

Self-reported use of shared decision-making among breast cancer specialists and perceived barriers and facilitators to implementing this approach

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Abstract

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Background Physicians are increasingly urged to practice shared decision-making with their patients. Using a cross-sectional survey, we explored the extent to which Ontario breast cancer specialists report practising shared decision-making with their patients, their comfort level with this approach, and perceived barriers and facilitators to implementation.

Participants and methods All Ontario surgeons and oncologists (radiation and medical) treating women with early-stage breast cancer were eligible for this study. Likert scales were used to measure physicians' comfort level with and self-reported use of different treatment decision-making approaches as well as perceived barriers and facilitators to treatment decision-making with patients.

Results The response rate was 79% for oncologists and 72% for surgeons. More physicians from each specialty (87% of oncologists and 89% of surgeons) expressed high levels of comfort with clinical example 4 (designed to illustrate a shared approach) than with any of the other examples presented (e.g. the informed and paternalistic approach). Similarly, more oncologists and surgeons reported that their usual approach to treatment decision-making was like example 4 than like any other approach presented (56% of oncologists and 69% of surgeons, respectively). Comfort levels with example 4 for oncologists and surgeons were 31% and 20% higher, respectively, than the reported use of this approach. Lack of time and patient anxiety, patient lack of information and/or misinformation, and patient unwillingness or inability to participate were perceived by a substantial minority of both oncologists and surgeons as barriers to patient involvement in treatment decision-making. Key facilitators identified included patients' emotional readiness, support, information and trust in the physician. More research is needed to identify contextual, physician, patient, and interaction factors that will facilitate shared decision-making in the medical encounter and help both parties create an environment conducive to implementing this approach to the extent desired.

Introduction

Physicians are increasingly urged to practice shared decision-making with their patients, yet there is little consensus on the meaning of this term. Different authors use this term to describe different patterns of interaction between patients and physicians in treatment decision-making.¹⁻⁶ In some cases, the concept is discussed without any clear definition of its meaning. This results in ambiguity and confusion for both physicians and patients wanting to implement this approach.

To help clarify this definitional confusion, we previously developed an analytic framework that describes key defining characteristics of shared decision-making and compares similarities and differences of this approach with others frequently cited in the medical literature,^{1,2} in particular, the paternalistic and informed models.

In our framework, shared decision-making implies the simultaneous participation of physicians and patients in all phases of the decision-making process: information exchange, deliberation about treatment options and negotiating an agreement on the treatment to implement. Some authors define treatment decision-making as a division of labour³ between physicians and patients, where information is shared but the patient alone makes the decision. We label this latter approach as informed because the patient alone makes the decision, without the input of physician values (preferences) in the deliberation and decision-making stages of the process.

In this paper, we present the results of a cross-sectional survey of Ontario cancer specialists treating women with early-stage breast cancer. We first empirically assess the extent to which Ontario surgeons and oncologists treating women with early-stage breast cancer report practising shared decision-making, as defined in our conceptual model, and their comfort levels with this approach. We then describe physician perceptions of barriers and facilitators to treatment decision-making with their patients. We focus on specialists who treat women with breast cancer because shared decision-making has been

defined as important to these women⁷ and because of our prior conceptual and empirical work in this area.^{1,2,8-10} Understanding physicians' comfort level with shared decision-making and associated barriers and facilitators is important not only because many women with breast cancer desire to participate in decision-making to some degree. In addition, patient participation is likely to lead to improved congruency between patient preferences and the treatment decision and potentially other outcomes such as patient satisfaction.

Methods

Design

A cross-sectional survey of Ontario physicians was undertaken in 1998 using a structured questionnaire.

Sampling and recruitment

Ontario surgeons were identified through the Ontario Association of General Surgeons. Of the 504 surgeons on the Association's list, 182 were declared ineligible because they were either retired, semi-retired, in training, practising part time, non-practising, no longer living in the province, not treating breast cancer patients, or were included in the pilot study. This left us with 322 eligible surgeons.

