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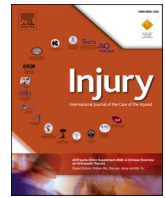
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Perspective; recommendations for improved patient participation in decision-making for geriatric patients in acute surgical settings

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ABSTRACT

Geriatric patients often present to the hospital in acute surgical settings. In these settings, shared decision-making as equal partners can be challenging. Surgeons should recognize that geriatric patients, and frail patients in particular, may sometimes benefit from de-escalation of care in a palliative setting rather than curative treatment. To provide more person-centred care, better strategies for improved shared decision-making need to be developed and implemented in clinical practice. A shift in thinking from a disease-oriented paradigm to a patient-goal-oriented paradigm is required to provide better person-centred care for older patients. We may greatly improve the collaboration with patients if we move parts of the decision-making process to the pre-acute phase. In the pre-acute phase appointing legal representatives, having goals of care conversations, and advance care planning can help give physicians an idea of what is important to the patient in acute settings.

When making decisions as equal partners is not possible, a greater degree of physician responsibility may be appropriate. Physicians should tailor the “sharedness” of the decision-making process to the needs of the patient and their family.

Introduction

The goal of shared-decision making (SDM) is to tailor treatment decisions to what is important to a patient (i.e. person-centred care), and in line with the professional standards of healthcare providers [1–4]. SDM is desirable and recommended in most situations, and surgeons should work together with their patients as much as possible. SDM is based on self-determination (the intrinsic motivation to preserve well-being) and relational autonomy (the idea that an individual's identity and values are formed by interpersonal relationships and social context) [3,5,6].

Geriatric patients often present to the hospital in acute surgical settings. Surgeons who treat these patients on a regular basis will recognize the many challenges and the dilemmas concerning treatment decision-making that these patients, their families, and surgeons are faced with. This usually occurs in situations where treatment decisions have

the greatest consequences for the patient [7,8]. Consequently, in acute settings, surgeons and patients do not always succeed to make person-centred treatment plans. To provide more person-centred care, better strategies for improved SDM need to be developed and implemented in clinical practise.

Essentially, the main problem in these settings boils down to three aspects: (1) working together with geriatric patients as equal partners is not always feasible, (2) the acute setting provides us with little time to carefully deliberate on the consequences of treatment decisions, and (3) there is always a degree of uncertainty in prognosis that compounds decision-making.

In this narrative review, we will discuss the challenges of decision-making for geriatric patients in the acute surgical setting. Moreover, we make recommendations to improve patient participation in decision-making in these settings.

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Challenges for shared decision-making for geriatric patients in acute settings

Surgeons should recognize that geriatric patients, and frail patients in particular, may sometimes benefit from de-escalation of care in a palliative setting rather than curative treatment [9–11]. Although every effort should be made to involve the patient in decision-making, daily practice shows us that SDM as equal partners is not always realistic in acute surgical settings. Some of these aspects are inherent to acute surgical settings in general, while other aspects are specific to geriatric patients.

In general, in acute surgical settings, there is usually a limited amount of time before treatment decisions need to be made, and decisions are often final [12]. Additionally, a degree of uncertainty regarding prognosis further complicates decision-making (Fig. 1). Even though there is an increasing interest in research investigating end of life care for surgical patients, there is still much to be learned about measuring person-centred outcomes, communication, prognostication, decision-making, and the delivery of palliative care [13,14]. Clinical research is certainly useful, but reducing uncertainty by increasing evidence does not always help decision-making in clinical practice, as discussed further on in the paper.

