

“If My Mother Was Alive I’d Probably Have Called Her.”

Women’s Search for Health Information in Rural Canada

Women living in a rural Canadian county were interviewed about how they locate health information. The experiences they described raise interesting questions about the efficacy of government sponsored e-health initiatives, particularly when such programs are intended to compensate individuals who live in remote communities for lack of access to health care services. Most of the women in the study undertake considerable health-related information gate-keeping for themselves and on behalf of family members and others in their personal networks. They seek and assess information from a wide variety of sources, some of which they locate via the Internet, and they balance what they learn against their experiences with the formal health system. The women’s accounts focused repeatedly on the quality of their relationship with those to whom they turn for assistance, although the actual roles of helpers, whether physicians, friends, librarians, or staff in health food stores, often appeared to be incidental. Instead, helpers’ perceived effectiveness seemed to depend largely on how well they express care when information is exchanged. Several women also reported that they had diagnosed and even treated themselves, sometimes on the basis of information gathered from the Internet. These and other findings are discussed with respect to public policy concerning consumer health information and the potential role of public libraries in the provision of health information programming in rural communities.

A report on the health of women living in Canada’s rural, remote, and northern communities suggests that there is an inverse relationship between the size of a community and its health status.¹ Rural residents have shorter life expectancies, higher rates of disability, and experience more accidents, poisoning, and incidents of violence than their urban counterparts. Many rural dwellers also face challenges in access to health care, including lack of privacy, limited local services, and inadequate transportation systems. These problems are not unique to Canadians; rural women living in Australia are reported to experience “higher morbidity and premature mortality rates than urban women for a number of conditions . . . have reduced access to health and illness-management services, [and] live in more hazardous environments.”² Similar issues face women living in rural areas of the United States. According to the Rural Assistance Center, a rural health and human services information portal, relative to their urban counterparts, women living in rural areas face higher rates of chronic diseases, including heart disease and cancer; are at greater

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risk of death from diabetes; and encounter more significant barriers to healthcare access as a result of poverty, lack of insurance or being underinsured, lack of public transit, geographic isolation, and limited access to healthcare providers.³

These findings raise important questions about current approaches to government health policy with respect to consumer health information, particularly as they affect women who live in rural areas. In Canada and the United Kingdom, e-health policy initiatives, such as publicly supported Web portals to provide consumer health information, have been developed so that governments can meet their obligation to provide citizens with equitable access to health services. Such approaches are built on the idea that “greater availability of health information via the Internet will lead to the emergence of more informed patients who are better able to assess the risks and benefits of different treatments for themselves.”⁴ For instance, Canada’s consumer health portal, the Canadian Health Network, declares that its mission is to “support Canadians in making informed choices about their health, by providing access to multiple sources of credible and practical e-health information.”⁵ This, and other, similar efforts, to support and encourage Internet use for locating health information often appear to be founded on untested assumptions about the potential health benefits of such interventions. For example, researchers who described a United States–based study in which chronically ill women from rural areas were taught to develop their computing and Web search skills hoped that by teaching the women to locate “quality” information, they would be better able to manage and adapt to their illnesses. While the intervention was successful in increasing the women’s computing skills and appeared to have a positive effect on their self-esteem and sense of social support, the anticipated health benefits were not found. For example, there were no significant changes in the women’s levels of depression or stress.⁶

As a public health strategy, the idea of empowerment through information, particularly when it is dependent on Internet-based services or telephone nurse-advisory programs, also is problematic for people on the wrong side of the digital divide or for those who need more face-to-face or hands-on comfort than these services afford.⁷ Indeed, it sometimes appears that e-health or cyberhealth information initiatives have evolved with little awareness of how people, particularly women, actually seek and use information. Meadows, Thurston, and Berenson argue, for instance, that “as programs continue to be developed and as policy decisions are made regarding health promo-

tion planning and resource allocation, it is important to take into consideration information that reflects the experience of women for whom they are intended.”⁸ Similarly, Warner and Procaccino wonder “whether the information seeking process of female health seekers is being considered in attempts to connect them with quality health information.”⁹ An editorial in the *British Medical Journal* calls for “e-health developers” to “first evaluate users’ needs,” noting that “few rigorous studies exist that show benefit from e-health.”¹⁰ In fact, critics of e-government programs, whether targeted at health, welfare, or other sectors, argue that achieving universal access through online services is problematic not only on the supply side, because sites and services have not developed in ways that are “sufficiently interesting and appropriate for users,” but also on the demand side, because people “may not have the skills to use the technologies; may not trust online services; may not see the benefit of online services; and, what is more, they may not even be interested in them.”¹¹

