

The role of doctor's opinion in shared decision making: what does shared decision making really mean when considering invasive medical procedures?¹

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Accepted for publication

29 November 2004

Keywords: doctor–patient communication, invasive medical procedures, patient preferences, shared decision making

¹This paper was presented at the Eighth Biennial Conference of the European Society for Medical Decision Making, Taormina, Sicily, 2002.

Abstract

Objective The goal of this study was to gain understanding about patients' perspectives on decision making in the context of invasive medical interventions and whether patients' decision-making preferences influenced the type of information they desired to be provided by physicians.

Design Questionnaire study of consecutive patients in a university-based general medicine clinic.

Interventions Patients were presented with a randomized list of three types of information that physicians could provide (risk, benefit and physician's opinion on whether they should undergo the procedure). Patients were asked whether they preferred patient-based, physician-based, or shared decision making and then were asked to select which one or combination of these three information types was most important to them in their own decision making. Patients were also asked to self-report on how many invasive procedures they had undergone in their own lives.

Participants A total of 202 consecutive patients (mean age = 65.1 years, SD = 12.3, range 28–88; mean education 13.3 years, SD 2.9, range 2–23).

Main outcome measures Patient reports.

Results Of the 202 patients, two patients reported no decision-making preference. These two patients were excluded from the analysis. Of the 200 remaining patients, 62.5% (125/200) preferred shared, 22.5% (45/200) preferred physician-based, and 15.5% (31/200) preferred patient-based decision making. More than half of all subjects chose physician opinion as the most important type of

information for decision making. Older patients (odds ratio 1.028; confidence interval 1.003–1.053) were more likely to have ranked the doctor's opinion as the most important in their decision making for invasive medical interventions.

Conclusions Although most patients want to share decision making with their physicians regarding invasive procedures, the majority of these patients report relying on the doctor's opinion on whether to undergo the procedure as the most important information in their own decision making.

Introduction

Studies conducted in a variety of settings have found that patients prefer to be involved in decisions about their medical care.^{1–3} It is now widely accepted that patients should be given the opportunity to participate in decisions by applying a model of shared decision making.

The conceptual framework for shared decision making relies on ethical, decision analytic and legal perspectives. The US Preventive Services Task Force has defined shared decision making as 'a process in which patients are involved as active partners with the clinician in clarifying acceptable medical options and in choosing a preferred course of clinical care.'⁴

Shared decision making is particularly applicable to decision situations when some patients may benefit from an intervention but others may not.^{5,6} Previous research has also found that patients are more likely to prefer shared decision making for non-urgent or non-life threatening conditions.⁷

Efforts to improve shared decision making require a clear definition of the nature of the information to be transferred from the provider to the patient. The most common approaches to this definition have been derived from the judicial doctrine of informed consent⁸ and decision analyses based on the utilities of health outcomes.^{9–11} In both these approaches, the primary information used in structuring the decision is the risks and benefits of alternative treatments. If patients used formal models to make medical decisions, then extensive risk and benefit information would be well suited to facilitate this task. However, most patients

construe their role as a partnership with the provider in the decision-making task. In this case, details of the risks and benefits may be less important than an understanding of how the provider weighs information in formulating a preference. Thus, how the patient defines participation in decision making would be expected to influence the types of information that the patient desires in a shared decision-making context.

We conducted this study to gain understanding about patients' perspectives on decision making in the context of invasive medical interventions and whether their preferences influenced the type of information they desired to be provided by physicians. We also examined what information patients consider most important in their own decision making about whether to undertake an invasive medical intervention.

Methods

This study was approved by the Institutional Review Board of the Department of Veterans Affairs Medical Center, Portland, Oregon. Informed consent to participate in this study was obtained from each patient.

We studied consecutive patients being seen for their medical problems in the General Medicine Clinic of the Department of Veterans Affairs Medical Center, Portland, Oregon. Patients were pre-screened by the principal investigator (DJM) and those with moderately severe or severe acute medical or mental health complaints were excluded from study participation.

First, patients were presented with the following definition of an invasive medical procedure:

An 'invasive medical procedure' is an intervention that requires that a physician use a device either to inspect an organ visually to look for a medical condition or disease state or to measure the function of an organ or disease state. In addition, there may be a biopsy of a tissue or bodily organ to be sent for pathological analysis to determine whether there is a medical condition or disease state present in the patient.

Invasive medical interventions are of two types: diagnostic and therapeutic.

A diagnostic invasive procedure may be used to diagnose whether the medical condition or disease state is present. A therapeutic invasive procedure may be used to treat a medical condition or disease state through the insertion of a sterile tube into the body to administer drug treatment or to physically remove or repair an obstruction.

