EJA-D-25-00460

EJA

*Eur J Anaesthesiol* 2025; **42:**1–7

REVIEW ARTICLE

# Shared decision-making for older adults in the peri-operative setting

## *A narrative review*

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Older adults undergoing surgery often face numerous challenges to healthcare decisions due to frailty, comorbidities and varying personal priorities. Shared decision-making (SDM) is a patient-centred approach that enhances peri-operative care by aligning medical decisions with individual values and preferences. When considering surgery for an older adult, SDM can ensure that the surgical treatment plan focuses on what older adults find important, such as quality of life (QOL), functional independence, long-term well being and survival.

This narrative review explores the role of SDM in peri-operative care of older adults and strategies for increasing SDM in this context. SDM fosters collaboration between patients, families and healthcare teams; as a result, it can lead to improved patient satisfaction, reduced decisional conflict and greater trust between patients and their medical teams. However, integrating SDM into routine practice remains complex due to cognitive impairment, communication barriers, time constraints and gaps in evidence.

Effective SDM strategies include enhancing interdisciplinary collaboration, improving clinician and staff training, developing decision aids tailored to older adults considering surgery and leveraging technology to support patient engagement.

Future efforts should focus on expanding SDM research, refining implementation frameworks and advocating for policy changes that facilitate patient-centred surgical decision-making in older adults. As the global population ages, prioritising SDM in peri-operative care will be critical to optimising patient outcomes, ensuring ethical, informed decision-making and aligning care plans with the patient's goals and values.

**Published online xx month 2025**

## KEY POINTS

- Shared decision-making (SDM) can improve care for older adults by aligning peri-operative decisions with patients' values, goals and preferences.
- Implementing SDM may require overcoming challenges such as cognitive impairment, communication barriers, time constraints and gaps in evidence.
- Effective SDM strategies include interdisciplinary collaboration, clinician training, decision aids tailored to older adults and technology-driven support tools.

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**Received:** 23 April 2025; **Accepted:** 20 May 2025



DOI:10.1097/EJA.0000000000002224

## The ageing population and surgical care

The global population is ageing at an unprecedented rate. This carries significant implications for healthcare systems worldwide. According to the WHO, the number of individuals aged 60 years and older will more than double by 2050, when it will reach 2.1 billion.[1] This demographic shift is accompanied by an increase in age-related diseases, many of which require surgical intervention. In high-income countries, older adults account for a growing proportion of surgical procedures, ranging from elective orthopaedic and cardiovascular surgery to emergency operations for conditions such as bowel obstruction or hip fractures.

In this narrative review, we will discuss these challenges and how a concept called shared decision-making (SDM) can be applied to help older adults achieve high-quality care.

Older surgical patients face unique challenges in their care due to the high prevalence of comorbidities, frailty, polypharmacy and reduced physiological reserves.[2] Comorbidities such as cardiovascular disease, diabetes and chronic obstructive pulmonary disease increase perioperative risks, including postoperative complications, prolonged hospital stays and higher mortality rates.[3] Frailty, a syndrome characterised by reduced strength, endurance and physiological reserve further complicates surgical decision-making and recovery.[4,5] In addition, age-related declines in organ function can reduce the body's ability to cope with surgical stress, leading to worse outcomes and increased need for postacute care services relative to younger surgical patients.[6]

## Concept of shared decision-making in healthcare

SDM is an approach that actively involves patients in their healthcare decisions.[7] SDM facilitates meaningful discussions between the patient, their family members and their healthcare team, allowing for informed choices that consider both medical evidence and individual patient goals, preferences and values. When considering surgery in older adults, SDM is particularly relevant as they may have different priorities than younger patients, with a greater emphasis on maintaining quality of life (QOL) rather than simply extending lifespan.[8]