Some would argue that public libraries have or should have a role in facilitating public access to health information because of their potential to help users overcome some of the problems associated with e-health strategies.¹² Unfortunately, despite the excellent efforts of the Consumer and Patient Health Information Section of the Medical Library Association (CAPHIS) and the National Library of Medicine (NLM), libraries and librarians are seldom visible on the health policy radar, at least not in Canada. And, although there are many good examples, especially in the United States, of well-developed services in which public libraries partner with other organizations to address consumer health needs, including outreach services directed at rural citizens (see, for instance, Ohio’s Netwellness Program), there is considerable variability from community to community in the quality and availability of such services.¹³ An NLM pilot study to evaluate public library consumer health services suggested that even though librarians regard health information as a top-ten topic of interest for patrons, not all public libraries have specific health information centers, and some librarians feel inadequately prepared to respond to health information requests.¹⁴ In Canada, a study of public libraries’ responses to inquiries during the Sudden Acute Respiratory Syndrome (SARS) outbreak in Toronto revealed tremendous variability in the quality of service, clearly demonstrating that a robust and focused consumer health information (CHI) role has not yet been embraced by many public libraries.¹⁵

For libraries that intend to support public access to health information, a clear expectation in

most discussions of best practices is that CHI services will, in some way, involve the Internet. And, whether the service involves using Web resources to provide reference support to patrons in search of health-related information, educating patrons about Internet search strategies, providing pathways to good health information Web sites, or teaching searchers to evaluate sites using evaluative criteria to assess site quality, success depends on understanding users' health information needs and practices. As a starting point for this understanding, it is useful to review what is known about how people generally seek information to cope with everyday problems.

Drawing from various research literatures, Harris and Dewdney described a number of principles of information seeking, the most important of which is that information needs arise from the situations in which help-seekers find themselves.¹⁶ In other words, any need for help or information is situation-based and dependent on a particular context. For example, given what is known about the health challenges facing people who live in rural areas, it seems likely that rurality provides a significant context for health-information seekers, especially women.

It also is widely accepted that people often rely (perhaps too heavily) on information that is readily accessible, sometimes referred to as the principle of least effort. How accessibility of information is determined in the rural context has not been specifically explored, nor has the degree to which accessibility trumps conventional medical authority when people are looking for answers to health-related queries. For example, in what circumstances will people living in a rural or remote area rely on and make health-related decisions on the basis of materials that are easily at hand, or take advice from individuals who happen to live nearby, rather than seeking out or traveling to consult a more authoritative source, such as a physician?

Another common search principle is that people tend to rely on advice and information from others, especially those similar to themselves, and resort to institutional sources only when earlier search attempts are seen to be of limited use. In addition, most of us expect, regardless of whom or where we consult, whether through informal networks or institutions and formal systems, that help and information will be provided in a supportive and nonjudgmental manner. In fact, for many people, the emotional experience associated with receiving information can be nearly as important as the quality of the information itself.

Information is not only acquired through deliberate acts of searching, but also through the

passive monitoring of everyday life, through which people learn about and stay oriented in their environments.¹⁷ Incidental information is acquired, for example, through everyday conversation, and by such means individuals become aware of pathways that might be followed in the event of need.¹⁸ As a result, people's social networks are likely to have an important influence on the information to which they have access, and key individuals within these networks may facilitate or constrain information exchange.¹⁹ As Williamson explained, "while it is very important to focus on users in any study of information for everyday life, it is also important to study them in relation to the major systems of information provision in society. It is the latter which inform people when they are sometimes unaware that they need information."²⁰

Understanding health information needs, then, requires some knowledge of the formal and the informal networks that exist in a person's community as well as the connections between that individual and these networks. In rural or remote communities, it would be valuable to know how peers and lay experts, as well as institutional and organizational supports outside the traditional medical system, such as libraries and librarians, are consulted in the absence of easy access to formal healthcare providers. To explore these issues in the present investigation, we studied the health information-seeking experiences of women who live in a rural area of Canada. Our goals were to: (1) learn more about how rural women go about searching for and using health information; (2) identify barriers they may have encountered; and (3) consider the implications of their experiences in terms of the principles of information-seeking, in the context of government e-health policies, and with respect to the potential for library services to improve access to health information for rural residents.

METHOD

Using ads in local newspapers, advertising flyers, and through word of mouth, women were recruited to participate in a study about their health information-seeking experiences. The forty women who took part had lived for at least two years in a large, sparsely populated, highly agricultural rural county in southwestern Ontario. The population of the county is 55,000 (17.5 people per square kilometer), and its largest community has a population of 7,500, although from anywhere in the county it is only approximately 200 to 250 kilometers, or 120 to 150 miles, to Canada's largest city.

