

Doctor-Patient Communication: A Review

Jennifer Fong Ha, MBBS (Hons), Dip Surg Anat,^{*†‡} Nancy Longnecker, PhD[‡]

^{*}Sir Charles Gairdner Hospital, Nedlands, Western Australia

[†]Royal Perth Hospital, Perth, Western Australia

[‡]University of Western Australia, Nedlands, Western Australia

ABSTRACT

Effective doctor-patient communication is a central clinical function in building a therapeutic doctor-patient relationship, which is the heart and art of medicine. This is important in the delivery of high-quality health care. Much patient dissatisfaction and many complaints are due to breakdown in the doctor-patient relationship. However, many doctors tend to overestimate their ability in communication. Over the years, much has been published in the literature on this important topic. We review the literature on doctor-patient communication.

INTRODUCTION

“Medicine is an art whose magic and creative ability have long been recognized as residing in the interpersonal aspects of patient-physician relationship.”¹

A doctor's communication and interpersonal skills encompass the ability to gather information in order to facilitate accurate diagnosis, counsel appropriately, give therapeutic instructions, and establish caring relationships with patients.^{2–4} These are the core clinical skills in the practice of medicine, with the ultimate goal of achieving the best outcome and patient satisfaction, which are essential for the effective delivery of health care.^{5,6}

Basic communication skills in isolation are insufficient to create and sustain a successful therapeutic doctor-patient relationship, which consists of shared perceptions and feelings regarding the nature of the problem, goals of treatment, and psychosocial support.^{2,7} Interpersonal skills build on this basic

Address correspondence to:

Jennifer Fong Ha, MBBS

Sir Charles Gairdner Hospital

Hospital Avenue

Nedlands 6009, Western Australia

Tel: 60 8 9346 3413

Fax: 60 8 9346 4847

Email: jenha81@yahoo.com.au

Key Words: Benefits, communication, doctor-patient relationship, review, strategies

communication skill.² Appropriate communication integrates both patient- and doctor-centered approaches.⁴

The ultimate objective of any doctor-patient communication is to improve the patient's health and medical care.² Studies on doctor-patient communication have demonstrated patient discontent even when many doctors considered the communication adequate or even excellent.⁸ Doctors tend to overestimate their abilities in communication. Tongue et al⁹ reported that 75% of the orthopedic surgeons surveyed believed that they communicated satisfactorily with their patients, but only 21% of the patients reported satisfactory communication with their doctors. Patient surveys have consistently shown that they want better communication with their doctors.²

The principles of patient-centered medicine date back to the ancient Greek school of Cos.¹⁰ However, patient-centered medicine has not always been common practice. For example, in the 1950s to 1970s, most doctors considered it inhumane and detrimental to patients to disclose bad news because of the bleak treatment prospect for cancers.^{11,12} The medical model has more recently evolved from paternalism to individualism. Information exchange is the dominant communication model, and the health consumer movement has led to the current model of shared decision making and patient-centered communication.^{6,7,13–15}

BENEFITS OF EFFECTIVE COMMUNICATION

Effective doctor-patient communication is a central clinical function, and the resultant communication is the heart and art of medicine and a central component in the delivery of health care.^{7,8,16} The 3 main goals of current doctor-patient communication are creating a good interpersonal relationship, facilitating exchange of information, and including patients in decision making.^{4,7,11,17} Effective doctor-patient communication is determined by the doctors' “bedside manner,” which patients judge as a major indicator of their doctors' general competence.¹

Good doctor-patient communication has the potential to help regulate patients' emotions, facilitate comprehension of medical information, and allow for better identification of patients' needs, perceptions,

and expectations.^{4,7,17} Patients reporting good communication with their doctor are more likely to be satisfied with their care, and especially to share pertinent information for accurate diagnosis of their problems, follow advice, and adhere to the prescribed treatment.^{1,6,7,9,14,16,18-23} Patients' agreement with the doctor about the nature of the treatment and need for follow-up is strongly associated with their recovery.¹⁰

Studies have shown correlations between a sense of control and the ability to tolerate pain, recovery from illness, decreased tumor growth, and daily functioning.^{16,20,24} Enhanced psychological adjustments and better mental health have also been reported.^{6,10,16,25,26} Some studies have observed a decrease in length of hospital stay and therefore the cost of individual medical visits and fewer referrals.^{1,27}