## Theoretical framework of shared decision-making

Although the precise definition of SDM differs across sources, there is general agreement on conceptual key elements.[9–11] According to the core principles of SDM, the process involves at least two participants: the clinician and the patient. Additional participants may include those whose involvement is desired by the patient, who are needed to provide expertise, or are required by law to be involved. Such individuals may include other healthcare providers, the patient's family, friends or other caregivers, or legally appointed healthcare proxies.[12] The process is characterised by open and explicit information exchange. Often, the clinician begins by presenting the medical issue requiring deliberation and decision-making. The patient or their representative is then invited to express their preferences, values and goals of care. On the basis of this dialogue, the clinician offers tailored treatment options, outlining their potential risks and benefits. Through this collaborative discussion, all participants gain a better understanding of the full spectrum of factors that are important to determine the appropriate management strategy. On the basis of this understanding, the group begins working towards a consensus about which treatment is most consistent with the patient's goals of care. The process concludes with an agreement on the preferred treatment.[9,13,14]

Frameworks such as the SHARE (Seek-Help-Assess-Reach-Evaluate) approach provide an evidence-based, pragmatic structure to guide SDM conversations. This approach consists of five stages: seeking the patient's participation, helping the patient to explore and compare treatment options, assessing the patient's values and preferences, reaching a decision together with the patient and evaluating the patient's decision.[15] Another relevant framework is a dynamic stepwise model tailored specifically to support the SDM process in older patients. It begins with preparation to identify previous documented priorities and goals, followed by a choice and goal conversation, an option conversation outlining personalised risks and benefits, focusing on what matters most to the patient and ends with an evaluation to ensure all parties are satisfied with the process (Fig. 1).[16]

## Benefits of shared decision-making for surgery in older adults

SDM fosters collaboration between patients, families and healthcare providers, ensuring that surgical decisions align with patient-centred goals. By actively engaging older adults in discussions about treatment options, SDM empowers them to make informed choices that reflect their values and priorities.[17,18] This process strengthens trust in the medical team, as patients feel heard and respected in their healthcare journey. Studies indicate that patients who actively participate in decision-making report greater satisfaction with their care and a stronger sense of involvement in their treatment.[19]

A key advantage of SDM is its ability to align surgical interventions with broader health objectives and QOL considerations.[20] Older adults may prioritise maintaining functional independence and alleviating symptoms over interventions that only serve to prolonging life.[21] SDM helps tailor treatment plans to patient priorities, potentially preventing procedures that may not enhance a patient's well being.[22] This approach is particularly relevant in frail or cognitively impaired patients, in whom surgery may carry unique risks compared with younger

CE: ; EJA/EJA-D-25-00460; Total nos of Pages: 7;
EJA-D-25-00460



**Fig. 1** Frameworks for Shared Decision-Making.[15,16]

| **The SHARE Approach** (General population, evidence-based and pragatic) | **Stepwise SDM Model for Older Adults** (Tailored for complex cases and age-related priorities) |
|---|---|
| **S** Seek your patient's participation | **Preparation:** Identify previously documented goals and priorities |
| **H** Help your patient explore and compare options | **Choice & Goal Conversation:** Discuss health goals and patient context |
| **A** Assess your patient's and preferences | **Option Conversation:** Present and compare options. personalize risks/benefits |
| **R** Reach a decision together | **Focus on What Matters Most:** Elicit patient values and desired outcomes |
| **E** Evaluate the decision | |

populations.[6,23] SDM with older adults frequently occurs in the context of these complex care scenarios where the primary goals are centred on enhancing wellbeing rather than achieving cure or prolonging survival.[8,17]

Uncertainty surrounding surgical outcomes can be a significant source of distress for older adults and their families. SDM can help to mitigate this anxiety by promoting clear, transparent discussions about risks, benefits and alternative treatment options.[24] When patients are well informed and actively involved in decision-making, they are more likely to feel at peace with their choice, potentially reducing the likelihood of decisional regret.[25,26] Family members engaged in SDM tend to be more proactive in seeking information, more comfortable asking questions and more involved in their loved ones' health discussions.[27] Including family members and caregivers in these discussions not only provides emotional support but also helps ensure that the patient's values and preferences are clearly understood and respected.