For geriatric patients in acute surgical settings, decision-making may be more complex. First, geriatric patients often present with multiple comorbidities, psychological problems, and a constellation of other medical and social issues that could complicate decision-making [11,15,16]. Second, geriatric patients often have cognitive impairments that may limit their decision-making capacity [16]. Third, although the introduction of patient-reported outcomes measures has helped gain understanding of the subjective patient experience, it is debatable whether these outcomes are truly person-centred [17]. “*What makes life worth living when we are old and frail and unable to care for ourselves?*” This question is raised in “Being mortal; medicine and what matters in the end” [18]. It is precisely this question that surgeons dealing with decision-making at the end of life should be asking their geriatric patients. This is an inherently subjective matter that can only be answered directly or indirectly by patients themselves. However, there are significant discrepancies between what patients find important and what surgeons, and even next of kin, *think* patients find important [19,20]. In acute surgical settings, patients are not always able to convey this. Fourth, geriatric patients often present to the emergency department without a legal representative or family member, and usually without advance care planning directives [21]. Even though some patients may have given thought to their goals of care and advance care planning or may have discussed this with their primary care physician, this information is rarely available at the emergency department.

The factors that make SDM between geriatric patients and treating physicians (including surgeons) challenging in acute settings are shown in Fig. 2. In these circumstances, we are unable to make holistic treatment plans as equal partners, by taking patient preferences and autonomy into account. It would be appropriate to address these issues as best we can in acute settings. Better still would be to prevent these issues from becoming a problem altogether, adopting an approach similar to preventative medicine.

Uncertainty about prognosis for the individual

Uncertainty regarding prognosis can be partially reduced by increased clinical experience, increasing evidence by conducting research, or developing tools that can help guide decision-making. Patients and physicians are often confronted with a probability of a certain outcome (Fig. 1). This probability is never 0% or 100%, but usually somewhere along the lines of “an approximately 80% probability of a favourable outcome”. It is usually unclear what “favourable” means to a patient’s unique situation.

The uncertainty in this context is twofold. First, an 80% probability of something is hard to interpret in any setting, let alone the acute surgical setting, as patients are left with a 20% probability of an unfavourable outcome. Second, the probability of an outcome is never *exactly* 80% on the individual level, but *roughly* 80% on a population level with a prediction interval around the predicted probability. This uncertainty makes it much more difficult to relate the prognosis on the population level to the prognosis of the patient in front of you. A patient will either experience an outcome or not, there is usually no in-between. It is possible to reduce uncertainty, and to narrow the prediction interval of the prognosis, but this does not necessarily make decision-making less difficult because we do not know how these probabilities relate to the outcome of the individual and to their goals of care.

Decision-making exists on a spectrum of “sharedness”

It should be recognized that decision-making exists on a spectrum, previously described in literature as the “shared decision-making continuum” (Fig. 3) [22]. The extremes of the spectrum, i.e. patient-driven decision-making and physician-driven decision-making, are clearly defined and hardly truly shared. Yet, in clinical practice, situations where these extremes occur are uncommon and these forms of decision-making are undesirable. Physician driven decision-making is paternalistic, and patient-driven decision-making, where patients are provided with information and evidence, does not stroke with the role of the physician as counsellor. We should offer patients a conversation, not information [2,23]. At the centre of the spectrum is SDM. However, situations exist where SDM is not feasible, particularly for critically ill patients [24]. There are ways to make decisions with a lesser degree of “sharedness” that still result in treatment decisions that are in line with what is important to patients.

How should we be working together with the patient?

A shift in thinking is required to provide better person-centred care for older patients. Physicians and medical students are trained to diagnose pathophysiological abnormalities and apply medical guidelines with the intention of restoring homeostasis. However, this approach does not take the totality of the patient into account. A shift from the pathophysiological paradigm to a person-centred paradigm will help to realize health outcomes that allow patients to achieve their goals of care [25]. Not everything that is broken needs to be fixed.

In acute surgical settings where SDM for geriatric patients is not feasible, we must find other ways to work together with patients. A patient and surgeon preference for some form of SDM has been well-documented in many fields of surgery [26–28]. However, few of these studies investigate the degree of “sharedness” patients desire on the