A more patient-centered encounter results in better patient as well as doctor satisfaction.^{1,5-7,9,13,15,18,19,22,25,26,28-30} Satisfied patients are less likely to lodge formal complaints or initiate malpractice complaints.^{1,5,9,19,22,28} Satisfied patients are advantageous for doctors in terms of greater job satisfaction, less work-related stress, and reduced burnout.^{4,26}

THE PROBLEMS

There are many barriers to good communication in the doctor-patient relationship, including patients' anxiety and fear, doctors' burden of work, fear of litigation, fear of physical or verbal abuse, and unrealistic patient expectations.³¹

Deterioration of Doctors' Communication Skills

It has been observed that communication skills tend to decline as medical students progress through their medical education, and over time doctors in training tend to lose their focus on holistic patient care.³² Furthermore, the emotional and physical brutality of medical training, particularly during internship and residency, suppresses empathy, substitutes techniques and procedures for talk, and may even result in derision of patients.³²

Nondisclosure of Information

The doctor-patient interaction is a complex process, and serious miscommunication is a potential pitfall, especially in terms of patients' understanding of their prognosis, purpose of care, expectations, and involvement in treatment.¹² These important factors may affect the choices patients make regarding their treatment and end-of-life care, which can have a significant influence on the disease.³³ Good communication skills practiced by doctors allowed patients

to perceive themselves as a full participant during discussions relating to their health.¹⁰ This subjective experience that influences patient biology is the "biology of self-confidence" described by Sobel, which emphasized the critical role of patients' perception in their healing process.³⁴

Doctors' Avoidance Behavior

There are reported observations of doctors avoiding discussion of the emotional and social impact of patients' problems because it distressed them when they could not handle these issues or they did not have the time to do so adequately. This situation negatively affected doctors emotionally and tended to increase patients' distress.²⁶ This avoidance behavior may result in patients being unwilling to disclose problems, which could delay and adversely impact their recovery.²⁶

Discouragement of Collaboration

Physicians have been found to discourage patients from voicing their concerns and expectations as well as requests for more information.³² This negative influence of the doctors' behavior and the resultant nature of the doctor-patient communication deterred patients from asserting their need for information and explanations.³² Patients can feel disempowered and may be unable to achieve their health goals.³² Lack of sufficient explanation results in poor patient understanding, and a lack of consensus between doctor and patient may lead to therapeutic failure.³²

Resistance by Patients

Today, patients have recognized that they are not passive recipients and are able to resist the power and expert authority that society grants doctors.³⁵ They can implicitly and explicitly resist the monologue of information transfer from doctors by actively reconstructing expert information to assert their own perspectives, integrate with their knowledge of their own bodies and experiences, as well as the social realities of their lives.³⁵ Being attentive to social relationships and contexts will ensure that this information is received, and most importantly, acted on.³⁵ Lee and Garvin³⁵ asserted that inequality, social relations, and structural constraints may be the most influential factors in health care. This was illustrated in their study when female patients from a lower socio-economic demographic in the Appalachian region of the United States modified advice to avoid sun exposure and, by taking into account societal pressures that equated tanned skin with beauty, continued tanning despite knowledge of the risks associated with sun exposure and skin cancer (Figure). The study by Lee and Garvin³⁵ demonstrates



Example of influences that a patient takes into account on the doctor's advice.

the need to take into account social factors in the production, dissemination, and use of knowledge.

STRATEGIES FOR IMPROVEMENT Communication Skills

Communication skills involve both style and content.³⁶ Attentive listening skills, empathy, and use of open-ended questions are some examples of skillful communication. Improved doctor-patient communication tends to increase patient involvement and adherence to recommended therapy; influence patient satisfaction, adherence, and health care utilization; and improve quality of care and health outcomes.^{7,37}

Breaking bad news to patients is a complex and challenging communication task in the practice of medicine.¹² Relationship building is especially important in breaking bad news.¹⁷ Important factors include understanding patients' perspectives, sharing information, and patients' knowledge and expectations.^{12,38} Miscommunication has serious implications, as it may hinder patients' understanding, expectations of treatment, or involvement in treatment planning.¹² In addition, miscommunication decreases patient satisfaction with medical care, level of hopefulness, and subsequent psychological adjustment.¹²

Baile et al¹² reported that patients often regard their doctors as one of their most important sources of psychological support. Empathy is one of the most powerful ways of providing this support to reduce patients' feelings of isolation and validating their feelings or thoughts as normal and to be expected.