In the peri-operative setting, SDM can also aid in identifying patients who may benefit and cooperate from prehabilitation strategies, palliative care consultations or nonsurgical management, ultimately optimising peri-operative care.[28–30] For high-risk surgical procedures, consultations incorporating SDM may require longer clinic appointments compared with standard medical consultations. However, past research suggests that, in general, SDM interventions do not significantly extend the overall time spent with patients.[30]

From the perspective of a healthcare system, SDM may enhance cost-effectiveness by reducing procedures that are not aligned with patient values, lowering hospital expenditures and minimising postoperative complications and readmissions.[31] In addition, SDM may help standardise clinical practice, limiting unwarranted variations in care and potentially reducing complaints and litigation.[32]

## Unique challenges among older adults undergoing surgery

For balancing risks and benefits, surgery presents distinct complexities for older adults. Although the goal of surgery is to help improve the life of the older patient, the associated risks of surgery may decrease QOL, even if death is prevented. In addition, traditional surgical risk assessment tools rarely consider syndromes of ageing such as frailty or multimorbidity. Beyond the typical risks of surgery (e.g. bleeding, infection), considerations such as cognitive function, life expectancy and anticipated QOL may inform older adults' decisions whether to proceed with surgery. A significant challenge in SDM for older adults undergoing surgery is addressing differing perceptions of surgical success. Although some patients prioritise survival, others may focus on functional independence and postoperative QOL.[33] Discussions must include potential trade-offs, including postoperative morbidity, preserving independence and the potential need for long-term care.

By incorporating SDM principles, healthcare teams can navigate these complexities, ensuring that surgical decisions align with patient-centred outcomes, ultimately enhancing the quality of care in older surgical patients.

One of the primary challenges in implementing SDM for older surgical patients is cognitive impairment. As individuals age, they may experience cognitive decline, such

as dementia or mild cognitive impairment, which can hinder their ability to comprehend complex medical information and evaluate the risks and benefits of treatment options.[34] Assessing decision-making capacity is therefore a necessary step in this context. When diminished decision-making capacity is suspected, appropriate measures must be taken in accordance with ethical principles of autonomy and nonmalfeasance, along with pertinent legislation to ensure vulnerable patients are safeguarded.[14–16] In decision-making process, this decline in cognitive function may necessitate the involvement of surrogate decision-makers, such as family members or legal guardians.[35] In some cases, the patient's ability to make informed choices may be limited, making it difficult to ensure that the final decision aligns with their true preferences and values.

Communication barriers may also present significant challenges to SDM.[36,37] Older adults are often affected by hearing impairments, visual deficits or other sensory issues that can make it harder for them to fully grasp the information being communicated by healthcare providers, or to engage with paper or digital decision tools. In addition, language barriers among non-native speakers may make it difficult to understand medical terminology or engage fully in the decision-making process. These challenges can lead to misunderstandings, lack of clarity and difficulties in expressing preferences, which ultimately undermine the effectiveness of SDM.

Cultural sensitivity is another important factor to consider in SDM. Older adults come from diverse cultural backgrounds, each with different values and perspectives on healthcare.[38] In some cultures, family members may be expected to make decisions on behalf of the patient, while in others, individual autonomy is prioritised. Failure to acknowledge and respect these cultural differences can lead to misalignment between medical recommendations and the patient's personal values, potentially causing dissatisfaction and potential challenges implementing a treatment plan.

Moreover, healthcare teams face challenges implementing SDM with older adults. One major obstacle is time constraints in busy clinical settings. In many healthcare environments, especially in hospitals, healthcare teams face significant pressure to make quick decisions due to the high volume of patients and limited consultation time. This time pressure often makes it challenging to engage in the in-depth, collaborative discussions that SDM requires, particularly with older adults who may need more time to process information, ask questions and fully understand the options available to them.[39]

Time-sensitive decisions, such as those required for emergency surgery, add another layer of complexity to SDM. When a patient's life is at risk, clinicians often need to make quick decisions, which may leave little room for meaningful discussions with the patient.[40] Although SDM is essential, the urgency of the situation in emergencies can make it difficult to fully engage with the patient, leading to a more paternalistic approach in which decisions are made primarily by the healthcare team without extensive input from the patient.