Medical and radiation oncologists were identified through the Ontario Cancer Foundation's list of provincial oncologists in the nine Ontario regional cancer centres and a list of community oncologists prepared by their professional association. These lists were combined and duplicate names removed, leaving 167 oncologists. Of these, 37 were declared ineligible for reasons noted above, leaving 130 eligible for the study.

To recruit physicians, a modified Dillman follow-up approach was used,¹¹ whereby physicians, at specified intervals, received up to a maximum of four mailings of the questionnaire along with a cover letter inviting them to participate in the study. Non-respondents to all four

mail-outs subsequently received a telephone call to encourage participation.

Questionnaire development

We developed and pilot-tested a questionnaire to explore the meaning of shared treatment decision-making to physicians and their self-reported use of this approach. The same questionnaire was administered to all study physicians but was formatted in different versions tailored to suit surgeons, medical and radiation oncologists. The questionnaire was modelled on an earlier version developed for women with early-stage breast cancer.

During the physician questionnaire development process, we conducted three separate focus groups of radiation oncologists, medical oncologists, and surgeons to learn about their perceptions of the meaning of shared decision-making, the extent to which they practised and felt comfortable with shared decision-making, and barriers and facilitators they perceived to implementing this approach. Each version of the physician questionnaire was then pilot-tested with three members of each of the three physician groups represented in the study.

Clinical decision-making examples in which the role of the patient and physician were systematically varied were presented to physicians in the questionnaire (Box 1). Physicians were asked to identify which (if any) of the four examples reflected a shared decision-making approach.

Box 1 Treatment Decision-making examples

Example 1 (paternalism)

After reviewing the medical records and examining the patient, the doctor decides on a suitable treatment and presents this to her. The doctor gives her information about the treatment, including risks and benefits. The patient accepts the treatment that the doctor recommends.

Example 2 (some sharing-information only)

After reviewing the medical records and examining the patient, the doctor presents to her the available treatment options. Information about the risks and benefits of each option are given and discussed with her. The doctor invites her to ask any questions. The doctor then recommends a treatment that the patient accepts.

Box 1 Continued

Example 3 (informed)

After reviewing the medical records and examining the patient, the doctor presents the available treatment options to her. Information about the risks and benefits of each option are given and discussed with her. The doctor asks the patient to decide on a treatment and states that she is the best person to make the decision. She decides and informs the doctor of the treatment she prefers.

Example 4 (shared)

After reviewing the medical records and examining the patient, the doctor presents to her the available treatment options. Information about the risks and benefits of each option are given and discussed with her. The doctor invites her to ask any questions. The doctor asks her what her preferences for treatment are given her lifestyle and the issues that are important to her. Together, they decide on a suitable treatment to implement.

Example 1 was constructed to reflect a paternalistic approach to decision-making as defined in our conceptual framework referred to above,^{1,2} with the physician dominating the interaction. In example 2, information was shared between the physician and patient but the physician was the sole decision maker (some sharing). In example 3, the physician provided information to the patient on treatment benefits and risks but the patient was the sole decision maker (the informed approach). In example 4, both the patient and physician simultaneously participated in each phase of the decision-making process (information exchange, discussion of treatment options and reaching agreement on the treatment to implement). Example 4 represented a pure shared approach as described in our framework.^{1,2}

No labels were attached to the four clinical examples in the questionnaire because we did not want to signal to physicians our intention to construct examples that reflected specific decision-making approaches. Physicians were allowed to identify, as illustrations of shared decision-making, as many of the examples presented as they felt were appropriate. Physicians could also indicate that none of the examples presented seemed to illustrate a shared

approach. The results of this analysis have been previously reported.⁹

Using these four decision-making reference points, we asked physicians to identify how comfortable they felt with each type of decision-making approach (using a five-point Likert scale from 1, extremely uncomfortable to 5, extremely comfortable) and whether their usual decision-making approach was more like clinical example 1, 2, 3, or 4. We also assessed, using a four-point Likert scale (1, never, 4, almost always), how often, if ever, physicians identified a defined list of factors as barriers or facilitators during treatment decision-making with patients. We grouped these barriers and facilitators into three different categories based on our own judgement as to whether each represented a system-level, physician or patient-level factor.