Communication Training

Doctors are not born with excellent communication skills, as they have different innate talents.

Instead they can understand the theory of good doctor-patient communication, learn and practice these skills, and be capable of modifying their communication style if there is sufficient motivation and incentive for self-awareness, self-monitoring, and training.^{11,25} Communication skills training has been found to improve doctor-patient communication.^{39,40} However, the improved behaviors may lapse over time.²⁸ It is therefore important to practice new skills, with regular feedback on the acquired behavior.²⁸ Some have said that medical education should go beyond skills training to encourage physicians' responsiveness to the patients' unique experience.¹⁰

Collaborative Communication

Collaborative communication is a reciprocal and dynamic relationship, involving the 2-way exchange of information.⁴¹ In an ideal world, doctors should collaborate with their patients to provide the best care because doctors tend to make decisions based on quick assessments, which may be biased.⁴¹ This requires the doctors to take time or set up opportunities to offer and discuss treatment choices to patients and share the responsibility and control with them.^{7,11} Successful information exchange ensures that concerns are elicited and explored and that explanations of treatment options are balanced and understood to allow for shared decision making.^{7,11,14,42} In this approach, the doctor facilitates discussion and negotiation with patients and the treatment options are evaluated and tailored to the context of the patients' situation and needs, rather than a standardized protocol.^{7,11,42} Care options need to be collaborative between doctor and patient, taking into account patient expectations, outcome prefer-

ences, level of risk acceptance, and any associated cost to maximize adherence and to assure the best outcome.³²

Conflict Management

Feudtner⁴¹ described situations in pediatric palliative care in which the cause of conflicts was often not expressed. The root source was often unspoken and thus unclear or unknown to one or even both parties, which generated feelings of discord. Conflict is often a challenging situation as it can evoke feelings of helplessness, frustration, confusion, anger, uncertainty, failure, or sadness.¹¹ The doctor should recognize these feelings and develop skills to identify problematic responses in the patient or themselves to de-escalate the situation and enable the relationship problems to be turned into a clinical success.¹¹

In addition to minimizing avoidance behavior, which prevents patients from expressing opinions, effective doctor-patient communication should involve productive conversation, which involves understanding of both parties' perspectives, by shifting from a perspective that is rigidly certain of one's belief to a more exploratory approach that strives to understand the situation from another perspective.⁴¹ Recognizing the impact of patient reciprocation of communication and affect in a medical visit is important as it may help create positive exchanges to defuse negative patterns.²⁵

Health Beliefs

Beliefs and values affect the doctor-patient relationship and interaction.⁹ Divergent beliefs can affect health care through competing therapies, fear of the health care system, or distrust of prescribed therapies.³⁷ This perception gap may negatively affect treatment decisions and therefore may influence patient outcomes despite appropriate therapy.¹⁷ Although doctors use a biomedical model to understand illness, patient beliefs and values are influenced by social and behavioral factors as well as biology or anatomy.¹⁷

It is important to identify and address perceived barriers and benefits of treatment to improve patient adherence to medical plans by ensuring that the benefits and importance of treatment are understood.¹⁷ Doctors should understand patients' functional meaning of disease, as well as the relationship meaning and symbolic meaning, followed by a summary of this information and telling the patient the problem from the doctor's perspective and, finally, asking the patient to summarize what was said.¹⁷ Agreement between doctor and patient is a key variable that influences outcome.¹⁷

Patients construct their own version of adherence according to their personal world views and social

Approaches in Assessment of Doctor-Patient Communication

Recording

- Standardized observation
- Audiotape/videotape

Surveys

- Quantitative measures
- Qualitative measures

contexts, which can result in a divergent expectation of adherence practice.^{9,13,15} Good doctor-patient communication is a mechanism used to gain an understanding of patients' social context, expectations, and experience.^{9,13,42} With collaborative communication, a particular condition, perspective, or fact can be identified, allowing for a view from a different perspective, drawing attention for a better assessment and the subsequent treatment.⁴¹ In this model, effective doctors acknowledge and respect patients' rights to make decisions and choices.¹³

LIMITATIONS AND FUTURE DIRECTIONS

Clinical research will guide improvements in determining best practice. Randomized controlled trials are able to effectively control bias and chance in evaluating efficacy. However, this is easier said than done in terms of investigations of communication. A majority of the studies reported in this review were cross-sectional.⁷ However, doctor-patient relationships are frequently long term, involving multiple visits, and this may limit the generalizability of the studies.

