3	25	8	4 (50)
Total	51	31	18 (58)
Overall total	125	76	50 (66)

*Reasons for ineligibility: physician no longer living in the area; physician living and practising in the area for less than 1 year; unable to contact physician; scheduling conflict or physician ill or out of town at the time of the focus group; ischemic heart disease a small part of physician's practice; and physician on call.

†These 2 groups were conducted in the same urban setting. Physicians were recruited for either group, and attendance was 6 and 8 respectively.

We convened the groups to discuss specific recommendations published in a cardiovascular consensus statement that were relevant to primary care.¹¹ Initially, to place the specific recommendations in a broader context, participants were asked to discuss the use of evidence in their day-to-day practice (Box 1). This "discussion starter"¹² yielded particularly rich findings, which are presented here. Eight of the sessions lasted approximately 2 hours, and the 2-person session was 1 hour long.

Each session was facilitated by a physician investigator (W.P.) and comoderated by another team member. The researchers who

were present debriefed and reviewed field notes after each session. Audio-tapes were transcribed within 48 hours and reviewed by the researchers as soon as available, to clarify any muffles or add other contextual information felt to be important for later analysis and interpretation. This mode of dealing with the transcripts enabled the researchers to reflect on each session before conducting the next one and permitted newly identified or rich topics to be probed in subsequent focus groups.

Each transcript was read independently by members of the research team, who identified key passages for further consideration. Two of the team members (W.P. and P.L.T.) then compared and contrasted their emerging ideas and developed larger conceptual categories. The other researchers (F.I.B., L.A.J. and J.L.C.) critiqued and confirmed these preliminary categories. Disagreements were resolved through team discussion. We also actively searched for disconfirming examples. Numerous categories were created and revised to accommodate the data adequately. The agreed-upon categories became the basis of a coding structure within QSR NUD*IST, software designed to facilitate textual analysis.¹³ All of the transcripts were coded by one team member (P.T.), who sorted preliminary categories into larger themes, which were then checked by other team members for accuracy and to ensure that the spectrum of experience was represented.

Our analysis was guided by grounded theory methodology.¹⁴⁻¹⁷ This approach is excellent for examining complex social realities, such as the application of evidence in family practice. Specifically, this approach helped to reveal the varied and interesting ways in which family physicians in our study thought about evidence-based medicine. Two major themes, each divided into 3 sub-themes, emerged from the data.

Findings

Evidence in the clinical encounter

The theme of evidence in the clinical encounter had 3 subthemes.

The first of these was *evidence-mindedness* (Box 2A). Participants told us in a variety of ways that they think about evidence during the clinical encounter much more now than even a few years ago. Some considered evidence helpful for clinical decision-making and for explaining treatment options to patients. Evidence was described as replacing a "belief system" based on some combination of what

Box 1: Discussion

We would like to get a general sense of how evidence fits into everyday practice, how you consider evidence when you are treating patients in your office. Before we put the first specific recommendation up on the screen, let's talk for 5 or 10 minutes about how you think, in general, about evidence in managing cardiovascular patients in your office each day.

was taught in medical school and learned later through experience, from colleagues and through continuing medical education.

The second subtheme was *presenting evidence to patients* (Box 2B). Although some participants declared that they never quoted specific studies to patients, changes in management or in medication and explanations of treatment options were generally cited as opportunities for the discussion of evidence. The use of evidence varied from broad, general statements (“From what we know, this is best for you”) to specific references to the characteristics of study participants (i.e., whether a participant’s individual patients were similar to those in studies). Although participants reported that some patients had little interest in hearing about evidence, they found that it could be used to reorient a patient’s decision regarding medication choice or lifestyle modification or to foster compliance. Other patients brought information obtained from outside sources, such as the Internet, to the clinical encounter and engaged in vigorous discussions about appropriate treatments. One participant described this process as “duelling sheets of paper,” another as “mental sparring.”

Other factors influenced discussions of evidence, including the ability of patients to understand research information, the magnitude of the benefit or harm of the suggested change, the existence of comorbidities that might influence the decision, the life circumstances of the patient and, finally, past experiences between the patient and the physician.