Examples of diagnostic and therapeutic invasive procedures include:

- Upper endoscopy conducted by a gastrointestinal (GI) doctor who inserts a sterile instrument into your mouth and manoeuvres into your oesophagus, stomach and first part of the intestine, to look for the presence of a medical condition or disease state related to these organs.
- Lower endoscopy, flexible sigmoidoscopy or colonoscopy conducted by a GI doctor who inserts a sterile instrument into your rectum and manoeuvres it through the lower intestinal tract to look for the presence of a medical condition or disease state related to these organs.
- Bronchoscopy conducted by a lung (pulmonary) doctor who inserts a sterile scope (bronchoscope) through your nose or mouth into your lungs to look for the presence of a medical condition or disease state related to your lungs.
- Cardiac catheterization conducted by a heart (cardiology) doctor who inserts a sterile tube (catheter) into the artery in your groin and traces the tube into your heart to obtain measurements of your heart function or into the openings of your arteries supplying blood to the heart (coronary arteries) to look for blockages.
- Stent placement conducted by a heart (cardiology) doctor who places a stent into your coronary arteries to relieve blockages in an artery supplying the heart muscle.
- Biopsy conducted through any of the above invasive visualizing procedures to visualize a tissue or organ and to biopsy (take one or more small pieces of the tissue or organ) for pathological analysis.
- Interventional radiology conducted by a specially trained radiologist who inserts a tube into your body and injects a dye to visualize a blood vessel, an organ, or other body part to diagnose or treat a condition.

Patients were asked to complete a survey, containing the following items.

When your physician discusses an invasive medical intervention with you to see if you would want to undertake the intervention, your physician can present you with three types of information:

- Risk information (information about how risky the intervention is to you)
- Benefit information (information about how you would benefit from the intervention)
- The doctor's opinion on whether you should undergo the intervention

Study subjects were asked to answer two questions:

Question 1. Which of the above three types of information is most important to you when you are asked to consider undergoing an invasive medical intervention as defined above?

When you read the list below, is one of the three types of information listed the 'most important' information that you consider when you have to make a decision on whether to accept or refuse an invasive medical intervention?

_____ Yes, one type of information is most important to me for my decision making.

_____ No, more than one type of information is most important to me for my decision making.

If you answered 'yes' to Question 1, please put a '1' next to that type of information most important to you for your decision making:

- Risk information _____
- Benefit information _____
- The doctor's opinion on whether the procedure should be done in your case _____

If you answered 'no' to question 1, then more than one type of information is most important to you for your decision making. Please specify which are the most important types of information using the following rankings:

- If all three types are important to you, please write a '1' by each information type.
- If an item of information is not important to you, write a '0'.
- If some other combination of information is important to you, please order the information by placing a '1', '2', or '3' on how you rank the information in terms of their importance to you in your decision making:

- Risk information _____
- Benefit information _____
- The doctor's opinion on whether the procedure should be done in your case _____

Question 2. When you make decisions in medicine related to invasive medical procedures, who do you prefer to make the decision:

- I prefer to make the decision myself: _____
- I prefer to have the doctor make the decision for me: _____
- I prefer to share the decision making with my doctor: _____

Patients were then asked to write down their age, highest level of formal education completed and the number of invasive medical procedures they had undergone in their own lives. In order to determine whether any patient characteristics

or preferences were related to preference for types of information, we performed a logistic regression analysis. The dependent variable was created by dividing the subjects into two groups. Group 1 was composed of those subjects who ranked doctor's opinion as the most important information type for their decision making. Group 2 was composed of all other subjects. The independent variables included age, number of years of formal education completed and the number of invasive procedures the patients reported that they had undergone.

Results

In our study, 202 consecutive patients (mean age = 65.1 years, SD = 12.3, range 28–88; mean education 13.3 years, SD 2.9, range 2–23) were approached for participation, and all agreed to participate. Participants included 180 men and 22 women.