The approaches used in assessing doctor-patient communication and health outcomes in the literature are shown in the Table.^{7,30} Behavioral and observational components involve recordings to evaluate the actual medical encounter and analyze it in order to code behavior based on one of the observational instruments with respect to task and socioemotional behaviors.^{7,14,30} The patients' perception measures are assessed via surveys to rate frequency, occurrence, or other elements of physician behavior.^{7,14,43} Patients' perceptions may have a greater impact on their own outcomes than physician behavior, but their perceptions are subjective and subject to bias, and patients may be influenced by other factors such as their health status and state of mind and may not accurately reflect the reality of the consultation.⁷

Comparisons between studies are difficult as numerous tools are available but no single tool is completely satisfactory. Different studies use combinations of different tools for this reason. In addition, items are generated for measurement of patient

perceptions without predefined categories of doctors' behaviors.⁷

Qualitative measures, although difficult to gauge, can provide a deeper understanding of patients' subjective perceptions. Clinically the most easily quantified outcomes are physiological measures, but these may not be possible in many surgical or chronic illnesses.¹⁹ They are also highly specific and may contribute minimally to an understanding of the patient's overall health.¹⁹ Satisfaction is a complex notion with many determinants and is used as the ultimate outcome of the delivery of health care services as it is a proxy for health, and its rating provides useful information about the structure, process, and outcomes of care.^{21,44} Morss et al, as quoted by Alazri and Neal,²¹ reviewed 21 relevant qualitative studies and found that the domains used to assess patient satisfaction with care included availability of the physician, coordination in a multidisciplinary team, competence, communication and relationships, ability to provide information and educate patients, responsiveness to emotional needs of patients, ability to provide holistic care, and ability to support patients' decision making. Satisfaction contributes to better medical outcomes through fulfillment of patients' values and expectations.²¹ Patients who experience good processes and outcomes of care are more satisfied and therefore more likely to continue maintaining the existing doctor-patient relationship.²¹

The main independent predictors of satisfaction have been patients' perceptions of communication and partnership, and a positive doctor approach.²⁷ Satisfaction strongly predicts compliance with treatment and medical outcomes in acute illness.²⁷ However, its use in medical interviews to relate to patient-centeredness may be inaccurate as its scales include subscales on communication.²⁷

A majority of the literature frequently uses patient satisfaction and adherence to determine the efficacy of the doctor-patient relationship.^{7,39} The ability to generalize is limited, depending on, among other things, the size and representative nature of the specific population studied.^{7,36} Satisfaction needs to be investigated with a tightly defined and homogeneous case mix to explore cause and effect of various factors on doctor-patient communication.²⁷ In addition, the Hawthorne effect (awareness that one is being observed and evaluated) is difficult to avoid in observational studies and may affect behavior.^{5,45}

CONCLUSION

"The patient will never care how much you know, until they know how much you care." (Terry Canale in his American Academy of Orthopaedic Surgeons Vice Presidential Address⁹)

Doctor-patient communication is a major component of the process of health care.⁴⁶ Doctors are in a unique position of respect and power. Hippocrates suggested that doctors may influence patients' health.¹⁹ Effective doctor-patient communication can be a source of motivation, incentive, reassurance, and support.^{19,47} A good doctor-patient relationship can increase job satisfaction and reinforce patients' self-confidence, motivation, and positive view of their health status, which may influence their health outcomes.^{19,47}

Most complaints about doctors are related to issues of communication, not clinical competency.^{9,29,42} Patients want doctors who can skillfully diagnose and treat their sicknesses as well as communicate with them effectively.³²

Doctors with better communication and interpersonal skills are able to detect problems earlier, can prevent medical crises and expensive intervention, and provide better support to their patients. This may lead to higher-quality outcomes and better satisfaction, lower costs of care, greater patient understanding of health issues, and better adherence to the treatment process.^{29,32} There is currently a greater expectation of collaborative decision making, with physicians and patients participating as partners to achieve the agreed upon goals and the attainment of quality of life.³²

