

What influences seniors' choice of medications for osteoarthritis?

Qualitative inquiry

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ABSTRACT

OBJECTIVE To explore with seniors what influences their choice of medication for osteoarthritis.

DESIGN Qualitative study using semistructured in-depth interviews.

SETTING Interviews were conducted in patients' homes in two cities in Nova Scotia.

PARTICIPANTS Seniors with a physician-confirmed diagnosis of osteoarthritis.

METHOD Interviews were audiotaped and transcribed verbatim. A grounded-theory approach was used. Key words and phrases were identified independently by all members of the research team who then collectively grouped the data into conceptual categories.

MAIN FINDINGS Four themes emerged from discussions about medication choices: the role of family physicians in influencing use of cyclooxygenase-2 inhibitors, the effect of fear of making medication choices, the reasons for discontinuing cyclooxygenase-2 inhibitors, and views on other information sources. Distribution of free samples, family physicians' recommendations, and fear of side effects influenced seniors' choices of osteoarthritis medications. They claimed not to be influenced by direct-to-consumer advertising or the fact that cyclooxygenase-2 inhibitors are more expensive than other classes of drugs for osteoarthritis.

CONCLUSION Because seniors' choice of medications for osteoarthritis is often influenced by physicians' recommendations and distribution of free samples, further research into how distribution of free samples affects medication choices in family practice is needed.

EDITOR'S KEY POINTS

- This qualitative study explored what influences seniors' use of cyclooxygenase-2 (COX-2) inhibitor nonsteroidal anti-inflammatory drugs (NSAIDs) for osteoarthritis.
- The greatest influence was a physician's recommendation, often accompanied by a free sample. Fear of side effects from traditional NSAIDs also influenced their choice. Some were resistant to changing medications for fear of worsening their osteoarthritis.
- Interestingly, seniors claimed not to be influenced by direct-to-consumer advertising or the fact that COX-2 inhibitors are more expensive than other drugs.

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Osteoarthritis (OA) is the most common form of arthritis.¹ Medications used to manage the discomfort associated with OA have either analgesic or analgesic plus anti-inflammatory properties (eg, acetaminophen, acetylsalicylic acid, and other nonsteroidal anti-inflammatory drugs [NSAIDs]).

In April 1999, a new class of NSAIDs called cyclooxygenase-2 inhibitors (coxibs) was approved in Canada. In the short time these drugs have been available, their use has grown to account for half of the NSAID market.^{2,3} This has occurred even though coxibs are similar in effectiveness to other NSAIDs,⁴ and there is no convincing evidence that they are safer than other NSAIDs.⁵ In Nova Scotia, they cost more than the maximum daily amount covered by pharmacare programs, so copayments are higher than for other prescription OA medications.

While there have been calls for patients to become more involved in decisions about their own treatment⁶⁻⁸ because it is believed that this will enhance patient satisfaction and cooperation with therapeutic recommendations,⁹ there is little research on what factors influence patients' decisions about medications.¹⁰⁻¹² Research shows that physicians' recommendations are very influential, so much so that they can direct patients to make decisions that are contrary to what is best and contrary to what patients would otherwise prefer.¹³ Patients are also influenced by friends and relatives,¹⁴ other patients met at the clinic,¹⁴ and the media.¹⁵

Fraenkel et al¹⁶ found that older patients were not knowledgeable enough to make informed choices, which led to medication choices inconsistent with their preferences. Due to this lack of informed choice, the high prevalence of OA among seniors,^{1,17} and the number of drugs seniors with OA are taking concurrently,¹⁸⁻²¹ greater understanding of what influences seniors' choice of medications for OA is an important avenue of research.

The objective of this research was to explore with Nova Scotian seniors the factors that influence them to choose anti-inflammatory medications that have higher copayments (coxibs). We specifically explored physicians' role in decision making about OA medications and the role of other sources of information on OA medications.

METHOD

Design

This study used individual interviews to understand treatment choices for OA qualitatively. Individual interviews were chosen because they increase participants' privacy and disclosure. The Capital Health Research Ethics Board in Halifax, NS, granted ethics approval.

