

Criteria For Agreement When Conducting Local Consensus Discussions: A Qualitative Study

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Purpose: Healthcare is a complex, multi-layered team environment where effective change often requires reaching consensus among relatively autonomous stakeholders. Although conducting informal consensus discussions is a frequently used implementation strategy in real-world clinical settings, limited information exists about what defines consensus when using these methods. Specifying the criteria for consensus is important, as it can shape the design of consensus-building strategies. This study aimed to identify and define the key domains of consensus used in local consensus discussions to standardise healthcare practices.

Patients and Methods: A qualitative study was conducted in one private hospital in Australia using a modified, grounded theory methodology. Clinical, non-clinical and leadership staff involved in developing standardised perioperative pathways using informal consensus discussions were recruited. Data were collected via semi-structured interviews and naturalistic participant observations between February 2023 and May 2024. Data collection and analysis occurred concurrently until theoretical saturation was achieved. Data were analysed using open coding with constant comparison, focussed and theoretical coding to develop theoretical concepts.

Results: Sixteen hours of observations with 31 participants and nine semi-structured interviews were conducted. Analysis identified four distinct consensus criteria: i) unanimous consensus, ii) delegated consensus, iii) assumed consensus and iv) concessional consensus. While unanimity was the preferred outcome, other consensus types emerged as viable alternatives when unanimous agreement was challenging to achieve. Each criterion had differing factors and mechanisms which influenced reaching the consensus criterion, underpinning assumptions, and considerations for practice, which formed four domains of consensus.

Conclusion: These domains provide a structured framework for classifying consensus criteria when conducting local consensus discussions in healthcare. The findings broaden our understanding of consensus in local healthcare discussions, moving beyond a singular focus on unanimity. By clearly defining consensus types, organisations can strategically select consensus methods that best support decision-making and intervention implementation.

Keywords: consensus-building, decision-making, implementation science, qualitative research, healthcare, perioperative pathways

Introduction

Healthcare organisations are complex and collaborative environments, where health professionals draw on diverse sources of information to guide their clinical decisions.¹⁻⁴ If these clinical decisions are made in silos they can contribute to unwarranted variation in care, which refers to patient care that differs from a direct and proportional response to the available evidence or the needs and choices of patients.⁵ This type of variation can lead to patients receiving low-value care, exacerbate disparities in patient outcomes, and contribute to increased healthcare costs.^{6,7} Reducing unwarranted variation in care often requires a level of consensus between a diverse range of stakeholders to benchmark outcomes and test assumptions.⁸ However, health professionals operate with a degree of professional autonomy, introducing unique challenges to achieving consensus on systems and processes of care that could reduce unwarranted clinical variation.

Conducting local consensus discussions is a recognised implementation strategy used to reach agreement in quality improvement activities in healthcare settings.⁹ These discussions involve stakeholders being brought together to establish a dialogue to achieve consensus or acceptance of a decision.^{10,11} The goal is to achieve sustainable and implementable agreements that are considered fair and high-quality, as they incorporate the perspectives of all stakeholders involved in the discussions.¹⁰ This strategy has been shown to overcome barriers related to communication within organisations, designing and assembling an intervention, and promoting leadership engagement in implementation trials.¹² It also shows promise as a strategy to assist in de-implementation and reducing the provision of low-value care.¹³ However, there is uncertainty around how to effectively operationalise this strategy across different contexts.¹⁴

Both formal and informal methods can be used to reach agreement when conducting local consensus discussions.^{15–17} The extant academic literature focusses on formal consensus-building approaches such as the Delphi Method.¹⁸ Formal consensus-building methods provide some indicators for when consensus is reached, such as setting a percentage of agreement or using the highest ranked item.^{19,20} However, there is variation and inconsistency in how some formal methods are conducted and how consensus is defined across different studies.^{21–24} There is even less clarity for informal consensus-building methods, which rely on more flexible, adaptive, and context-specific approaches to reach consensus.^{22,25} Informal consensus-building methods are commonly used in hospitals to standardise practices on a smaller scale, due to their practicality and responsiveness to dynamic clinical environments. Many studies that have used informal consensus methods to implement healthcare interventions have not clearly reported on how they defined consensus, or the ‘level’ of agreement reached.^{14,25,26} There is also limited guidance in the form of actionable frameworks that define what informal consensus processes entail. For example, the WHO Handbook for Guideline Development mentions that voting may be used in unstructured consensus processes, but it provides no further definitions or details.¹⁶ As a result, our understanding of what constitutes consensus during informal consensus-building remains limited.

