



## Review Article

# Shared decision-making in peri-operative medicine: a narrative review

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## Summary

This review on shared decision-making comes at a time when international healthcare policy, domestic law and patient expectation demand a bringing-together of the patient's values and preferences with the physician's expertise to determine the best bespoke care package for the individual. Despite robust guidance in terms of consent, the anaesthetic community have lagged behind in terms of embracing the patient-focused rather than doctor-focused aspects of shared decision-making. For many, confusion has arisen due to a conflation of informed consent, risk assessment, decision aids and shared decision-making. Although they may well be linked, they are discrete entities. The obstacles to delivering shared decision-making are many. Lack of time is the most widely cited barrier from the perspective of physicians across specialties, with little time available to the anaesthetist at the day-of-surgery pre-operative visit. A more natural place to start the process may be the pre-operative assessment clinic, especially for the 'high-risk' patient. Yet shared decision-making is for all, even the 'low-risk' patient. Another barrier is the flow and the focus of the typical anaesthetic consultation; the truncated format presents the danger of a cursory, 'time-efficient' and mechanical process as the anaesthetist assesses risk and determines the safest anaesthetic. As patients have already decided to proceed with therapy or investigation and may be more concerned about the surgery than the anaesthesia, it is often assumed they will accept whatever anaesthetic is offered and defer to the clinician's expertise – without discussion. Furthermore, shared decision-making does not stop at time of anaesthesia for the peri-operative physician. It continues until discharge and requires the anaesthetist to engage in shared decision-making for prescribing and deprescribing peri-operative medicines.

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## Introduction

Shared decision-making aims to bring together the patient's values and preferences with the physician's expertise to determine the best bespoke care package for the individual [1]. Its increasing prominence is due to a confluence of forces: quality improvement initiatives; the impact of patient advocacy groups; changes in healthcare

policy; the need to distribute limited resources fairly and wisely; and a desire to understand complaints and claims and thereby reduce medicolegal payouts. Along with the development of biopsychosocial models of health, the differentiation of illness from disease and a focus on patient-defined outcomes, shared decision-making is one component of a broader shift towards 'patient-centred

care' – indeed, it has been called the 'pinnacle' of this movement [2].

The concept of shared decision-making has been prominent in the literature for approximately three decades. The 1980s and 1990s saw the publication of highly influential work [3–6] that argued for a move beyond the basic principle of 'informed consent' to a more deliberative interaction featuring robust discussion between doctor and patient about the best way to shape care in alignment with the latter's values and preferences. Commentary, descriptive and interventional research, and policy and institutional initiatives have continued since (Table 1). For example, the Institute for Healthcare Improvement reinforced the importance of patient experience, satisfaction and involvement by including it in its *Triple Aim Framework* [7]. In 2011, Collins and Coulter [8] tried to set the pace in the UK with the headline title '*Making shared decision-making a reality*', and now, in 2019, we are making tentative steps towards the shared decision-making ideal in the peri-operative space [1, 9, 10]. It is apparent from the very gradual pace of shared decision-making work that the ideal is proving harder to deliver than anticipated, for reasons that we will discuss at length below.

Despite these difficulties, achievement of processes that more robustly involve patients in peri-operative decisions remains an important goal. National surveys of inpatient experiences performed in the UK by the Care Quality Commission demonstrate the importance of

**Table 1** Key publications in the evolution of shared decision-making in peri-operative medicine.

1984: Katz. The Silent World of Doctor and Patient [3].
1992: Emanuel & Emanuel. Four models of the physician-patient relationship [4]
1993: Gerteis et al. Through the Patient's Eyes 1993 [5]
1997: Charles et al. Shared decision-making in the medical encounter: what does it mean? (or it takes at least two to tango) [6]
2008: Berwick et al. The Triple Aim: health, care and cost. Cited in [7].
2011: Coulter & Collins. Making shared decision-making a reality. No decision about me without me [8]
2012: Barry, Edgman-Levitan. Shared decision-making – the pinnacle of patient centred care [2]
2017: The SHARE approach. Agency for Healthcare Research and Quality, Rockville, MD [11]
2017: Yentis et al. AAGBI: Consent for Anaesthesia 2017 [9]
2017: Royal College of Surgeons. Consent: Supported Decision-Making [10]
2018: Peri-operative Quality Improvement Programme. 5 National Improvement Opportunities 2018–2019 [1]

involving patients in decisions about their care [12, 13], and some improvements have been made: between 2009, 2013 and 2017 there was an increase from 75% to 78% to 81% of patients responding that their questions relating to their operation were answered in a way they could 'completely' understand. Whether this finding can be extended to anaesthesia remains to be found. In addition to involvement, the evidence supports the need for patients to be offered choices and to have their opinion heard [14], something that is written into the NHS Constitution [15] as part of a patient's rights, and in the GMC's 'Good Medical Practice' guidance for doctors practising in the UK [16].