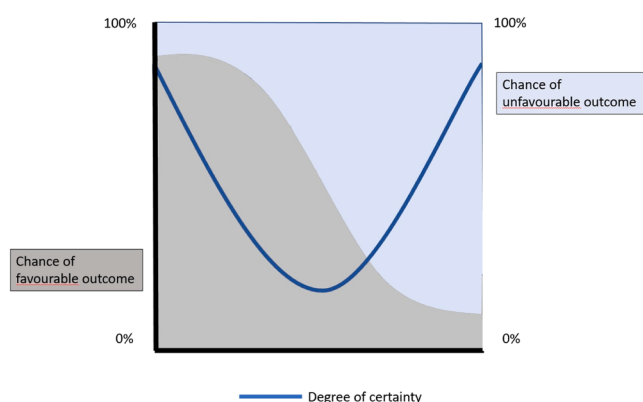


Fig. 1. This figure shows the degree of certainty of prognosis in relation to the chance of an outcome. Both Y axis show the chance of a favourable or unfavourable outcome, respectively. They have an inverted relation with the lowest degree of certainty in the middle.

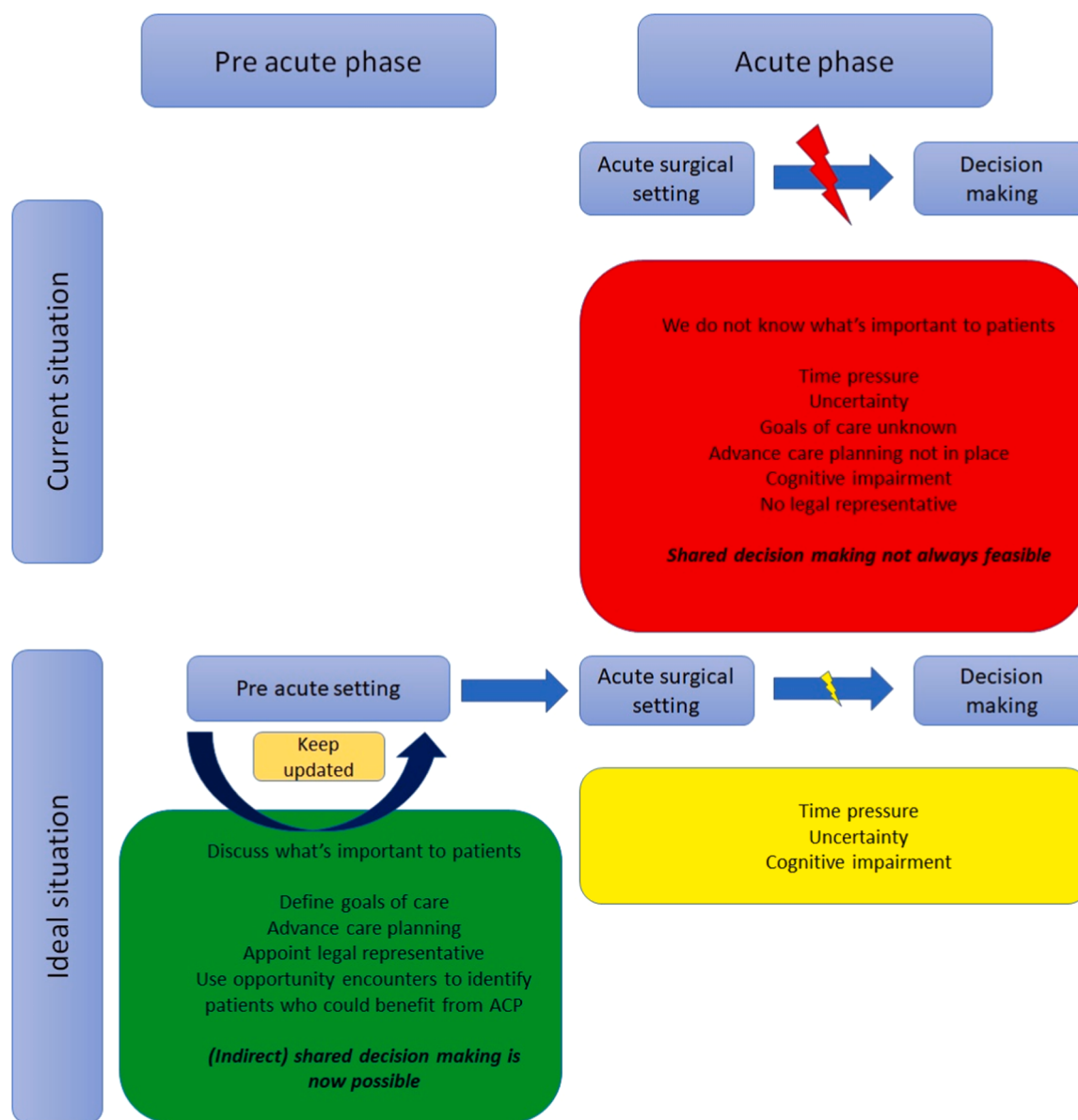


Fig. 2. This figure shows the factors that make shared decision-making challenging in acute settings, and recommendations that can greatly improve the collaboration with patients if parts of the decision-making process are moved to the non-acute phase.

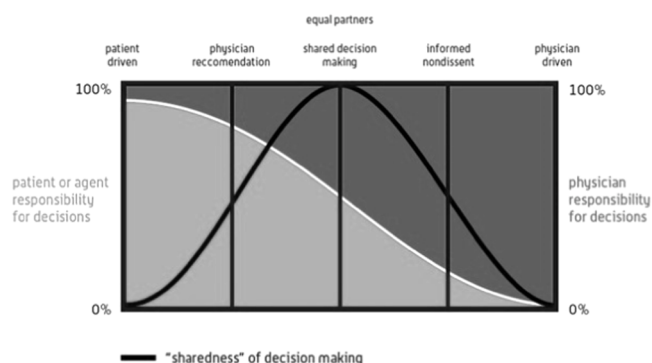


Fig. 3. This figure shows that decision-making exists on a spectrum of sharedness. The figure was adapted from Kon [22].

decision-making spectrum [22,26–31]. The idea that some patients may prefer “participation” in decision-making as opposed to true equal partnership in SDM has been previously described in literature. This is particularly the case for geriatric patients and patients who require emergency surgery [28,32–37].

Fortunately, there are ways to improve participation in decision-making for geriatric patients in acute surgical setting. First and foremost, deliberating on the goals of care (GOC) should be part of decision-making for all surgical patients, both in the elective and non-elective setting. Ideally, the GOC should be established after multiple conversations with the patient and their families, because GOC are highly personal and must be in line with what is important to the individual patient [16,38]. Unfortunately, this is often not possible in acute settings, so alternatives are needed.