An experienced interviewer conducted the interviews, all of which were tape recorded. At the

outset of the interview, twenty of the participants were asked what they would do if they or a family member woke during the night feeling ill, not with life-or-death symptoms, but with something more serious than the flu. The other twenty women were asked what they would do about a nagging, non-urgent health concern. All participants also were asked to describe an experience in which they had actually sought information about a health concern for themselves or a family member. They were asked about other sources of health information they had consulted in the past and to provide some personal demographic information. Each woman was given a twenty-dollar honorarium to thank her for her time.

The audio-taped interviews were transcribed, and the resulting text subjected to a qualitative analysis using a coding system developed through the application of NVivo software.

RESULTS

The women who took part in the study ranged in age from twenty to eighty-two years (with a mean age of forty-six). Many were well-educated; two-thirds reported that they had completed some post-secondary education, and another 20 percent had completed high school. Half of the women reported family income of less than \$30,000 (Canadian dollars) per year, and fewer than 20 percent had a family income of more than \$60,000. Sixteen women were mothers, nine of whom had young children living at home at the time of the interview.

Fifty-five percent of the participants lived in one of the small towns in the county, 25 percent were village-dwellers, 15 percent lived on a working farm, and 5 percent lived on a rural nonfarm property. Most were born in the province of Ontario; 20 percent in the immediate or adjoining county; and another 57 percent elsewhere in the province. Four women were born outside Canada.

The digital divide was very much a factor for many of the women who took part in this study. Two reported that they do not have telephones; nine women told the interviewer that they don't use the Internet because they don't own or use computers; and another three reported that, even though they have computers at home, they don't have Internet access.

Situational Context

Urgency of Concern

As noted earlier, situational context is a key determinant of information-seeking behavior. An

important contextual variable when it comes to health is the severity of the inquirer's health concern. Depending on whether they were faced with an urgent health situation or coping with a nagging health concern, the women anticipated using different strategies (see table 1). For urgent concerns, the strategy most often described was to visit a hospital emergency department, whereas for a chronic or nagging problem, the most frequently mentioned option was to look for information on the Internet.

Although the majority of women said they would turn to hospital emergency and nurse telephone advisory services if they had to cope with an immediate, potentially urgent health concern, it is interesting to consider the responses of women who did *not* cite these sources when describing what they would do in this situation. Some said, for example, that they would self-medicate and wait until the morning to call their family doctor, or that they would rely on information they could find in their personal collections of medical and home remedy books.

Rurality

Many of the women who took part in the study are heavily influenced by the realities of living in a rural area. Indeed, nearly half mentioned aspects of rural life when describing their experience of searching for health information. Several raised concerns about the health impacts of living in a rural area, particularly because of such agricultural practices as spraying and intensive hog farming. Others mentioned the lack of services in rural areas, raised issues with respect to confidentiality, and questioned the competence of local health-care providers, especially physicians. A number of women explained that their decisions about whether to visit a local physician or go to the hospital were affected by the distances they needed to travel, especially during the winter.²¹ For example, one remarked, "Out in the country, it's a lot easier to try to work out the symptoms in my *Doctor's Book of Home Remedies* than having to get in the truck and go to the hospital."

Small Town Libraries

As well as relying on the Internet for health information, several women said they would find libraries useful if they were dealing with a chronic or nagging health concern. When describing their experiences of searching for health information either for themselves or on behalf of others, more than half said they had or would consider using

the library. One woman explained that she took comfort in the library's print resources:

It's been really helpful for me. It's a tool that I feel a degree of confidence in, in terms of something in print. . . . I think I'm getting closer to that confidence with the Web, but I think I still have a higher degree of skepticism about the information on the Web as opposed to what I might get out of an encyclopedia or out of a book at [the] library.

For some, the library is an important resource because it provides Internet access that is not available at home or because the women don't know how to retrieve information from the Internet on their own. One respondent said that if she were dealing with a nagging or chronic health problem, "I would be going straight to the library and the Internet, because we don't have a computer or the Internet here [at home] and I would resort to the Internet and any library books I could get."

Another woman who visits the library in order to use the Internet appreciates the help of library staff when she searches because "there's just so overwhelmingly much on the Internet." Others who commented on the importance of help from library staff said, "The girls up there are good if you can't find anything. They'll help you. Help you look up, you know, what you're looking for." Another commented, "The library in town, if you can't find it they'll help you find it. Usually you get

what you're looking for. If not, you'll get it from a different library in the county." Others noted:

You can go in there and ask them about certain books. They'll tell you if they have it or not. They have a good computer system up there and they can tell you, "okay, we can get this book from this other county but it's going to take a day or so." You know, they're very helpful.

I just go to the girls at the library and they just get the information . . . the ladies that work there are usually very up to date with things, so I assume, because they always call me five minutes after with something.