Setting

Participants were interviewed in their homes in two urban areas in Nova Scotia.

Participants

We used purposeful random sampling because this method adds "credibility when a potential purposeful sample is larger than one can handle."²² Participants chosen had completed an earlier quantitative survey and had volunteered to be interviewed about their OA and the medicines they were taking. The survey's sampling procedure is described by Lawson et al.²³

Of 244 possible participants, 191 (78%) had completed the survey, and 127 (66%) of these agreed to be interviewed. Because such a large number had agreed to participate, a random list was generated for each practice setting, and patients were contacted by telephone to confirm they were willing to be interviewed. Ten interviews were arranged for one setting; nine were actually conducted. Seven interviews were conducted in the second setting for a total of 16 interviews.

Data collection

The principal investigator (P.L.T.) conducted all interviews and kept detailed field notes. He used an unstructured interview guide. The interviewer repeatedly revised the questions between interviews to seek out alternative views. All interviews were audiotaped and transcribed verbatim by project staff immediately after each interview. The investigators read the transcripts and provided feedback to the interviewer. After 16 interviews, the researchers thought that saturation had been reached.

Data analysis

Transcripts were checked against tapes and read for accuracy. Analysis was guided by grounded-theory methods, which seek to develop and understand connections between and among theoretical categories. Each transcript was read independently by all members of the research team to identify key words and phrases. The team then collaboratively grouped these words and phrases into conceptual categories that accommodated the range of words.

The final set of conceptual categories formed the basis of a coding structure within QSR N5,²⁴ a software program designed for textual analysis. Reports were

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generated for each code, permitting the research team to confirm or qualify the coding structure and ensure it continued to accommodate the data.

FINDINGS

Four themes emerged from discussions about factors that influence seniors' medication choices: the role of family physicians, the effect of fear of making medication choices, the reasons for discontinuing coxibs, and views on other sources of information on OA medications.

Physicians' role

Coxibs were a focus of this study, and 11 of 16 participants had taken a coxib at some point. Many participants stated that they started taking coxibs after their physicians had given them free samples: "Dr X had some samples in his office, so he suggested that we try them."

Most participants taking coxibs tried them as their first prescription medication; physicians' recommendations were very influential in this decision. When the interviewer asked how a patient came to choose that [coxib brand name], the patient answered, "He [physician] gave it. He prescribed it." Further probing into patients' interactions with their physicians showed that participants shared a spectrum of views, ranging from accepting their physicians' recommendations to questioning their physicians' judgment: "What he gives me, I just take as he directs it. That way, I figure, we get along a lot better." "No, this here, the last one, he said there's more people using it now because they find it better. But clearer than that he did not say a word."

Several participants reported bringing information into their physician's offices. This was met with varying degrees of receptiveness. Asked about discussing this information with the doctor, a participant said, "Yeah, we talk a lot, yeah. We respect each other." Another said, "No, no. I went to one doctor, I won't mention his name, but I did read an article one time and I went to him and he said 'I don't want to listen to that BS and all that.'"

Effect of fear of making medication choices

For the three participants who switched to coxibs after trying traditional NSAIDs, all said they switched out of a fear of developing side effects: "I do remember taking an anti-inflammatory, but I stopped because of possible stomach problems, which I did not get so it paid off in that respect."

In several other instances, patients' fear of a deterioration in health led to "pharmaceutical inertia," a term we coined to describe patients' resistance to making any changes to their drug regimens. Pharmaceutical inertia emerged in several ways. For some, it resulted in drug compliance, even though they were not convinced the treatment was effective: "I'm scared to stop taking it to

find out if it is helping me for fear I get worse." "Whether it helps or not, I am not sure." "And even when you take those drugs, you really wonder, after you have taken them as long as I have, if they're doing you any good or not, because you no longer know. Because if you stop ... I don't dare stop to see what would happen." Asked why, given their doubts, they continued to take these drugs, a patient said, "I don't know. I suppose it is like saying your prayers." For others, fear of interactions and side effects led them to refuse to try other medications:

The only way I can explain is if you're diving for the first time, you want to go off that diving board, you really want to get in that water, you know, but I can't put that bloody pill in my mouth! After remembering what the other one was about, and it's not only arthritic drugs; I've had the experiences with other drugs too that haven't been very pleasant.