Second, when GOC are established, advance care planning (ACP) can help surgeons to work together with their patients indirectly. In ACP documents, such as a living will, patients can document their wishes for medical situations in which they no longer have capacity to decide for themselves, even if this means having another person make treatment

decisions on their behalf (e.g. durable power of attorney) [39]. ACP has been widely endorsed by regulatory organizations and the judicial system. Unfortunately, the large majority of geriatric hospitalized patients does not have ACP in place [21,40]. Also, ACP is not always adequate in acute surgical settings and for end-of-life decisions, because situations where these decisions must be made cannot always be foreseen.

Still, ACP can be very helpful in decision-making. Patients should be motivated to think about what is important to them in hypothetical medical settings, and discuss this with their families and primary caregivers. The COVID pandemic has once again shown us the importance of having GOC and ACP conversations setting [41,42]. These discussions should be considered standard of care preventative medicine, and may be very well suited for primary care settings.

In addition, it would be helpful to identify patients who could benefit from these conversations well before they end up in an acute medical setting. A visit to emergency department of patients who do not require acute intervention could be an opportunity to engage in conversations about ACP and GOC. For example, with a frail patient who presents to the emergency department after sustaining a wrist fracture after a fall. Follow-up visits would help to determine their baseline status, patient preferences and priorities. It would ingrain the culture of SDM and documenting GOC in everyday practice, and using these “opportunity encounters” has been shown to result in good patient satisfaction [43].