Some women were not convinced about the value of rural libraries when it comes to finding health information. For instance, one woman said while the library might have useful resources or access to them, she wouldn't rely on it because of concerns about confidentiality. "Well, in a small town, I mean, the librarian here is a great gal, but I'm not about to go talk about . . . you know . . ."

Another said she wouldn't rely on the library for books about health because, "you have to return them and that's not going to do you." On the other hand, because she doesn't have a computer at home, the same woman also reported that she uses the computer in the library to search for health information.

Table 1. Help/Information Sources for Urgent or Nagging Health Concerns

Information Source	Urgent Health Concern (n=20)	Nagging Health Concern (n=20)
Hospital/emergency department	11*	0
Internet	1	11
Family doctor/clinic	6**	9
Nurse telephone advisory service	7	5
Medical encyclopedia, home remedy book, and so on	3	8
Library	0	8
Pharmacist	1	4
Friend, family member	3	3
Alternate healthcare provider (homeopath, chiropractor, nutritionist)	0	3
Health food store	0	3
Public health unit	0	2
911	1	0

*Note that some respondents referred to more than one source of help and information.

**Of these six, four indicated that they would medicate themselves with non-prescription drugs and wait until the morning to call their doctors.

Several women had concerns about the age of materials available in local libraries, suggesting a lack of awareness of the current, electronic resources to which the public library subscribes to on behalf of its patrons. Their comments included:

The information, of course, gets dated very quickly, and, especially in rural areas, I don't think they always have a lot of up-to-date books on subjects like health.

I would rely on the local library for a health topic that wouldn't change much over the years.

Chances are it might not be as up to date as I'd like it to be in the library, but it would give you a good foundation about some of the tried-and-true treatments and people who are possibly expert in the field.

[The library] has been helpful. Maybe not 100 percent, but it has been helpful. I think they need to update it more. In the rural communities, um, I think they get the information last, the good books last. And by the time they get them they're outdated.

Some participants regard the Internet as a replacement for libraries (again, not recognizing the Web-based services provided by the local public library system). As one woman put it, "a lot of the library stuff is on the Internet now." Another observed that "the Internet is like having a library right in your house."

Relying on the Internet

Ah well, sometimes I'll just refer to the Internet if it's something that I'm not sure of what to do about. Well, if my mother was still alive I probably would have called her and asked her thoughts on what I should do but I think nowadays I look to the Internet quite a bit for information on health matters, whether it's what prescriptions I'm taking or a medical condition. It's a starting point to get more information. When I see something about something I will then go further and look for further information either on the Internet or it's a treatment or medication I'm interested in I will then maybe go further and ask my doctor. But the Internet [is most helpful over time] because it's available immediately when you need it.

As this woman's comments make clear, the ease of access to, or the proximity of, the Internet makes it a valuable tool when she is trying to retrieve health information, although it doesn't replace the personal information exchanges she had with her mother. In contrast, one young woman was very enthusiastic about the Internet precisely because it *did* provide an opportunity for a personal relationship:

I looked up [a site] and [it] had a specific doctor and you can chat with him, like live, and ask him a question . . . and you can even have him send you an e-mail as to when he's going to be on next. I thought that was really awesome.

Another respondent had more trust in the Internet than she did in the pharmacy when making decisions about medications:

I'm more inclined to read it on there [the Internet] than to read the information they give you at the pharmacy. I'll also look to see if there's an alternative medication or therapy that I could be taking instead of what I'm currently taking.

Others were less sanguine about the value of the Internet and appeared to have a limited understanding about how to use it. One woman told the interviewer that she used a doctor disk on her sister's computer and explained that, "We just punched in my symptoms and it came up [with a diagnosis] and it turns out that was not what was wrong so I probably won't turn to the Internet again."

Consistent with findings reported elsewhere, of the women who had used the Internet to locate health information, most reported that they rely on keyword searches using popular search engines, and few had any particular recollection of the sites they'd consulted.²² Comments included, "I'd just type in maybe women's health, probably women's health . . ." "I would start with typing in the issue, doing a search on the issue. I tend not to go to the medical sites; I tend to plug in the issue and see what comes up." "I usually just type in whatever I'm looking for and see what comes up."

Interestingly, with respect to the impact of government e-health initiatives, in spite of a media campaign underway at the time of the interviews that was designed to raise public awareness about the provincial government's new consumer health portal, only four of the participants in the study

had any recollection of visiting the site, and those who had did not find it particularly valuable.²³

Health Literacy

The volume and complexity of health information available, especially via the Internet, posed significant challenges for the study's women. One said:

What I would say about health information? I'm just overwhelmed. It's almost like doing a master's thesis to try and sort out which part of it is pertinent to oneself. . . . A big problem is the ability of a highly educated person to talk down to the person who is the patient.