Pharmaceutical inertia also emerged as an unwillingness to change drugs without any guarantee of improvement: "There's no good to change a drug unless you have some idea that it's going to improve. I don't believe in going from one to the other."

Reasons for discontinuing coxibs

Six participants who had tried coxibs at one point had discontinued them, mostly because of side effects, but also because of finding them ineffective. The research team found it surprising that cost was not an insurmountable barrier for these participants and was not mentioned as a reason for discontinuing. Asked about this, a participant said, "It would be, but I started on it and if it had worked, you know, it worked, and if it hadn't put my [blood] sugar down, I guess I'd be on it still." Some seniors talked about prioritizing their health to ensure they would be able to afford medications:

I don't care, I'd rather do without stuff, like I says. As you get older, you don't buy as many clothes as when you're younger. When you're younger—if you are working out, you need clothes; it's different. But when you are home and that, you don't need that many clothes to hang up. So I save and I put it for my medication; I need it.

Other participants mentioned being on drug plans as a reason cost was not a barrier for their medications: "Well, I'm a veteran, you see, and I'm on the VIP."

Views on other information sources

Pharmacists, social networks, and the media were used as sources of information along with family physicians. For the most part, pharmacists were seen as important sources of information, "We buy everything here at [specific pharmacy], and if we start something new or we

need something, they give good advice." "There is a lot of good pharmacists out there; they've given me a lot of information." Not all shared these views, however. Asked whether they talked to their pharmacists about their medications, one said, "No. You just say, like the ... I'm on Zocor ... but all they tell you there is not to take it with grapefruit."

The influence of social networks (friends, family, and social groups) varied among participants. Some found such networks credible sources of information; others were sceptical of their reliability: "The best possible place to get information for your medical assistance is in the barber shop." "And some friends I completely disregard, because I think they are not right at all." Participants also varied in how they used information gleaned from social networks to make decisions about their own health. "So then my daughter, believe it or not, she had got the prescription ... and she took one and she was ungodly sick to her stomach with it. Yeah, it affected her. So I—it was just a sample that he gave me, actually. So I didn't even take it." "I haven't tried it [shark cartilage]. A friend of mine is on it, they tried it, and they're not amazed, you know, but some people are, I guess. I think we may be structured differently, every one of us, and it may help you but not me and so forth."

Participants were asked whether they had conversations with friends or family about medications. One said, "I'm really tight-lipped."

Participants also reported that drug advertising had little effect on their decisions. Asked whether they paid attention to things like television advertisements about drugs or things in magazines or books or anything like that, one participant said, "Not really, no." Some participants who noticed these advertisements thought the sources were not trustworthy: "I was tempted from what I read about that [shark's cartilage], ... but I don't believe in any of these promotions. I don't follow them." "They don't tell the truth. They often say one Tylenol a day takes the whole pain away. I don't believe it." Several mentioned paying attention to the advertisements: "And of course I've seen the ads on TV, ... but they don't mean too much to you unless you have, you know, arthritis or something. It's like a lot of ads go over your head.... Before I was talking to her [friend], I hadn't paid much attention." Articles in magazines and the press were also mentioned as sources of information, but again they did not have much effect on drug use: "Well I don't follow all of it, but I read the books and magazines, doctors' articles."

DISCUSSION

In our study, we found that distribution of free samples, recommendations by family physicians, and fear of side effects from traditional NSAIDs were influential in patients' starting anti-inflammatory medications that

had higher copayments (coxibs). Fear played a role for many participants in this study, influencing some to discontinue medications because they feared side effects and others to resist making changes to their drug regimens because they feared making the condition worse. Influences on stopping coxibs included side effects and finding coxibs ineffective. There were mixed views on pharmacists and social networks as sources of information about OA medications. The negative findings in this study were also of interest: direct-to-consumer advertising did not influence starting OA medications, and higher copayments for coxibs were not found to be a reason for not taking them.