Analysis

Survey data were analysed descriptively by individual item using percentage distributions. As the questionnaire was sent to all oncologists and surgeons in Ontario treating women with breast cancer, rather than a sample, we did not use statistical measures when comparing results.

Results

Response rates

Of the 322 eligible surgeons, 232 (72%) completed and returned the questionnaires. One hundred and two (79%) of the 130 eligible oncologists responded.

Socio-demographic information

Socio-demographic information for oncologists and surgeons responding to the survey is presented in Table 1. Both radiation and medical oncologists are designated under the single heading 'Oncologists'.

The age distribution of oncologists and surgeons show different patterns. There were more young (<50 years) oncologists than surgeons (49% vs. 33%) and more elderly surgeons

Table 1 Demographic characteristics of oncologists and surgeons¹

Characteristics	Oncologists ²	Surgeons ²
Age (years)	N (%)	N (%)
< 50	47 (48.9)	74 (33.0)
50–64	39 (40.6)	80 (35.7)
> 65	10 (10.4)	70 (31.3)
Total	96 (99.9)	224 (100.0)
Gender		
Female	34 (34.0)	20 (8.8)
Male	66 (66.0)	206 (91.2)
Total	100 (100.0)	226 (100.0)
Cancer centre affiliation		
Yes	61 (62.2)	8 (3.6)
No	37 (37.8)	217 (96.4)
Total	98 (100.0)	225 (100.0)
City size		
< 299 999	27 (27.6)	128 (56.9)
300 000+	71 (72.4)	97 (43.1)
Total	100 (100.0)	225 (100.0)

¹Percentages are based on valid cases only.

²The largest number of missing cases for oncologists for any of the above variables is 6. The comparable number for surgeons is 8.

(> 65 years) than oncologists (31% vs. 10%). While men dominated women in both specialty types, this was especially true among surgeons (91% male). Oncologists were far more likely than surgeons to be affiliated with a cancer centre (62% vs. 4%). The majority of oncologists (72%) worked in cities of > 300 000 population while slightly less than half of the surgeons (43%) did so. In summary, the demographic profiles of the study oncologists differed substantially from those of the study surgeons.

Physicians' self-reported level of comfort with some form of shared treatment decision-making

Table 2 identifies the percentage of oncologists and surgeons recording a score of 4 or 5 on a five-point Likert scale (1, very uncomfortable; 5, extremely comfortable) indicating their degree of comfort with each of the four clinical decision-making examples. A minority of both groups, 12% of oncologists and 17% of surgeons reported high levels of comfort with example 1 which was constructed to reflect a pure 'paternalistic' approach. The vast majority of physicians in both specialties (87% and 89%)

Table 2 Percentage of oncologists and surgeons reporting high levels of comfort in using each of the four approaches to treatment decision-making illustrated in examples 1–4^{1,2,3}

Clinical examples ⁵	Oncologists N (%) ⁴	Surgeons N (%) ⁴
Example 1 (paternalistic)	12 (12.0)	36 (16.9)
Example 2 (some sharing)	54 (54.0)	99 (45.2)
Example 3 (informed)	35 (35.0)	92 (42.0)
Example 4 (shared)	87 (87.0)	199 (89.3)

¹The preamble and actual question read: To answer the following questions please look at the examples in the enclosed cream coloured sheet. Each example shows a different way in which a decision about treatment can be made with a patient. Now think about your approach to decision-making with early stage breast cancer patients over the last 6 months:

C2: On a scale of 1–5, indicate your level of comfort in using each of the four approaches to treatment decision-making described in the clinical examples on the cream coloured sheet (for each example, circle one number only).