Another remarked, "It's tough on the Internet because there's just too many options."

One woman explained that when she uses the Internet she searches for "a general consensus" by "bringing up a medical term" then decides whether she can "understand what they are telling me": "Sometimes they give you terms that, as a layperson, a lot of it I do understand, but some of it I don't."

Another cautioned that when using the Internet "you have to be careful" because there are problems with quality of information and there is "too much." A woman told the interviewer that she finds the Internet to be "fairly helpful," although:

[Y]ou really have to weed through what you're reading and be careful, you know, not to take everything they say because, I mean, I could publish an article on how grass grows and I know nothing about how grass grows, so you really need to weed through it and see what's reputable.

Others faced challenges when using the Internet because of limited search skills. One explained, "I've used the Internet and tried to go searching but always by myself. I'm not too good at it."

Health information retrieved from the Internet also can create stress for the searcher. One of the respondents asked a friend to do an Internet search to locate information for her about a chronic condition. The search produced results that "scared me even more. . . . There was too much information that was conflicting and ranged from minor to very major . . . so that didn't help. It actually almost made it worse."

Self-reliance

The women in this study were remarkably self-reliant when it came to searching for information

about their own health or on behalf of others. Indeed, several made specific reference to their desire to take responsibility for their own health. One woman explained that although she trusts her doctor, "you have to go out there yourself and find other things." In fact, to manage a chronic pain problem for which she'd received little relief from the formal health system, this woman took matters in her own hands. She found a pain management clinic through the newspaper, learned and continues to practice self-massage, participates in a special exercise program, and uses the computer at a friend's house to order health food products.

Another woman told the interviewer that, with respect to her general approach to health:

I feel independent enough that I can work through it [illnesses and other health problems]. I can change the foods I eat and notice what gives me different effects then I can change on my own. I don't need someone to tell me.

After a series of frustrating health events and unsatisfactory medical interventions, a participant concluded, "There's only one person responsible for my health and it's me . . . I was looking for everyone else to fix me and I needed to fix me."

Similarly, another commented, "Nobody knows your body better than your own self, and it's your responsibility to do the research."

The Importance of Relationship in the Information Exchange

Consistent with findings reported in other studies, 90 percent of the women said they had or would rely on friends and family members for advice and information about their health, and all of them said they have or would rely on physicians to provide them with health information. However, several expressed ambivalence about managing their relationship with their physicians in view of information they retrieve through their own efforts. In another study of women's health information-seeking, the authors observed that "when women experienced symptoms, assessed the need for consultation, and engaged in health-seeking behavior from the professional sector and tried to transfer their knowledge from the popular sector to the encounter, the reaction is often less than empowering."²⁴ In the present study several women made similar observations, for example:

[T]he best source of information is an informal system that's around you of colleagues,

friends, family resources. I feel put off by the formal system because it's not user friendly, it tends to be bureaucratic and you have to work with it to get what you want.

I found [my doctor] not helpful, unfortunately. It makes it hard because there's not a lot of other doctors. Like, it's not just a matter of switching to another doctor. So, I'm hanging on to this doctor who I don't respect for the medical information she's given me so far.

As noted earlier, the expression of care in any helping relationship is expected and required by most information seekers, regardless of who provides assistance. In this study, nearly 70 percent of the participants commented on the quality of their relationships with service providers when describing their experiences in trying to locate health information. For example, a woman described her social worker as the best source of health information because:

[S]he can refer me, she has information, she's a good facilitator. You can ask her for just about anything and she can direct you. If she doesn't know she finds out and calls you later. She's very, very good and she gives you the feeling that she's got all the time in the world to spend with you and I know her caseload is big. She's really the best.

Another said her acupuncturist/chiropractor had been most helpful to her because "he was concerned, caring, professional, and gentle." A woman who commented on the significant informing role her local health food store plays in her life said, "They really look after you."

Several women also talked about the importance of having access to information from others similar to themselves, especially women who had been through comparable experiences. For instance, a woman who had been diagnosed with breast cancer explained she wanted to connect with someone who had been through the experience because "I needed information to be prepared for what I had to face."

WHAT DO WOMEN DO WITH HEALTH INFORMATION?