Role in decision making

Of the 202 patients, two patients reported no decision-making preference. These two patients were excluded from the analysis. Of the 200 remaining patients, 62.5% (124/200) preferred shared, 22.5% (45/200) preferred physician-based and 15.5% (31/200) preferred patient-based decision making. Over 40% of patients in each category of decision making (patient-based, physician-based and shared decision making) reported that the doctor's opinion on whether they should undergo the procedure was the most important for their decision making (Table 1). The proportion of patients with this preference

Types of information rated as 'most important for decision making' by patients	Patient based (n = 31)	Shared decision making (n = 124)	MD based (n = 45)
Doctor's opinion	42% (13/31)	55% (68/124)	73% (33/45)
Risk or benefit (information or some combination of risk-benefit and doctor's opinion information)	58% (18/31)	45% (56/124)	27% (12/45)

Table 1 Preferences for type of decision making vs. type of information ranked by patients as 'most important' for their decision making

was higher in the groups desiring greater physician involvement in decision making. Forty-two per cent (13/31) of patients who reported wanting patient-based decision making ranked doctor's opinion only as the most important information for their decision making; 55% (68/124) of patients who reported wanting shared decision making ranked doctor's opinion as most important for their decision making; and 73% (33/45) of patients who reported wanting physician-based decision making ranked doctor's opinion as the most important for their decision making (Table 1). Fifty-six per cent (102/178) of men and 45% (10/22) of women ranked doctor's opinion as the most important factor in the decision making.

Doctor's opinion only vs. other types of information alone or in combination

The logistic regression indicated that older patients (odds ratio 1.028; confidence interval 1.003–1.053) were more likely to have ranked the doctor's opinion as the most important in their decision making for invasive medical interventions (Table 2). Prior education and number of invasive procedures the patient underwent in his or her lifetime were not independently associated with information preference.

Discussion

Shared decision making in this study was defined as a framework where both the patient and the physician had a role in the actual decision making involving diagnostic treatments. We distinguished shared decision making from two other types of decision making: the patient himself or

herself making the decision or the patient wanting the physician to make the decision on the patient's behalf. We found that, among primary care patients, the majority of patients desire to share decision making with their physicians. Yet, our study also shows that, no matter what role the patients report they want in decision making, they frequently rate the doctor's opinion on whether the intervention should be performed as the most important information their physician can provide them. This is not to say that these patients are not interested in the risks related to invasive procedures. We have previously reported that over 90% of general medical patients want to know about risk information.¹²

Models of decision making focusing on the comparison of risks and benefits may not be a good fit with patients' frameworks for weighing information. Patients, particularly older patients, may be dissatisfied with physician explanations that do not provide the physician's opinion as a dominant focus of that explanation. Our study suggests that such models are lacking if they do not have an explicit role for the provision of the doctor's opinion on which alternative is best for the patient.

Invasive procedures

Our study examined only decision making as applied to invasive medical interventions. However, it is important to note that judicial opinions have tended to be based on lawsuits involving invasive medical interventions.¹³ The court system has also emphasized attention to the doctor's opinion as not only an integral part of the doctrine of informed consent, but also as a main component of the fiduciary relationship that exists

Table 2 Patient characteristics in relation to patient preferences for type of information

	Doctor's opinion only (<i>n</i> = 112)	Risk/benefit information alone or in combination with doctor's opinion (<i>n</i> = 88)
Age (mean number of years)	66.9 (range 37–86; SD = 11.5)	62.9 (range 28–88; SD 13.0), <i>P</i> = 0.027
Education (mean number of years of formal education completed)	12.9 (range 2–23; SD = 3.2)	13.7 (range 6–20; SD = 2.4), <i>P</i> = 0.136
Invasive procedures (mean number of invasive procedures undergone in one's life)	6.08 (range 0–57; SD = 9.0)	10.4 (range 0–400; SD = 44.5), <i>P</i> = 0.361

between a patient and a physician. Yet, current scientific frameworks have lagged behind the court system in terms of articulating the precise roles doctors' opinions have within optimal decision-making frameworks. Our study suggests that patients not only want their doctors' opinions but also consider these opinions as the most important factor in their decision making. More explicit attention needs to be focused on articulating the role of the doctor's opinion in decision modeling approaches in patients with consideration of how sick the patients are at the time they are approached for decision making.

Our study had the following limitations. First, our sampling of patients was confined to one clinic. Secondly, our study relied on the use of a hypothetical scenario (not one that patients were currently facing in their own lives). Thirdly, our study relied on the use of a forced choice by participants. Fourthly, because the study was conducted among military veterans, women were under-represented in our sample. Our findings may not be generalizable to other groups of women patients.

We conclude that the doctor's opinion remains a very important factor in patient decision making and needs to be provided to patients who want it. This is particularly important for older patients. The very notion of shared decision making for these patients, in fact, may mean that the physician is sharing his or her opinion on what should be done. The clinical importance of age on preferred role needs to be addressed. The key point here is that people need to be asked what their preferences are for decision making (in particular, whether they prefer a more patient based, a more physician based or an approach based on a variant of shared decision making).

Acknowledgements

No potential conflicts of interest exist.

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