²See Box 1 for the wording of clinical examples 1–4.

³High level of comfort' is operationalized as a score of 4 or 5 on a five-point Likert scale where 1 = not comfortable and 5, extremely comfortable.

⁴Percentages are based on valid cases only.

⁵Labels for each of the four clinical examples above were not included in the descriptions of each clinical example given to physicians (see Box 1).

expressed high levels of comfort with example 4, which was constructed to incorporate key components of a shared treatment decision-making approach. This was also the example that an overwhelming majority of oncologists (87%) and surgeons (94%) identified as illustrating a shared approach in our earlier analysis.⁹

About half the oncologists and surgeons in this analysis reported high levels of comfort using clinical example 2 (some information sharing but the physician decides) while 35% of oncologists and 42% of surgeons reported high levels of comfort with example 3, (some information sharing but the patient decides: i.e. the informed or consumer approach).

Physicians self-reported use of some form of shared treatment decision-making

Table 3 provides information about oncologists' and surgeons' self-reported treatment decision-making approaches and whether they are usually more like clinical examples 1, 2, 3 or 4 (Box 1). The majority of physicians in both groups (56% of oncologists and 69% of surgeons) cited

Table 3 Percentage of oncologists and surgeons reporting that their usual approach to treatment decision-making is more like clinical examples 1, 2, 3 or 4^{1,2}

Clinical examples ⁴	Oncologists N (%) ³	Surgeons N (%) ³
Example 1 (paternalistic)	1 (1.0)	5 (2.2)
Example 2 (some sharing)	27 (27.0)	39 (17.1)
Example 3 (informed)	8 (8.0)	17 (7.5)
Example 4 (shared)	56 (56.0)	158 (69.3)
None/other	8 (8.0)	9 (3.9)
Total	100 (100.0)	228 (100.0)

¹The preamble and actual question read: To answer the following questions please look at the examples in the enclosed cream coloured sheet. Each example shows a different way in which a decision about treatment can be made with a patient. Now think about your approach to decision-making with early stage breast cancer patients over the last 6 months: C5: My approach is usually more like: (check one box only).

²See Box 1 for wording of clinical examples 1–4.

³Percentages are based on valid cases only.

⁴Labels for each of the four clinical examples above were not included in the descriptions given to physicians (see Fig. 1).

example 4 (the shared approach) as their usual approach. Twenty-seven per cent of oncologists and 17% of surgeons reported that their approach was usually like example 2 (some sharing of information, with the physician making the decision). Few physicians of either specialty indicated that their approach was usually like example 3 (the informed approach) and even fewer like example 1 (paternalistic).

There was a gap of 31% in the proportion of oncologists who said they usually practiced shared decision-making (56%) and the proportion reporting high levels of comfort with this approach (87%). Comparable findings for surgeons were 69 and 89%, respectively. For both groups, comfort levels with this approach exceeded self-reported use.

Perceived barriers to treatment decision-making with patients

Physicians responses to the question: 'To what extent do you experience the following as difficulties during the treatment decision-making process are presented in Table 4. The original four-point Likert scale response categories of 1 (never) to 4 (almost always) were collapsed such that responses 1 and 2 were recoded as 'No, Not

Table 4 Perceived barriers to treatment decision-making among Ontario oncologists and surgeons treating women with early-stage breast cancer¹