A page on the Canadian Health Network site (a consumer health information portal sponsored by the Public Health Agency of the Government of Canada) titled "How to Find the Most Trust-

worthy Health Information on the Internet" advises users of health Web sites to look for caution statements "that health information should not be taken as health advice or a substitute for visiting a health professional."²⁵ Similarly, the Health on the Net Foundation, a Swiss not-for-profit group, has developed an honor code for Internet health sites to protect users in search of health information. HONcode-accredited Web sites are to adhere to various principles, one of which states, "The information provided on this site is designed to support and not replace the relationship that exists between a patient/site visitor and his/her existing physician."²⁶ Although such statements are made, in part, to help those responsible for the sites to avoid potential liability, they also are consistent with public health policies that advocate personal empowerment through health information. In other words, they derive from the assumption that, by increasing knowledge of health and medical matters through consulting trustworthy sources of health information, members of the public will be able to participate more effectively in their own health decisions, although these resources are not intended to replace the expert role played by physicians and other health professionals.

The experiences reported by women in this study suggest that some of them use health information, including e-resources, as intended by policy makers—to reassure themselves, acquire knowledge about health conditions on behalf of themselves and others, and prepare for interactions with health professionals. Some also rely on e-resources to overcome the barriers of access to health care they face as a result of living in a rural area. For instance, one woman who wanted to know whether she was receiving appropriate care for a heart condition described how she'd searched the Internet for information about testing she had received: "I guess there was some level of skepticism living in a rural community. Is the health care system here as up to date? . . . I think I was just doing it [searching the Internet] to reassure myself."

Others used health information for purposes that appear to go well beyond what is intended by designers of public e-health policies with respect to personal empowerment. Whether they consulted the Internet, libraries, personal collections of medical dictionaries and home remedy books, or suppliers of complementary or alternative medicine, several of the women interviewed were prepared to rely on these sources, rather than the advice of professional health experts, to make significant decisions about their own health needs and on behalf of others. For example, in the following passage, a woman described what she did

after being told by a psychologist that she was suffering from post-traumatic stress:

Um, I got a book on post-trauma. Um, um, I also talked to a lot of people at the shelter who had seen people with the same symptoms. Talked to people who are going through it too and what they find helpful for them. Like a lot of people are using chamomile tea. A lot of people use B vitamins. Um, and that was the other thing I heard on the radio—that people with depression or, you know, because post-trauma can often get you into that area too, and B vitamins and C together, um, tend to help to get you out of that. And then I looked up which foods had lots of serotonin in them and which was, you know, what I should be consuming to help boost it naturally.

Another woman explained that not only does she use information she finds on the Internet to self-diagnose, but she makes treatment decisions and orders substances through the Internet to treat herself:

If it was a shoulder injury or something or if it was a pain in the toe I'd look it up on the computer and see if it really was gout or something, and then go to the doctor.

Interviewer: "So, you'd be looking for what . . . the diagnosis or . . . ?"

Yes . . . or a description. . . . I have some powder from a fella I was talking to on the Internet to see if that just might give me a little bit better health. . . . and, I looked up (a health condition) on the computer and took a look at it and, um, there's no way that I'm going to go through that operation.

Many women reported that they look for information and advice from sources outside the formal medical system, such as health food stores and a wide range of alternative service providers, including chiropractors, massage therapists, naturopaths, homeopaths, social workers, acupuncturists, nutritionists, and even vibrational therapists. One explained:

I was worried about my thyroid glands and [a co-worker] went on the Internet and printed off a bunch of stuff for me and told me what signs to look for and what things can help alleviate certain things that go along with it, like go to the chiropractor and yoga and stuff like that, so it was pretty neat.

A woman who struggles with chronic back pain explained that she relies on alternative health care providers to help her interpret treatment information she locates on the Internet. She does so because she believes that "[P]hysicians are trained to deal with symptoms and disease, whereas the alternative world deals with preventing those from happening." Another woman told the interviewer that she no longer relies on doctors. Instead, she regularly "experiments" on herself. For instance, she changed her diet in order to treat yeast infections and a sinus condition. Another said:

I basically took my health in my own hands. I'm not saying that it's the right thing to do but . . . I really haven't got much help from my doctor. . . . I went and asked them (at the health food store), even though I'm taking my thyroid medication I still feel tired so they said to take an iron supplement. . . . I like to get a different perspective on everything, not just what the doctor says because they don't have an open mind.

One woman was so offended by her doctor's suggestion that her chronic pain was the result of emotional problems that she has since been experimenting on her own with different treatment methods, including yoga and energy kinesiology. She also stopped eating meat and now plans to remove dairy products from her diet.

In a particularly poignant description of her search for health-related support, another woman described the importance of information she received from a "lady in the health food store," not only in terms of managing her health condition, but to validate her health concerns:

I couldn't seem to explain to him [her husband] what I was going through and what I was experiencing and he thought I was faking it and my children thought I was faking it and many friends thought I was faking it. But he went with me [to the health food store] and the woman explained everything about [the disease], well maybe not everything, but she covered a large field. We were in the store a good hour, just talking about it, and my husband came out of there saying, "I didn't realize. I learned a lot today."