While many participants chose coxibs on physicians' recommendations, our results demonstrated that how patients viewed their physicians' role in information exchange varied. This is consistent with results of other research showing that some patients take a passive role in decision making while others want to be treated as partners in care.^{25,26} Such variation can be challenging for physicians attempting to match the decision-making preferences of patients with their consultation style.²⁶ Clearly defined, shared-treatment, decision-making roles for both patients and physicians might be useful.²⁷

The fact that distribution of free samples influences decisions on medications and that direct-to-consumer advertising does not suggest that the pharmaceutical industry's allocation of marketing dollars targets the factors most likely to influence prescribing of their products. Rosenthal et al²⁸ showed that direct-to-consumer advertising accounts for only about 15% of the money pharmaceutical companies spend on promoting drugs; most of the marketing dollars are spent on promotions directed at prescribers (ie, sampling). Despite the important role sampling plays in decisions to try new medications and the large amount of money spent by the pharmaceutical industry on sampling, a recent review identified only 23 articles that focused on the effect of sampling.²⁹ For the most part, these articles found that sampling a medication increases the likelihood that patients will be given a trial of it and that it will be subsequently prescribed, a pattern also seen in our study. Our findings support calls for further research into the effect of sampling,²⁹ especially the risk to patients that results from the fact that a second health professional is not involved in distribution of the medication.³⁰

Our finding that participants who switched from traditional NSAIDs to coxibs did so out of fear of side effects is worrying because, at the time the research was conducted, there was no convincing evidence that coxibs were safer than traditional NSAIDs.⁵ This supports the findings of Fraenkel et al that patients are not knowledgeable enough to make informed choices about medications for OA.¹⁶

As to pharmaceutical inertia, if concern over possible deterioration led patients to continue using medications


even when they were unsure of the benefit, then they might have been exposed unnecessarily to the risks of taking NSAIDs or coxibs. Similarly, reluctance to switch to another medication might have resulted in missed opportunities for better therapeutic effects. Family physicians should be alert to pharmaceutical inertia and ensure that patients are taking medications only when the benefits clearly outweigh the risks and patients are truly comfortable with the decision.

Surprisingly, among reasons for discontinuing coxibs, cost was not an influential factor even though Nova Scotia Seniors' Pharmacare Program beneficiaries have higher copayments for these medications. A qualitative study in the United Kingdom by Schafheutle et al³¹ found that, while cost did influence treatment choices for a variety of clinical conditions, especially for less affluent study participants, it was not the most important factor. Symptom or disease severity, effectiveness of the drug, and necessity of treatment were more important factors.

Limitations

Limitations of this study include the unknown generalizability of our sample; our participants' tendency to intertwine medical conditions, leaving us unsure whether the medication choices they reported were always for OA; the lag time between when OA decisions were made and when the interviews were held, allowing recall bias; and the unknown effect of using purposeful random sampling as opposed to other methods of sampling. Also, while our study provides insight into patients' perceptions of their interactions with health care providers, the interactions would be better assessed by direct observation.

Conclusion

This study found that distribution of free samples, physicians' recommendations, and fear of side effects influenced seniors to choose anti-inflammatory medications for which they had higher copayments (coxibs). Seniors gathered information about OA medications in general from a variety of different sources, but they said they did not find the media particularly influential. 

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Contributors

Ms Bower was involved in concept and design of the study, analysis and interpretation of data, and drafting the article. **Ms Frail** contributed to concept and design of the study, analysis and interpretation of data, drafting the article, and revising the article critically for intellectual content. **Dr Twohig** participated in concept and design of the study,

analysis and interpretation of data, and reading the article critically for intellectual content. **Dr Putnam** was involved in concept and design of the study, analysis and interpretation of data, and revising the article critically for intellectual content. All the authors gave final approval to the version submitted for publication.

Competing interests

None declared

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