Types of influence	Yes (%)	
	Oncologists (n = 102)	Surgeons (n = 232)
System		
Insufficient time to spend with patient	64.4	37.2
The patient has received conflicting recommendations from various specialists	25.7	13.8
Physician		
I have insufficient information to make a decision about treatment at the first consultation	23.7	36.3
There are cultural differences between the patient and me	10.0	12.1
I experience difficulty knowing how to frame the treatment options for the patient	5.0	3.6
Patient		
The patient has misconceptions about the disease or treatment	39.0	40.7
The patient is too anxious to listen to what I have to say	38.0	48.7
The patient does not understand the information I have given	37.7	41.6
The patient does not want to participate in treatment decision-making as much as I would like her to	36.7	32.8
The patient is indecisive	30.7	33.2
The patient has difficulty accepting she has breast cancer	13.0	34.5
The patient has other health problems (e.g. heart disease)	11.2	26.1
The patient brings too much information to discuss	15.0	9.8
The patient wants to make a decision before receiving the information from me	8.9	10.1
The patient requests a treatment not known to be beneficial	8.9	7.9
The patient refuses a treatment that may benefit her	8.0	7.6
The patient wants to participate more in deciding on her treatment than I would like her to	7.9	10.2
The patients' family overrides the decision-making process	2.0	7.1

¹Percentages are based on valid cases only. The largest number of missing cases for oncologists for any of the above variables is 4. The comparable number for surgeons is 8.

a difficulty' and response categories 3 and 4 were recoded as 'Yes, a difficulty'. In terms of health system factors, about two-thirds of oncologists and 37% of surgeons reported that they had insufficient time to spend with their patients. Twenty-six per cent of oncologists and 14% of surgeons reported, as a difficulty, that the 'patient had received conflicting recommendations from various specialists'.

In terms of physician factors, insufficient information to make a treatment decision at the first consultation was cited as a difficulty by 24% of oncologists and by 36% of surgeons. Few physicians (<13%) reported difficulties with either cultural differences between themselves and their patients or with knowing how to frame the treatment options for patients (<6%).

Several patient factors relating to communication about treatment options were cited as difficulties for a substantial minority (38–49%)

of both oncologists and surgeons. These factors included: patient misconceptions about the disease or treatment, patient anxiety preventing the patient from listening to (hearing) what the doctor had to say, and patient lack of understanding of the information given by the physician. Physician perceptions that patients did not want to participate in treatment decision-making as much as they (the physicians) would like them to, and that patients were indecisive were also factors cited as posing difficulties for a substantial minority of physicians (31–37%). More surgeons than oncologists cited the patient with multiple health problems as problematic for decision-making (26% vs. 11%), and patient difficulty in accepting the diagnosis of breast cancer (35% vs. 13%).

Other patient factors in Table 4 were cited as difficulties for only a small minority of physicians ($\leq 15\%$) of either specialty. These factors included: the patient brings too much

information to discuss, the patient wants to make a decision before receiving information from the doctor, the patient requests a treatment not known to be beneficial, the patient refuses treatment that might benefit her, the patient wants to participate more in deciding on her treatment than the physician wants, and the patient's family overrides the decision-making process.

Perceived facilitators of treatment decision-making with patients

Physician responses to the question: 'To what extent do you experience the following as helpful during the treatment decision-making process' are presented in Table 5. The original four-point Likert scale response categories of 1 (never) to 4 (almost always) were collapsed such that responses 1 and 2 were recoded as 'No, Not Helpful' and response categories 3 and 4 were recoded as 'Yes, Helpful'. The availability of emotional support to the patient and a companion to accompany the patient to the medical consultation were seen as helpful by physicians

in both groups (89–98%). Other types of emotional support such as contact with a breast cancer support group or someone to talk to with cancer were viewed as helpful by about half to two-thirds of physicians surveyed. Having friends in the health care system was seen as helpful by fewer physicians, about a quarter of the oncologists and a third of the surgeons.

Patient emotional readiness for decision-making and willingness to participate in making the treatment decision were viewed as helpful to the vast majority of physicians in both specialties (91–96%). Patient attainment of a second opinion was viewed as helpful by far fewer physicians, 26% for oncologists and 19% for surgeons.

Patient knowledge about the disease and its treatment were seen as helpful by the majority of physicians, 84% of oncologists and 71% of surgeons, but providing written information somewhat less so (about three quarters of the oncologists and about half the surgeons felt this was helpful). Patient trust in the physician was rated as helpful by the highest proportion of physicians in each specialty, 98% of oncologists and 100% of surgeons.