Likewise, the lack of evidence-based data on patient-centred outcomes for older adults presents additional barriers to SDM. Ideally, clinicians should provide patients with the most relevant, evidence-based information tailored to the patient's individual priorities. However, relevant data on outcomes which matter the most to older patients – such as home time, functional independence and QOL – are still scarce in the peri-operative literature.[14,15,41] When treating older patients, many clinicians struggle to present relevant, reliable evidence, particularly when it comes to how different treatments may impact QOL, functional independence or time at home. Furthermore, the absence of strong evidence comparing surgical to nonsurgical alternatives, and the lack of routine standardised frailty risk calculations can leave healthcare providers with limited options for presenting treatment plans that align with the patient's values and goals.[42]

Finally, system-level barriers may hinder effective SDM in geriatric care. Older adult patients often require the involvement of multiple specialists, including geriatricians, surgeons, anaesthesiologists and palliative care providers. However, many healthcare systems may lack the infrastructure or resources to support interdisciplinary teams.[43] In addition, variability in healthcare systems and policies can affect the consistency and quality of SDM processes, making it harder to ensure that older surgical patients receive care tailored to their individual preferences.

## Strategies for implementing shared decision-making in the peri-operative care of older adults

Implementing SDM in peri-operative care for older adults is crucial for aligning medical interventions with the values and preferences of older adults.[44] Yet, a recent qualitative study found that SDM was frequently not incorporated in current practice due to barriers, including medical culture, time constraints and physicians' assumptions about patient's preferences.[45] Strategies for effective SDM implementation may include building effective communication, using an interdisciplinary approach, providing targeted training and education, including decision aids in clinical discussions, and integrating technology into the decision-making process.

## Interdisciplinary approaches to increase shared decision-making

The complexity of geriatric care necessitates an interdisciplinary approach that includes surgeons, anaesthesiologists, geriatricians and palliative care specialists. Each

professional brings a unique expertise and perspective that can enhance the SDM process. Engaging patients, family members and care partners is also vital. Family members and care partners often play a crucial role in the decision-making process for older adults.[46,47] Engaging family members in care discussions can help acknowledge diverse perspectives and promote open communication, thereby improving the overall decision-making experience.[46] Studies show that older adults often prefer to involve family members in their healthcare decisions, which can lead to better alignment of treatment options with their values and preferences.[47]

## Training and education

To effectively implement SDM, healthcare teams must be trained in both SDM techniques and the specific needs of older adults. Incorporating SDM into medical curricula and continuing education programmes can equip providers with the necessary skills to engage older adults and their families in meaningful discussions about treatment options.[13,48] Training modules that focus on communication skills targeted for older populations have been shown to improve clinician confidence and competence in facilitating SDM.[48] For example, employing the 'teach-back' method, where patients repeat information in their own words, ensures understanding and fosters a more interactive decision-making environment.[49,50]

Another important component of training is the development of resources, such as conversation aids, that help overcome communication barriers.[45] These tools can help clarify aspects of treatment options and ensure that older adults and their families are well informed. Moreover, ongoing education about the complexities of care for older adults can help healthcare teams understand the unique challenges faced by older patients, thereby enhancing the quality of SDM.[51]

## Decision aids

Decision aids are tools designed to help people make informed choices about their healthcare by presenting information about treatment options, potential outcomes and the associated risks and benefits in a clear and balanced way. They can help patients process, understand and internalise relevant clinical evidence, particularly for outcomes they have not yet experienced. These tools can also help bridge communication gaps by enabling patients to better express their preferences and allowing clinicians to more effectively perceive and adapt to those preferences during the process.[14]

Despite the growing evidence, anaesthesia-specific decision aids remain rare. Most publicly available repositories offer decision aids for general medical conditions rather than peri-operative or anaesthetic decisions.[52–55] Although these tools are not designed for anaesthesia, they serve as useful models for high-quality decision aids. General decision guides, such as Options Grids, may be adapted to support patients facing time or preference-sensitive peri-operative decisions.[56] Option Grids are summary tables, using one side of paper to enable rapid comparisons of options, using questions that patients frequently ask (FAQs) and designed for face-to-face clinical encounters. These general guides help clarify values, improve patient's confidence and can provide a foundation for meaningful conversations even when condition-specific tools are unavailable.[57]

A notable exception is the *My Anaesthesia Choice-HF* tool, developed to support anaesthesia-related SDM for older adults undergoing hip fracture surgery.[58] Designed to help patients and clinicians navigate anaesthesia options, this tool has demonstrated promise in reducing decisional conflict and enhancing patient knowledge. However, further research is needed to adapt such tools to a broader range of anaesthesia decisions relevant to older adults in both elective and emergency contexts, particularly in high-risk or time-sensitive situations.