The third subtheme was the *changing nature of evidence* (Box 2C). Such changes, particularly new evidence leading to changes in treatment or management, prompted a range of responses among participants. Changing management goals, the introduction of new medications or the publication of new clinical practice guidelines could create confusion or uncertainty for some patients, but they also presented physicians with opportunities for discussion. The consensus was that such changes must be dealt with sensitively for a subset of patients including, but

not limited to, patients who prefer alternative remedies and those lacking financial resources or drug plans.

One participant recounted that when he was in training, β -blockers were contraindicated for patients with heart fail-

Box 2: Evidence in the clinical encounter

A. Evidence-mindedness

- Certainly, when I see patients come in, I never used to think about [whether there is] evidence that this works. I had a set of beliefs. (Town 2)
- Well, for one thing, I’m thinking a lot more about evidence these days than I did 2 years ago, 5 years ago. ... And I think that that is largely due to the focus that we’re now seeing ... with the emphasis on trying to define ... how good these studies are and what the evidence really means. ... I’ve become a lot more conscious of it when I see patients in the office. (Town 2)

B. Presenting evidence to patients

- [W]hen I’m trying to convince them to use an agent, I’m saying, ... “You know, there’s a study that suggests that, a good study that shows that ...” (Town 2)
- I frequently cite studies. I may even give a bit of the study demographic ... if I am trying to use it to make a point to a patient. (City 3)
- Sometimes it depends on where the patient’s going. If they’re going in a direction I don’t necessarily want them to go, I feel that they have some problem or they’re not seeing it or something, I can say, ... “Here’s [a trial] or here’s some evidence that shows that you don’t need to do that. ...” (City 1)
- It’s not just my opinion ... and it’s not just my experience, however wonderful that may be. ... I think that sometimes you have to kind of get down and dirty with evidence, because it really is the only ace in the hole that we have. (Town 2)
- Well, the kind of patients I deal with ... I have a lot of country people in my practice and a fair number of geriatrics ... [and] a lot of them don’t seem to want the evidence. (Town 3)
- And my job is to tell [patients] what I think they should do and why I think they should do it. And then they have to choose whether they’re going to do that or not. I tell them ... “It’s recommended that you take this ... and if you want to know the numbers I can go over them for you.” Most of them don’t want to know exactly what the numbers are. But they have to decide whether they want to take the drug or not. If they can’t afford it or it makes them not sleep well at night or [gives them] aches and pains or whatever, you can work with that, but if they’re not interested in taking it, they make the choice. (City 1)
- I don’t quote studies to patients. (City 1)

C. The changing nature of evidence

- And the evidence is always changing, too, so a lot of patients say, “Well look, if I start on this medication this year, 3 years from now there’s going to be something different out ... so maybe I’m better off not even trying [the new] medication and see what happens.” (Town 2)
- And I just tell them, “I’m sorry, the rules have changed. ... We expect your blood sugar now to be between 4 and 7. And we expect your cholesterol to be down, you know. And ... these are new rules, I’m not setting them.” (Rural 3)
- You have to be able to say, “We were doing the best we could at the time. And this is better.” (Town 2)
- Well, if they’ve been on [a medication] for a long time and were put on [it] by someone that they trusted in the first place, it may be difficult to make them understand why they should stop. (Town 1)

ure, whereas they are now recommended therapy. In the case of changing guidelines on lipid levels and changing indications for angiotensin-converting enzyme inhibitors, a particular problem is that the change proposed may apply to “asymptomatic” patients. In this situation the doctor must use “new” evidence to convince the patient to change approaches based on “old” evidence, for a patient who is experiencing no symptoms of illness that would seem to warrant such change.

The supporting culture of evidence

The second theme emerging from the focus groups, the supporting culture of evidence, also comprised 3 subthemes.

The first subtheme was *prior appraisal and interpretation* (Box 3A). Participants reported that they had limited time to read and review individual articles. Therefore, they valued evidence when it was part of a practice guideline produced or endorsed by an independent professional association, especially if the recommendations demonstrated an understanding of the context of primary care. There was wide variation in participants’ perception of their own critical appraisal skills, from having almost no understanding to clearly demonstrating their ability to interpret study results and consider applicability to individual patients.