DISCUSSION

General principles of information-seeking provide useful ways to understand the health-related

experiences of the women in this study. As usual in such investigations, understanding situational context is essential. For these respondents, rurality was a significant factor influencing their health information-seeking strategies and the use they made of the information they found. Not only are these women affected by the distance they need to travel to access healthcare services, but their decisions are influenced by concerns over lack of confidentiality as well as scarcity and quality of locally available healthcare services. Another significant contextual variable is the urgency of the situation that gives rise to a need for health information. For many of the women in this study, immediately pressing health concerns lead them to seek out primary health care sources, such as hospital emergency departments, for help and information. A few, however, are either particularly stoic or have such confidence in the resources to which they have immediate access, such as home remedy books, that they are prepared to rely on them even in urgent situations. When managing chronic or nagging health issues, many women are disinclined to rely on the formal health care system, and turn instead for advice and information from the Internet, libraries, or reference materials they have at home.

The principle of least effort (or ease of accessibility) also was evident. Many women turn to sources that are close-at-hand, such as home remedy books or medical dictionaries as well as friends and family members, for information about health-related issues. Consistent with what has been reported in other studies of women's healthcare practices, they also rely on their informal social networks to stay up to date—to gather information on a serendipitous basis.²⁷ Significant sources of health information in these local networks also included pharmacies, health food stores, and even veterinarians.

At the level of formal systems, two factors that facilitate information seeking are: (1) a common understanding between an information-seeker and service provider about the problem situation and the type of information being sought; and (2) a willingness on the part of the helper to behave toward the help-seeker in a manner that communicates concern, respect, and support.²⁸ In this study, the presence or absence of these facilitating mechanisms was often at the root of the situations described to the interviewer. For instance, many women talked about their need to be heard and respected when they look for information about their own health or on behalf of others. If they perceived such support and care to be absent—for example, in their relationship

with a physician—they sought assistance elsewhere. Indeed, because they'd lost confidence in the formal health system, several women were prepared to diagnose and treat themselves. These women's self-reliance and self-agency through the use of various alternative sources of information and experimentation is consistent with Wuest's observations about women's use of informal sources of health information, including home remedies.²⁹ It also supports observations about how women living in remote northern areas develop what Leipert and Reutter call "resilience" in order to maintain their health.³⁰

Although many are very independent information-seekers, most women in this study rely heavily on the personal connections they form with others who are willing to spend time discussing their concerns. This was evident throughout most of the stories shared by the respondents. In fact, many women seemed to link satisfaction with their health outcomes (or those of their family members), at least to some degree, with the relationships through which they found, expressed, and discussed health information. Although all had had experiences with physicians, many of them positive, a number of women reported that they had found greater support for their health needs from others. The actual roles of these others, whether they were friends, family members, pharmacists, nurses, librarians, staff members in health food stores, or massage therapists, seemed in many ways incidental. Rather, their perceived helpfulness appeared to depend largely on the expression of caring during the information exchange. In other words, the degree to which the helper or information provider showed evidence of care, whether by listening, taking time, or showing some form of kindness, was central to whether the exchange of information was considered to be a success.

As attempts are made to find solutions to meeting the healthcare needs of people who live in rural areas, it is important to recognize the realities experienced by women who live in these communities. It was clear in the present study that women do a great deal of gate-keeping for themselves and for their families with respect to health care and service use. They actively seek and assess information from a wide variety of sources, including the Internet, and they balance what they learn against their experiences with the formal health system. Their experiences support Nettleton and Burrows' observation that "medical knowledge is no longer exclusive to the medical school and the medical text; it has escaped into the networks of contemporary in-

foscapes where it can be accessed, assessed, and reapropriated."³¹

WHAT ABOUT LIBRARIES?

When the women in this study looked for health information outside their personal social networks, many relied on inefficient strategies, especially when using the Internet. As health issues arise, they generally use a hunt-and-peck search method consisting largely of plugging keywords into popular search engines. Few bookmarked preferred Web sites or returned to known sites when searching. And, despite the enormous public investment in e-tools for health information, such as government-supported Web portals, most of the women were not aware of them or didn't use them. Similar observations have been reported elsewhere. For example, in a study conducted in the United Kingdom of women who used the Internet to locate health information, most employed "unsystematic" search strategies and had little awareness of "who or what organization was publishing the information being accessed."³² Even in a sample of well-educated women in the United States who regularly visit public libraries, most showed little awareness of specific health and medical information resources and relied on general search engines for health-related inquiries.³³ Given the frequency with which women in the present study mentioned feeling overwhelmed by the volume of health-related material on the Internet, and given their concerns about how to interpret what they found, it seems unlikely that Internet-based e-health initiatives alone will overcome the barriers of access to health care facing people living in rural communities.