REFERENCES

- Hall JA, Roter DL, Rand CS. Communication of affect between patient and physician. *J Health Soc Behav.* 1981;22(1):18–30.
- Duffy FD, Gordon GH, Whelan G, et al. Assessing competence in communication and interpersonal skills: the Kalamazoo II report. *Acad Med.* 2004;79(6):495–507.
- van Zanten M, Boulet JR, McKinley DW, DeChamplain A, Jobe AC. Assessing the communication and interpersonal skills of graduates of international medical schools as part of the United States Medical Licensing Exam (USMLE) Step 2 Clinical Skills (CS) Exam. *Acad Med.* 2007;82(10 Suppl):S65–S68.
- Brédart A, Bouleuc C, Dolbeault S. Doctor-patient communication and satisfaction with care in oncology. *Curr Opin Oncol.* 2005;17(14):351–354.
- Brinkman WB, Geraghty SR, Lanphear BP, et al. Effect of multisource feedback on resident communication skills and professionalism: a randomized controlled trial. *Arch Pediatr Adolesc.* 2007;161(1):44–49.
- Henrdon J, Pollick K. Continuing concerns, new challenges, and next steps in physician-patient communication. *J Bone Joint Surg Am.* 2002;84-A(2):309–315.
- Arora N. Interacting with cancer patients: the significance of physicians' communication behavior. *Soc Sci Med.* 2003;57(5):791–806.
- Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ.* 1995;152(9):1423–1433.
- Tongue JR, Epps HR, Forese LL. Communication skills for patient-centered care: research-based, easily learned techniques for medical interviews that benefit orthopaedic surgeons and their patients. *J Bone Joint Surg Am.* 2005;87:652–658.