The cumulative nature of evidence (Box 3B) was the second subtheme. Participants commented that it typically takes more than one study to change behaviour related to vital issues such as cardiovascular diseases, even though most studies are not remembered individually or by name. Small studies become “meshed” together in the minds of physicians, and once this occurs, changes in behaviour may result. There are important exceptions, such as “4S” (the Scandinavian Simvastatin Survival Study)¹⁸ and the HOPE (Heart Outcomes Prevention Evaluation) study,¹⁹ which on their own can affect practice if they address important patient outcomes, such as death. The physicians remember these studies by name and cite them to patients, noting what the evidence means to that particular person’s care.

Whether the evidence is cumulative or obtained from a single, high-impact study, the dominant view of focus group participants was that particular issues remain in the forefront of consciousness for a limited time frame. The physicians think of the evidence each time an appropriate patient is seen, for up to approximately 6 months. After that, it is applied when relevant for patients who develop the clinical condition, but by then the evidence has become a “habit” or engrained as “orthodoxy,” its origins less clear.

The third subtheme was *relationships with specialists* (Box 3C). Participants valued trusted local specialists as both sources of new evidence and interpreters of that evidence. Family physicians in our study represented a variety of perspectives in relation to specialists, from taking a relatively passive approach (“mimicking” specialists) to having a more active stance vis-à-vis specialists’ advice.

Interpretation

We believe that our findings are relevant to both producers of evidence and practising clinicians. In addition to studies demonstrating that particular evidence is incorporated into practice,²⁰ our study offers a macro-level perspective on the place of evidence-based medicine in family practice. To our knowledge, these are the first research data to indicate that Canadian primary care physicians are incorporating evidence-based medicine into their daily encounters with patients, even if they are not fully embracing it. Examining both the obstacles and the opportunities for the application of evidence provides important clues to providers of evidence-based information of interest to primary care.

Greater involvement of family physicians in guideline development would help to ensure that sufficient details are provided to make the guidelines of optimal value to family practice. Our participants expressed concern about differences between their patients and trial populations. Therefore, authors of guidelines or consensus statements need to give clinicians enough detail to permit the interpretation and application of trial evidence to the individual patient. Even secondary journals, which screen the primary literature and provide summaries of important articles, “often” omit important information about study design, methods and results.²¹

These family physicians identified a range of opportunities for using evidence in patient encounters, including cardiac events, such as myocardial infarction, or changes in medications. Particular tools, such as cardiovascular risk tables or evidence-based decision aids, may be effective for demonstrating the applicability of research findings to individual patients. Also, patients have unprecedented access to health information (e.g., through the Internet). Although their use of such resources may be burdensome or even threatening to family physicians, it offers a unique opportunity for discussions of evidence and its reliability. Bookmarking sites that have been reviewed and deemed credible, to serve as “quick-response” sources, is one helpful strategy.²²

These family physicians recognized that specialists promulgate and interpret evidence, and are particularly attentive to whether evidence is relevant to their practice population. At the same time, evidence-based medicine might empower family physicians to make alternative choices for their own patients by giving them the skills to discuss or challenge specialists’ decisions. A spectrum exists among family physicians, ranging from uncritical reliance on specialists’ advice to rejection of that advice on the basis of their own interpretation of the evidence. Individual physicians may also take different approaches in different situations.

Our findings raise several questions. Do all clinicians require critical appraisal skills or is a system for peer appraisal at both the national and local levels a more promising model for fostering the application of evidence? What is the most effective way to convey difficult risk-benefit

statistics to patients so that they can make well-informed decisions about their own treatment? Finally, do patients find the discussion of evidence helpful, meaningful and empowering, or do they find such discussions esoteric and obfuscating?