## Role of technology in shared decision-making

Technology has the potential to improve SDM for older adults. Telemedicine platforms, mobile applications and digital tools improve access to essential information, allowing patients to better understand their options and actively participate in their care.[59] As such, video-based decision aids can facilitate early pre-operative discussions, allowing patients and caregivers to ask questions, clarify expectations and weigh values-based choices, even in high-stakes settings.[60] Mobile apps and web-based platforms can also be used to deliver educational content, values clarification tools and structured guides to help older adults and their families prepare for key decisions in advance of time-pressured clinical encounters.[61] Although these technologies hold promise, the development of new technological tools must prioritise usability and patient-centred design.[62] These innovations will need to be developed and tailored to address the needs and preferences specific to older adults, thus, further contributing to the SDM process.

## Conclusion

SDM is essential in geriatric peri-operative care, ensuring that medical decisions align with patient preferences, values and overall health goals. The complexities of ageing, including comorbidities, frailty and cognitive challenges, necessitate a structured, patient-centred approach to surgical decision-making. SDM enables older adults, their families and multidisciplinary healthcare teams to navigate risks, benefits and treatment options in a collaborative manner, potentially leading to more informed and personalised care.[63]

Implementing SDM in geriatric peri-operative care requires addressing key barriers, including time constraints, communication challenges and the lack of tailored decision-support tools. Overcoming these obstacles

**Fig. 2** Adapted Three-Talk Model for Shared Decision-Making in Geriatric Anesthesia.[63]

| TEAM TALK | OPTION TALK | DECISION TALK |
|---|---|---|
| **Goal:** *Build partnership and set the stage* | **Goal:** *Discuss options and provide tailored information* | **Goal:** *Work together to make a decision* |
| • Acknowledge patient autonomy and invite family/caregivers<br>• Frame the decision in context of comorbidities, frailty, cognitive status<br>• Discuss goals of care<br>• Set realistic expectations of surgery and anesthesia | • Inform about anesthesia options<br>• Elicit patient preferences and concerns<br>• Tailor benefits and risks to comorbidities, frailty, cognitive status<br>• Avoid medical jargon and overuse of numbers | • Encourage patient to consider options<br>• Make recommendation if appropriate<br>• Ask for patient's decision to proceed<br>• Offer opportunity to revisit |

requires targeted interventions, such as training programs for healthcare clinicians and staff, improved interdisciplinary collaboration and the development of anaesthesia-specific decision aids. In addition, technology – such as telemedicine and interactive digital platforms – can enhance patient engagement and facilitate early, structured SDM discussions.

Moving forward, integrating SDM into standard peri-operative care can help clinicians, healthcare systems and policymakers to meet ethical and clinical imperatives. Research should focus on refining SDM frameworks for peri-operative care, evaluating their impact on patient outcomes and developing scalable strategies for broader implementation. By prioritising SDM principles and facilitating SDM interventions, anaesthesia practitioners can help to improve patient satisfaction, reduce decisional conflict and support ethical, compassionate and effective peri-operative care for older adults (Fig. 2).

## Acknowledgements relating to this article

Assistance with the study: none

This manuscript was initially conceptualised during online meetings.

All authors have contributed to conception and design, drafting the article or revising it critically for important intellectual content.

All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work thereby ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Financial support and sponsorship: none

Conflicts of interest: no authors have direct conflicts of interest regarding this manuscript.

JBE is a member of the Board of Directors of the European Society of Anaesthesiology and Intensive Care (ESAIC) and has received speaker's fees from Medtronic.

SS is the lead of ESAIC's subcommittee for the Geriatric Patient and has received speaker's fees from Medtronic/ Merck

Presentation: none

This manuscript was handled by Marc Van de Velde.

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