10. Stewart M, Brown JB, Donner A, et al. The impact of patient-centered care on outcomes. *J Fam Pract.* 2000;49(9):796–804.
11. Lee SJ, Back AL, Block SD, Stewart SK. Enhancing physician-patient communication. *Hematology Am Soc Hematol Educ Program.* 2002;1:464–483.
12. Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES—a six-step protocol for delivering bad news: application to the patient with cancer. *Oncologist.* 2000;5(4):302–311.
13. Sawyer SM, Aroni RA. Sticky issue of adherence. *J Paediatr Child Health.* 2003;39(1):2–5.
14. Kindler CH, Szirt L, Sommer D, Häusler R, Langewitz W. A quantitative analysis of anaesthetist-patient communication during the pre-operative visit. *Anaesthesia.* 2005;60(1):53–59.
15. Middleton S, Gattellari M, Harris JP, Ward JE. Assessing surgeons' disclosure of risk information before carotid endarterectomy. *ANZ J Surg.* 2006;76(7):618–624.
16. Roter DL. Physician/patient communication: transmission of information and patient effects. *Md State Med J.* 1983;32(4):260–265.
17. Platt FW, Keating KN. Differences in physician and patient perceptions of uncomplicated UTI symptom severity: understanding the communication gap. *Int J Clin Prac.* 2007;61(2):303–308.
18. Harmon G, Lefante J, Krousel-Wood M. Overcoming barriers: the role of providers in improving patient adherence to antihypertensive medications. *Curr Opin Cardiol.* 2006;21(4):310–315.
19. Kaplan SH, Greenfield S, Ware JE Jr. Assessing the effects of physician-patient interactions on the outcomes of chronic disease. *Med Care.* 1989;27(3 Suppl):S110–S127.
20. Greenfield S, Kaplan S, Ware JE Jr. Expanding patient involvement in care. Effects on patient outcomes. *Ann Intern Med.* 1985;102(4):520–528.
21. Alazri MH, Neal RD. The association between satisfaction with services provided in primary care and outcomes in Type 2 diabetes mellitus. *Diabetes Med.* 2003;20(6):486–490.
22. O'Keefe M. Should parents assess the interpersonal skills of doctors who treat their children? A literature review. *J Paediatr Child Health.* 2001;37(6):531–538.
23. Chen WT, Starks H, Shiu CS, et al. Chinese HIV-positive patients and their healthcare providers: contrasting Confucian versus Western notions of secrecy and support. *ANS Adv Nurse Sci.* 2007;30(4):329–342.
24. Greenfield S, Kaplan SH, Ware JE Jr, Yano EM, Frank HJ. Patients' participation in medical care: effects on blood sugar control and quality of life in diabetes. *J Gen Intern Med.* 1988;3(5):448–457.
25. Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: a meta-analytic review. *JAMA.* 2002;288(6):756–764.
26. Maguire P, Pitceathly C. Key communication skills and how to acquire them. *BMJ.* 2002;325(7366):697–700.
27. Little P, Everitt H, Williamson I, et al. Observational study of effect of patient centredness and positive approach on outcomes of general practice consultations. *BMJ.* 2001;323(7318):908–911.
28. Brown JB, Boles M, Mullooly JP, Levinson W. Effect of clinician communication skills training on patient satisfaction: a randomized, controlled trial. *Ann Intern Med.* 1999;131(11):822–829.
29. Clack GB, Allen J, Cooper D, Head JO. Personality differences between doctors and their patients: implications for the teaching of communication skills. *Med Educ.* 2004;38(2):177–186.
30. Hall JA, Roter DL, Katz NR. Meta-analysis of correlates of provider behavior in medical encounters. *Med Care.* 1988;26(7):657–675.
31. Fentiman IS. Communication with older breast cancer patients. *Breast J.* 2007;13(4):406–409.
32. DiMatteo MR. The role of the physician in the emerging health care environment. *West J Med.* 1998;168(5):328–333.
33. The AM, Hak T, Koëter G, van Der Wal G. Collusion in doctor-patient communication about imminent death: an ethnographic study. *BMJ.* 2000;321(7273):1376–1381.
34. Sobel DS. Rethinking medicine: improving health outcomes with cost-effective psychosocial interventions. *Psychosom Med.* 1995;57(3):234–244.
35. Lee RG, Garvin T. Moving from information transfer to information exchange in health and health care. *Soc Sci Med.* 2003;56(3):449–464.
36. Chiò A, Montuschi A, Cammarosano S, et al. ALS patients and caregivers communication preferences and information seeking behaviour. *Eur J Neurol.* 2008;15(1):55–60. Epub 2007 Nov 14. doi:10.1111/j.1468-1331.2008.02143.x.
37. Diette GB, Rand C. The contributing role of health-care communication to health disparities for minority patients with asthma. *Chest.* 2007;132(5 Suppl):802S–809S.
38. Parker SM, Clayton JM, Hancock K, et al. A systematic review of prognostic/end-of-life communication with adults in the advanced stages of life-limiting illness: patient/caregiver preferences for the content, style, and timing of information. *J Pain Symptom Manage.* 2007;3(1):81–93.
39. Harms C, Young JR, Amsler F, Zettler C, Scheidegger D, Kindler CH. Improving anaesthetists' communication skills. *Anaesthesia.* 2004;59(2):166–172.
40. Bensing JM, Sluijs EM. Evaluation of an interview training course for general practitioners. *Soc Sci Med.* 1985;20(7):737–744.
41. Feudtner C. Collaborative communication in pediatric palliative care: a foundation for problem-solving and decision-making. *Pediatr Clin North Am.* 2007;54(5):583–607.
42. Minhas R. Does copying clinical or sharing correspondence to patients result in better care? *Int J Clin Prac.* 2007;61(8):1390–1395.
43. Hagihara A, Tarumi K. Doctor and patient perceptions of the level of doctor explanation and quality of patient-doctor communication. *Scand J Caring Sci.* 2006;20(2):143–150.
44. Ware JE Jr, Davies AR. Behavioral consequences of consumer dissatisfaction with medical care. *Eval Program Plann.* 1983;6(3–4):291–297.
45. Girón M, Manjón-Arce P, Puerto-Barber J, Sánchez-García E, Gómez-Beneyto M. Clinical interview skills and identification of emotional disorders in primary care. *Am J Psychiatry.* 1998;155(4):530–535.
46. Suárez-Almazor ME. Patient-physician communication. *Curr Opin Rheumatol.* 2004;16(2):91–95.
47. Skea Z, Harry V, Bhattacharya S, et al. Women's perceptions of decision-making about hysterectomy. *BJOG.* 2004;111(2):133–142.