### Evolution of English law from 'consent' to shared decision-making

It is worth first describing the legal background to the development of shared decision-making as a concept and practice in the UK. In Britain, a recent landmark case, (*Montgomery (Appellant) v Lanarkshire Health Board (Respondant)* [2015] UKSC 11 on appeal from [2013] CSIH 3) [17], changed the landscape for doctors by highlighting the pivotal role of the partnership between healthcare provider and patient and relegating paternalism to the past. The case involved a woman with gestational diabetes and her choice of delivery options; a lower segment caesarean section was not offered, and shoulder dystocia occurred at the time of vaginal delivery, with subsequent injury to the baby. The Law Lords supported Mrs Montgomery and set a new direction in consent, moving away from the Bolam test [18]: being able to demonstrate that you (the medical professional) acted in a way that a responsible body of medical professionals in your field would deem reasonable is no longer a viable defence.

Dependence on the Bolam test had actually been questioned before Montgomery with the Bolitho test [19] (*Bolitho (Deceased) v City and Hackney HA* [1997] 3 WLR 1151), when on appeal the Law Lords placed two caveats onto the 'reasonable professional opinion' Bolam test: consideration must have been given first to both the risks and benefits of the treatment given, and second to the logic upon which that consideration was made – in other words, the decision needed to stand up to interrogation of reason rather than rely on the opinion of learned men. The shift towards shared decision-making has included a number of cases, yet in essence we have travelled from what a body of professionals deem reasonable (Bolam), to whether the practice is justifiable or stands up to an assessment of logic (Bolitho), to what a reasonable patient would want or need to know (Montgomery).

A number of comments in the Montgomery judgement are salient with regard to consent and shared decision-making. When it comes to consent, Lords Reed and Kerr stated, *'The doctor's duty is not fulfilled by bombarding the patient with technical information which she cannot reasonably be expected to grasp, let alone by routinely demanding her signature on a consent form'*. Moving the medical profession towards shared decision-making, the Law Lords highlighted that *'the assessment of whether a risk is material or not cannot be reduced to percentages. The significance of a given risk is likely to reflect a variety of factors besides its magnitude'*, making it essential for the clinician to find out more about the patient's values and preferences to try and determine what may or may not present a material risk. A dialogue with the patient, *'even (among) those doctors who have less skill or inclination for communication'* forms the backbone of shared decision-making; yet this can present an almost insurmountable obstacle in systems of modern healthcare delivery where demand, numbers of patients and expectations outstrip resources in terms of time and money.

## Challenges of the peri-operative context

The obstacles to carrying out shared decision-making become quickly apparent when we turn our attention to the peri-operative setting. The UK anaesthesia community have in many ways been ahead of the UK law in relation to consent [9], but they have lagged behind in terms of embracing the more patient-focused rather than doctor-focused aspects of shared decision-making. Although surgical outpatients have ranked aspects of care related to information and communication as their highest anaesthesia-related priorities [20], the pre-operative context presents several specific challenges to a fleshed-out and patient-centred decision-making process. One unsurprising obstacle is time. Lack of time is the most widely cited barrier to implementing shared decision-making from the perspective of physicians across specialties [21]. In their document, *'Consent: Supported Decision-Making'* [10], the Royal College of Surgeons recognised that *'time pressures can leave little opportunity to discuss diagnoses or treatment options'* (p. 18) and that *'complying with the standard may involve setting aside more time'*. Their firm suggestion was to plan for this increase in clinic time commitment, recommending that surgeons discuss this need with the Medical Director in their hospital [10].

The issue of time is a particular problem for the anaesthetist, who has very little of it on the morning of surgery. The natural place to start shared decision-making

in anaesthetic practice is thus the pre-operative assessment clinic, and this concept has received widespread support [9, 22–24]. The argument is easily won in the high-risk patient, where understandable decisional conflict can be better addressed over more than one visit, giving plenty of time to reflect on the significance of choices or discuss with family members. Yet shared decision-making is for all, including the routine, low-risk, elective patient for minor surgery, because there will always be risk, and there will always be patient and clinician preferences. Anaesthesia consultations carried out directly before surgery do not follow the familiar regimented stages of conventional outpatient consultations [25]: opening overtures; discovery of the patient's reason for attendance; verbal/physical examination; diagnosis; discussion of treatment or further diagnostic procedures; and termination of consultation. Instead, their truncated format presents the danger of a cursory and mechanical consent process for low-risk patients. Sir Ian Kennedy, in a review of a UK hospital's response to a breast surgeon found guilty of performing operations that did not align with his descriptions of said operations to patients, eloquently describes the tendency of consent to slip into an empty administrative routine to be completed as quickly as possible [26] (Point 6.12, p. 52):