Writ large, one might describe the various intermediaries to whom women turn for health information as providers of reference services. When it comes to supporting the health information needs of the women in this study, it seems obvious that the reference support potentially available to them in the public library system is an underexploited (and perhaps underdeveloped) resource. Although several women recognized the value of having libraries available as a local resource for health information, they had concerns about whether health-related materials available in local libraries are up-to-date and, other than access to the Internet provided in the libraries, they were unaware of the electronic resources available through the local public library system. Nevertheless, the women's willingness to use the Internet and libraries for information about nagging or chronic health issues suggests that it may be in

this domain (rather than, for example, for help with acute health concerns) that Internet-based e-health services and public library-based health information services have the greatest potential for increasing health support capacity in rural areas.

As noted throughout this article, studies of help-seeking in a variety of contexts have shown repeatedly that the quality of the connection between helper and help-seeker is essential to the satisfaction of the person in need of assistance. In health care, too, a recent study of the needs of women with primary breast cancer suggests that while women's dominant concern is to trust their doctor's expertise, they also want a relationship with the doctor and a person-to-person connection in which they are treated with respect.³⁴ Across the health sector, the importance of relationship is being increasingly recognized. In fact, a recently published editorial in the *British Medical Journal* calls for "the return of the human" in a theme issue on the topic of what's next in electronic communication and health care.³⁵

Although there are legitimate concerns about confidentiality when it comes to small public libraries as service hubs for sensitive health information, it does seem that public libraries have a great opportunity to develop meaningful health reference services, especially in rural areas where other services may be limited, as libraries are extremely well-positioned to respond to the need for access to reliable health information provided in a caring context.

On a practical level, the results of the present study provide some guidance that can help frame appropriate reference service and health information programming in public or community libraries. First and foremost, women living in rural areas are active health information-seekers and will consult a variety of sources to get the answers they need. The participants in this study who were familiar with libraries were likely to use them and find them helpful. It seems reasonable then, that an important, overarching consideration for those designing and delivering health reference services should be the promotion of communitywide awareness of such services. Second, there is a growing body of evidence, including the findings of this study, indicating that women want and need not only health information per se, but to have it presented, and ideally discussed, in the context of a caring, interactive relationship—one that respects the woman as the expert when it comes to her own needs, concerns, and context. This holds true for interactions with healthcare providers and, we would argue, with librarians. Third, the women in the present study

had a much broader conceptualization of “health” than might be expected. For many, “health” is incorporated in the concept of “well-being” or “quality of life,” thus many health information-seekers may want access to a variety of materials that would not traditionally be indexed as health topics. Some of the topic materials described by respondents in the present study included parenting, poverty, access to pension, employment insurance and other benefits, home heating, pollution, agricultural practices, credit counseling, social isolation, abusive relationships, time management, and dating. Any health reference service, therefore, should be interlinked with other subject areas that patrons may view as part of health and well-being, or, as one of the women in this study put it, “the emotional side of health.” Finally, the issue of health literacy, as well as information and technical literacy, must be addressed. Many women in the present study acknowledged that they were ill-equipped to search for information efficiently, or to evaluate its quality, applicability, and safety once retrieved. Health information programs and services should be designed not only to help patrons find high-quality information, but also teach them basic skills for searching, identifying high-quality sources, and knowing what types of information require follow-up action, such as consultation with a healthcare provider. Indeed, improvements in these types of literacies may be one of the more significant forms of enabling that libraries and librarians can offer patrons who have health-related concerns. For advice about how to create such services, the CAPHIS Web site offers many useful tips concerning how to set up and run a consumer health library.³⁶

CONCLUSION

It seems naïve, if not cynical, to assume that the healthcare needs of women who live in rural communities will be met by simply deepening the supply of Internet-based health information, particularly in jurisdictions where access to primary health care is limited by insufficient resources in the system, such as too few family physicians in Ontario, or where individuals do not have adequate health care coverage, as is the case for many uninsured or underinsured individuals in the United States. As nations struggle over how best to meet their citizens’ primary healthcare needs, tertiary support in the form of e-health information initiatives directed at the public is doable if attached to a context of care. One such obvious context is the local public library, where the expertise can (or should) exist to support effective

information searches and to provide an empathic, listening ear when information is retrieved. This, we suggest, is a much more realistic response to improving public access to health care than e-government strategies that rely only on such Internet resources as health portals on the Web. In fact, bolstering local libraries to provide meaningful health reference programs may go some distance to relieve the pressure on women who are looking for health information for themselves and for family members and who will, as we have seen in this study, turn to unregulated sources and rely on potentially harmful tactics for treatment in the absence of available or caring support from the formal health system.

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