Table 5 Perceived facilitators to treatment decision-making among Ontario oncologists and surgeons treating women with early-stage breast cancer¹

Types of influence	Yes (%)	
	Oncologists (<i>n</i> = 102)	Surgeons (<i>n</i> = 232)
Patient support		
The patient has emotional support from family or others	96.0	98.3
The patient has someone with them at the consultation	95.0	89.0
The patient talks to someone else who has cancer	47.6	67.4
The patient has contact with a breast cancer support group	45.0	52.5
The patient has friends who work in the health care system	23.7	35.3
Patient readiness to participate		
The patient is emotionally ready for decision-making	96.1	92.5
The patient wants to participate in making the treatment decision	95.0	90.7
The patient seeks a second medical opinion	26.2	18.6
Patient information		
The patient is prepared (knowledgeable about disease and treatment) for the consultation	84.1	70.9
Providing written information to the patient	72.5	45.6
Physician–patient relationship		
The patient trusts me	98.0	99.5

¹Percentages are based on valid cases only. The largest number of missing cases for oncologists for any of the above variables is 4. The comparable number for surgeons is 8.

Discussion

Based on the socio-demographic differences between oncologists and surgeons in this study, one might have expected to find differences between the two specialties in their definitions, comfort level and self-reported use of the various treatment decision-making approaches presented to them. For example, one might expect that oncologists, who were frequently younger than surgeons, would be less paternalistic in their orientation because the former would have trained and practised in the current era where paternalism is a less commonly accepted approach to treatment decision-making than it was earlier. However, this was not the case. The vast majority of physicians in both specialties expressed high levels of comfort with example 4, the shared approach (87% of oncologists and 89% of surgeons). This example depicted simultaneous sharing of each stage of the decision-making process by both the physician and patient. This was also the example that the vast majority of physicians cited as illustrating a shared approach in our previous analysis.⁹

These findings suggest a considerable consensus among our study physicians with respect to the definition of shared decision-making and their desire to participate in this process. Despite variation in the medical literature on the meaning of this concept and despite variations in socio-demographic characteristics of oncologists and surgeons, Ontario cancer specialists seem to hold similar perceptions of what shared decision-making means which go beyond information transfer to include the simultaneous sharing of all phases of the decision-making process as depicted in our conceptual framework.^{1,2} This is an important finding because implementation of shared decision-making and physician training in this approach requires an explicit understanding and at least some degree of consensus on the defining characteristics of this approach.

Less than 17% of physicians of either specialty expressed a high level of comfort with the paternalistic approach to decision-making. This suggests that, for the most part, study physicians want patients to be involved in treatment

decision-making to some extent. Alternatively, it is possible that physicians may have been reluctant to report that they feel very comfortable making decisions in a paternalistic way.

Thirty-five per cent of oncologists and 42% of surgeons reported high levels of comfort with example 3 (the informed approach). This latter finding suggests that many physicians in our study did not fully feel comfortable giving the patient total autonomy to make the treatment decision. Rather, many physicians felt an investment in the treatment decision that is made and want their preferences to be considered in the process.^{1,2}

Although example 4 as defined in our conceptual framework was identified by the highest proportion of physicians of both specialties as their usual approach to treatment decision-making, there was a considerable discrepancy between physicians' reported comfort level with example 4 and their self-reported use of this approach. Why, then, did some physicians, who felt very comfortable with this approach, not use it more in practice?

Our data on perceived barriers to treatment decision-making with patients may shed some light on this issue. We found, as have others¹² that the key system-related factor identified as a barrier to shared decision-making was insufficient time to spend with patients. In our study, this was especially the case with oncologists. This finding is not surprising. From other data in this study, it is clear that physicians want patients to participate, think that patients need to be fully informed to do so, and need time to absorb the emotional impact of the diagnosis before making a treatment decision. All of these processes take time. Moreover, oncologists, more than surgeons, felt that patients sometimes received conflicting treatment recommendations. This perception may be because surgeons sometimes referred their patients post-surgery to a cancer specialist for a particular type of adjuvant therapy rather than for a consultation about which, if any, adjuvant therapies would be appropriate to try in this particular case.