*"Further light is cast on the failure to grasp the importance of consent by the practice, which I still encountered in 2013, of clinicians talking of 'consenting' patients. The objections to this awful phrase are not merely linguistic. They go to the heart of a proper understanding of the relationship between patients and clinicians. Consent is a device designed to signal to clinicians that patients are in charge of their own bodies and that clinicians need to ask permission (consent) before doing things to them. If, however, the prevailing culture is one in which the patient is seen as the recipient of whatever is on offer, then consent can come to be seen as some perfunctory exercise to make sure some difficult-to-understand-why hurdle is jumped over. Hence, the patient is 'consented' and the clinician can then get on with things, having had to pause as briefly as possible to tick the consent box."*

Professor Kennedy's account hints at a second difficulty inherent to decision-making in anaesthesia: the position of the anaesthetist within the peri-operative pathway. The surgical patient, by the time he or she speaks with an anaesthetist, has already agreed to a plan for investigation or treatment. Anaesthesia consultations are not done to decide whether the patient will have anaesthesia [27]; the

patient is already somewhat positioned as the 'recipient of whatever is on offer' to use Kennedy's phrase, because he or she has already agreed to an overarching course of care. The patient's and the anaesthetist's assessment and understanding of the risks associated with anaesthesia occur only against the backdrop of a preceding decision, made by the patient and another physician, to undergo the procedure at hand. This inflects the pre-operative consultation in complex ways that must be clarified by further empirical study. It may be the case, for example, that patients have a greater tendency to defer to physicians about anaesthetic decisions because they have already decided on the procedure [28]. It may also be true that anaesthetists do not typically bring up process elements like choice of airway device, medication and route of administration because they view such process elements as matters of 'clinical judgement,' part of the procedural package to which the patient has already consented. However, they commonly initiate discussions about procedural elements such as the choice of regional vs. general anaesthesia [29] even though the 'process' elements can affect peri-operative risk to a similar degree.

Anaesthesia is a highly task-focused specialty. The anaesthetist is presented with a patient, who has a set of comorbidities, and a plan for undergoing a procedure. For the high-risk patient, the task is to assess the risk of morbidity and mortality for that patient's pathology and physiological state according to the anaesthetic and surgical techniques available. In the rush to optimise the patient to ensure the best outcome, some have suggested that anaesthetists should ask the primary care physician to send haemoglobin, electrolytes and glycated haemoglobin results at time of referral. But due to the 'downstream' position of the anaesthetist in the peri-operative pathway, such a strategy is not ideal from the standpoint of shared decision-making. Has the patient been referred by the primary care physician for surgery, or simply for a surgeon's opinion? Is the role of the surgeon to only discuss the knee replacement (for instance), or might they have more options to consider, at which point the patient may need time to decide about or even to refuse surgical intervention, once they have been through a shared decision-making process? One could argue that taking tests in anticipation of surgery (before a decision has been made) is a form of coercion, and it may give rise to unanticipated results that require further investigation that the patient may or may not want. Directing attention to the role of the anaesthetist in the entire peri-operative pathway highlights the fact that decision-making is not a discrete event but a temporally unfolding process [30]. This process begins well before the anaesthetist

becomes involved, and it does not stop when the patient leaves the recovery room: as peri-operative physicians, anaesthetists have an important role to play in ensuring that excellent recovery is a reality [31], and that take-home analgesics are prescribed and deprescribed in a responsible fashion [32].

## Patients' preferred decision-making roles

Another issue particularly germane to shared decision-making in the peri-operative context is the extent to which a given patient prefers to participate in a specific anaesthesia-related decision. Considerable individual variation in patient preferences for involvement in decision-making has been shown [33]. Furthermore, decision-making preferences appear to be changing over time: 43% of analyses conducted between 1974 and 1989 found that a majority of patients preferred to participate in decisions, as compared with 71% of analyses in 2000–2007 [34]. Physicians are generally not proficient at estimating the decision-making preferences of their patients [35], an inaccuracy that is borne out in actual consultations, as the patient-involving behaviours of physicians do not vary in association with variations in patients' self-reported decision-making roles [36]. Unfortunately, this inability to determine how, and to what extent, patients would like to be involved in decisions has been demonstrated in studies that have specifically examined anaesthetists [37]. Professor Kennedy offers an account [26] of a couple in the midst of a decision-making process around breast surgery that vividly illustrates the consequences of a provider's failure to match their interactional approach to the inclinations of a patient and her family (Point 6.11, p. 52):