This inquiry was limited to evidence pertaining to cardiovascular disease, which is both plentiful and strong, and hence our findings may not be applicable to other clinical problems. Another limitation is that our study focused on clinical encounters with patients; we did not fully pursue

Box 3: The supporting culture of evidence

A. Prior appraisal and interpretation

- I use things like guidelines ... which are put out by a national body, whether it be [the Canadian Medical Association or the Medical Society of Nova Scotia] ... and I use them a lot and I show them to the patients [to explain] why I choose to treat or choose not to treat, based on a particular number in association with their age, their sex, other risk factors and comorbidities. So that I find very helpful. (Town 2)
- I'm not sure I'd want to hear [the latest evidence] from the cardiologists. I'd rather hear it from the academic family physicians who have time to review all the evidence and stuff. Because cardiologists have their particular bias and they're not seeing the same population that I'm seeing. (City 3)

B. The cumulative nature of evidence

- I don't think that I would go out and change my pattern of practice on the basis of [one] study. So I think that most of us, when we're talking about looking at study evidence, it's often a combination of studies, and at least I've had help, maybe from my consultant or maybe from a [continuing medical education] program, in terms of even distilling that into a specific recommendation. Because I, certainly on the basis of one study that I read ... I don't think that I would necessarily change my pattern of practice with regard to ischemic heart disease. ... You know, with regard to the treatment of toe fungus [laughter], you know, maybe I'd be prepared to go out on a limb a little bit, but I think I need more than a [single] study as evidence strong enough to change what I'm doing now [for ischemic heart disease]. (Town 3)
- But when you read several studies or several areas that show definite benefit of a certain treatment, then that's what you use. (Town 1)
- You're looking for something that's really big and important that's going to change your basic gut feeling, and if you don't have that, you tend to kind of mesh about these studies in the background of your mind and come out with your own [ideas]. ... By and large, I think we tend to mesh a lot of these guidelines together and come out with something that's hopefully close to what we should be doing. (Town 1)
- HOPE [Heart Outcomes Prevention Evaluation study] is hot, I don't know for how long, maybe another 6 months. (City 2)
- After a while, it becomes ... second nature, you don't actually consciously think about the study ... but the decision-making process is there. ... [It becomes] habit forming I think more than anything else. ... Somebody comes in with ischemic heart disease, I start looking for their cholesterol, their blood pressure, their sugar readings. But I don't actually think, "Oh well, I have to do this because 4S [Scandinavian Simvastatin Survival Study] told me that if I lower their cholesterol then I'll decrease their mortality." ... I just do it. [City 2]
- [After the] 4S study, everybody who came in, you would think about cholesterol with them, document your decision one way or the other, document that you talked about it. And now, if [it is] not a new patient, you sort of make the assumption — well, I have talked about this already, I've documented this already. And you know the blush goes off the rose — you kind of assume it has been done. Right now it's ACE inhibitors because of the HOPE trial. ... A year from now it will be something else. (Rural 2)

Relationships with specialists

- [Local specialists] give us an excellent service and I confess I tend to mimic [them and] pick up a lot of things from them. (Rural 2)
- I respect [the specialist's] knowledge and he's always done well by my patients, always had good experiences with him. I certainly won't say, "Well, what study, what evidence-based medicine do you base this recommendation on?" (City 1)
- I didn't think it was an appropriate change for [the patient] — if [the consultant] was changing the medication simply because of the HOPE study, I mean, the patient didn't fit the HOPE study ... it's a consultant, it's my patient [laughter] and there [the patient] goes back to the drug that he has trusted and he knows and he has done well on for the last 7 years and so that's what he's staying on. (City 2)

whether family physicians considered the role of evidence in framing consultants' decisions and advice. Further inquiry is needed in different contexts and for different clinical conditions to develop the ideas generated by this study.

Decisions about the application of evidence in primary care settings are highly complex, shaped by such diverse factors as patients' understanding of and interest in their own health, comorbidities, individual physicians' use and understanding of current evidence, and the changing nature of evidence itself. This conclusion supports the balance emphasized by the Evidence-Based Medicine Working Group itself.²³ A key point is that not only is the evidence that might be used in the family practice setting complex, but it may be contested by patients who have different goals or who wish to pursue different paths in their health care. Our findings suggest that any debate about the completion of the paradigm shift toward reliance on evidence needs to account for the realities of primary care and for particular clinical content.

Competing interests: None declared.

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