A substantial minority of physicians also felt that they had insufficient information to make a

treatment decision at the first patient consultation. Physician–patient communication factors such as cultural differences and ways of framing information on treatment options were not viewed as problematic for physicians in either specialty. Far more important, from the physicians' perspective, were patient-related factors such as patient understanding of treatment information that would enable them to participate in treatment decision-making, patient emotional readiness and willingness to participate, and ability to reach closure on the treatment decision.

We do not know how these physicians arrived at these perceptions or the extent to which they actually reflect their patients' views. While other researchers have reported that, in general, a significant minority of patients have been found not to want to directly participate in a shared or informed approach.^{13–16} breast cancer patients, in particular, have typically expressed higher preferences for involvement in this process.¹⁷ As emphasized in our original conceptual papers on shared decision-making,^{1,2} if only one party to the interaction is willing or is perceived to be willing to engage, a shared process will not occur. One party's willingness is a necessary but not sufficient condition for it to happen. We think it is the physician's role to actively elicit patient preferences in this regard, rather than to assume what the patient is thinking.

Stevenson *et al.*¹⁸ undertook a study in Britain of general practitioners to explore the extent to which the first two conditions for shared decision-making discussed in our conceptual framework were implemented by physicians in patient–physician encounters concerning medication use. They found little evidence that both the patient and the physician were involved in the decision-making process (condition 1) or that both parties shared information (condition 2). Consequently, there was no basis on which to build a consensus about the preferred treatment (condition 3) and reach an agreement on which treatment to implement (condition 4).

Physicians in the Stevenson *et al.* study¹⁸ identified a number of health system barriers to

shared decision-making such as time pressures, hospital based training which encouraged paternalistic practice, and the increased emphasis on opportunistic screening in general practice which was felt to interrupt the natural flow of consultations and make it more difficult to engage in shared decision-making. As in our study, the belief that patients lack the will or ability to participate in decision-making was also cited as a barrier.

Researchers¹⁹ have suggested other barriers to shared treatment decision-making such as an embedded power imbalance between physicians and patients, and conflict between the physician's own treatment preferences and those of other patients. This latter finding again supports the idea that many physicians may not want to give the full decision-making authority to the patient (clinical example 3) but instead feel an investment in the treatment decision.

A potential limitation of this study is its focus on physicians treating women with early-stage breast cancer. Oncologists and surgeons in this clinical practice area have been exposed to many messages about the importance of patient participation in treatment decision-making. The high profile of this issue may not be as prominent in other medical fields. To assess the generalizability of our findings to other types of physicians, this study needs to be replicated with physicians specializing in different areas of medicine.

Another limitation of the paper is that data on physicians' usual approach to treatment decision-making is based on self-reports only, rather than observed behaviour and there may be a discrepancy between the two. Without independent data on actual practice, we cannot verify the degree of agreement between what these physicians say they do and what they actually do. This would be an important issue to address in future research.

Conclusion

We found a substantial gap between self-reported comfort levels with shared decision-making and self-reported use of this approach among

the study physicians. Barriers were identified by these physicians that may hinder more widespread involvement of patients in the treatment decision-making process. Key facilitators identified included more time during each encounter, patients' emotional readiness to engage in the process, patient support, information and trust in the physician. Processes of care that provide physicians and patients with adequate time for information exchange and deliberation about treatment options are likely to facilitate shared decision-making. In addition, patient decision aids, administered before or during the consultation, that help to improve patient understanding of information and support deliberation of treatment alternatives may also be useful. More research is needed to identify contextual, physician, patient, and interaction factors that will facilitate shared decision-making in the medical encounter and help both parties create an environment conducive to implementing this approach to the extent desired.

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