Third, communication is key. It is important to clearly communicate the consequences of treatment decisions. Even for an experienced clinician, this is easier said than done. Patient decision aids have been suggested as a supplemental tool for end-of-life decision-making. Although a large variety of such tools exists, currently developed patient decisions aids fail to meet the complexity of end-of-life decisions and fail to address patient needs [44–46]. Scenario planning is a communication strategy that can help facilitate decision-making in the setting of uncertainty. The “best case/worst case” framework combines a narrative description and graphical aids of possible outcome scenarios and can help with shared surgical decision-making in acute surgical setting at the end of life for geriatric patients [47,48]. Additionally, training residents in participating in these conversations and understanding the concepts presented could help improve the SDM skills of the future generation of surgeons and foster culture change. The surgeon has a relevant role in the SDM process, and SDM training of surgical teams can improve the quality of shared decision making [49,50].

Finally, when decision-making as equal partners is not possible, a greater degree of physician responsibility may be appropriate, and informed nondissent has been suggested as alternative in such instances. Surgeons should be familiar with, and skilled at, the wide range of acceptable decision-making approaches in the spectrum (Fig. 3) [24]. This does not mean that decision-making should revert to paternalism, but rather to tailor the “sharedness” of decision-making to the needs of the patient and their family.

All these options are helpful, but may ultimately not fully solve the decision-making dilemmas that we are faced with in acute surgical settings. Therefore, we propose a revised model for better patient participation in treatment decision-making.

Recommendations for improved patient participation in decision-making

The acute nature of the setting cannot be changed, cognitive impairment may not be modified easily, and a degree of uncertainty will always make decision-making more difficult. In cases where cognitive impairment can be modified (e.g. delirium), decision making should be postponed until the patient is *compos mentis*. We can greatly improve the collaboration with patients if parts of the decision-making process are moved to the pre-acute phase (Fig. 2). To achieve this, it is imperative to identify patients who are likely to present in an acute surgical setting and start a dialogue about what is important to them. Every older individual (including, but not limited to patients) should be motivated to

deliberate on what their goals of care are. It is important to realize that what is important to patients and their GOC can change in time. Therefore, it is important to re-evaluate this on a regular basis. Additionally, they should make sure that ACP directives are in place and legal representatives are appointed. The question is; how are we going to communicate this to patients and implement these recommendations for person-centred care? We should consider these discussions in the pre-acute phase to be a form of preventative medicine, much like well-established screening programs for breast or colon cancer [51,52]. And similar to these established screening programs, awareness campaigns, GOC discussions in the outpatient clinic, and improved collaboration with primary care physicians and nursing homes must all be part of the solution. The entire care pathway needs to be involved for this goal-based approach to succeed. The information about patient preferences should be carefully documented and be kept up to date, preferably by a primary care physician. This information should become a standard part of the referral to the hospital and be integrated in electronic patient records. Of course, primary care physicians could also decide together with patients to not refer a patient to the hospital at all, and instead remain at home with comfort care.

Conclusion

Surgical decision-making with geriatric patients is complex in acute surgical settings. Although all effort should be taken to involve the patient in decision-making, clinical practice shows us that this is not always feasible in this setting. We do not know what is important to the individual patient, GOC are often unclear, ACP directives are not in place, legal representatives are not appointed, cognitive impairments impede SDM, uncertainty about the prognosis makes treatment decisions more difficult, and the acute setting provides us with little time to carefully deliberate on the consequences of treatment decisions. All these factors combined make SDM between geriatric patients and treating physicians challenging in acute settings. In this review, we made recommendations to address some of these issues. Better still would be to prevent these issues from becoming a problem altogether, by moving parts of the decision-making process to the pre-acute setting. A shift in thinking from disease-oriented to a patient goal oriented paradigm is required to provide better person-centred care for older patients. When making decisions as equal partners is not possible, a greater degree of physician responsibility may be appropriate. Physicians must tailor the “sharedness” of decision-making to the needs of the patient and their family.

Preference in color statement

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Medical ethics committee

This is a perspective paper (editorial), no review by a medical ethics committee was required.

Declaration of Competing Interest

All authors confirm that they have no conflict on interests. All authors do not have any financial and/or personal relationships with other people, or organisations, that could inappropriately influence (bias) their work.

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