*"He (Mr Patterson) was incensed to be told by a member of staff dealing with his wife's subsequent complaint, that in deciding whether to have a second operation, 'It is usual practice as part of the consent process for a surgeon to discuss various surgical options with their patient. ... Ultimately, the decision whether or not to undergo surgery... has to be the decision of the patient themselves (sic).' His response, quite rightly in my view, was that 'his wife should not have been put in the position of having to decide on the correct procedure... We were faced with a dilemma we were not qualified to resolve'."*

This reflection also reinforces study findings that confirm the importance patients place on being fully involved without having to necessarily make the final decision [25, 26]. This may frequently be the case in

anaesthesia consultations, where patients may be focused more on wider goals [38] such as the type of surgical procedure they are undergoing, than the granular details of anaesthesia. However, this orientation does not mean that the patient will not value thorough communication with the anaesthetist and this is a dialogue that would be required anyway in order for the physician to ascertain that the patient does not wish to exert strong decision-making power about aspects of anaesthesia.

## Implementation of shared decision-making

In recent years, the medical decision-making community has largely shifted from examining the concept of shared decision-making and its potential effects to pushing to implement it in practice [39, 40]. The most common type of intervention used to pursue implementation of shared decision-making has been the decision aid. Cathy Charles, who played a central early role in theorising the shared decision-making model, has made a convincing argument that, in some circles, decision aids and shared decision-making are now treated as synonymous [41]. Outcomes associated with the implementation of decision aids [42] have at times been attributed to the achievement of shared decision-making [43] when in fact no studies have yet shown that the use of a decision aid changes provider–patient interaction into something resembling shared decision-making.

The concept of shared decision-making was based on moving beyond traditional consent – with its primary focus on information provision – to a model that involved the patient in a deliberative discussion with the physician about what may be the best path forward. That decision aids have become the main vehicle for trying to achieve this type of discussion is thus a somewhat strange development, since their focus is on delivering more information to the patient. Shared decision-making as proposed by its founding theorists contains a deliberation stage, following on from information transfer, that is, fundamentally intersubjective, highly dynamic and spontaneous, and powerfully inflected by social norms, affect and asymmetries of authority and expertise. It is not clear that information provision is the main barrier keeping patients from participating in this stage [44], or that more information will always lead this stage to generate a better decision [45].

Shared decision-making's struggle to truly push beyond informed consent is evident in the anaesthetic literature, much of which has narrowly focused on consent: editors and authors have blurred the lines between shared decision-making and consent [46] and articles have

frequently concerned themselves with the timing and amount of information given about medical procedures and likely outcomes rather than tackling the more difficult areas of what is important to the patient and what preferences they may have for their care [9, 28, 47, 48]. In the future, it will be vital for peri-operative practitioners and researchers to continue developing and implementing guidelines and interventions that encourage meaningful dialogue between patients and physicians, resulting in a choice of the best treatment modality, and taking patient preferences and values into account. For example, Choosing Wisely [49], a campaign run from the Academy of Royal Colleges in the UK, has a series of MAGIC questions (Table 2) that can help the patient to guide the clinician into a dialogue about their healthcare and treatment options. These questions arose from the health foundation's 'MAking Good decisions In Collaboration' programme, completed in April 2013 [49]. In the United States, the Agency for Healthcare Research and Quality has produced a set of steps to direct the practitioner through the process of shared decision-making called the SHARE approach [11] (Table 3). These strategies, in combination with decision aids, are an important step – although only an initial one – in helping patients and clinicians choose care that is 'supported by evidence, not duplicative, free from harm, truly necessary, and consistent with patients' values' [49].

Shared decision-making is a central component of the international priority of delivering high-quality, truly patient-centred, healthcare. The literature, the law and healthcare policy confirm that shared decision-making is what patients (and doctors – when they are patients) want. It is more than informed consent; it is more than the transfer of information.

**Table 2** MAGIC questions for patients to ask their healthcare professionals [49, 50].

Do I really need this test, treatment or procedure?  
 What are the risks or downsides?  
 What are the possible side-effects?  
 Are there simpler safer options?  
 What will happen if I do nothing?

**Table 3** The SHARE approach to shared decision-making: five essential steps for clinicians [11].

Seek your patient's participation  
 Help your patient explore and compare treatment options  
 Assess your patients values and preferences  
 Reach a decision with your patient  
 Evaluate your patient's decision



Shared decision-making requires a dialogue that takes place over a number of consultations, providing the patient time for pause and thought. The challenges for implementation by healthcare providers in current service-driven environments remain and require an appreciation of the true meaning of the concept of shared decision-making, and the more exacting task of finding the time.

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