The absence of defined criteria for agreement in informal processes creates uncertainty about when true consensus has been achieved, meaning individuals and organisations may have different ideas of what consensus entails. Consensus can be defined as “agreement among all participating stakeholders”,²⁷ yet this definition lacks specificity, leaving room for varying interpretations. It may be assumed that unanimous agreement is the standard for consensus. However, whilst unanimity may be desirable, relying solely on criteria that require formal agreements or that everyone agrees unanimously may not always be achievable, particularly in settings with inherently hierarchical structures where leaders or senior clinicians may dominate the consensus process.^{28,29} In practice, the concept of consensus may vary significantly, ranging from unanimous agreement to more flexible forms of social order where not everyone may fully agree, yet are still willing to follow the decision.¹⁷

Establishing clear criteria for agreement enables organisations to design and structure their consensus approach, by knowing when a decision is made, when to move on, and when to conclude the discussions. By understanding what constitutes consensus before starting a decision-making process, groups can plan how to progress when unanimity cannot be achieved. Establishing clear criteria allows consensus group members to have a clear understanding and realistic expectations of the process and ensures that all stakeholders are genuinely aligned and committed to the decisions made, avoiding the pitfalls of superficial agreement where underlying disagreements might later undermine the initiative. Clear criteria can also improve the transparency and accountability of decision-making processes in hospitals, fostering a more collaborative approach to consensus among healthcare professionals.

Implementation Context

Perioperative pathways that standardise the care of patients before, during and after surgical procedures involving anaesthesia have been shown to reduce variation and improve patient outcomes.³⁰ Perioperative pathways comprise numerous elements that are distributed along the patient pathway and delivered by different clinicians and departments. For example, Enhanced Recovery After Surgery (ERAS) protocols include 24 core elements with evidence for their effectiveness.³¹ However, substantial variation remains in care processes and outcomes between surgical patient cohorts across different hospitals.⁶ It remains unclear how to best implement perioperative pathways into practice and the role that conducting local consensus discussions might play in achieving agreement between health professionals and other

stakeholders. We conducted a quasi-experimental effectiveness-implementation hybrid (type III) study to implement perioperative pathways to standardise the care for patients across five surgical patient cohorts at a private hospital in Australia.³² This study provided the opportunity to examine the criteria for agreement when undertaking informal local consensus discussions.

Aims

The aim of this paper was to define the criteria for agreement used in informal consensus discussions when standardising processes of care. A secondary aim was to develop a framework representing the domains and indicators of consensus.

Materials and Methods

A qualitative, modified grounded theory study embedded within a larger observational study³² was conducted between February 2023 and May 2024.

Study Context and Consensus Approach

The study site was a university-owned, private teaching hospital located in metropolitan Sydney. The organisation is a 144-bed facility, including a 20-bed intensive care unit, and 14 operating theatres, that focusses on clinical care, teaching and research. The organisation aimed to reduce unwarranted clinical variation for select surgical procedures. To achieve this, an informal consensus approach was utilised to develop and implement perioperative pathways for the following surgical cohorts; i) total hip arthroplasty; ii) total knee arthroplasty; iii) spinal surgery; iv) cardiac surgery and; v) breast cancer surgery. The approach involved conducting local consensus discussions between multidisciplinary groups to reach agreement on care components of each pathway and an implementation plan.

The consensus process, including each meeting, was facilitated by one clinician-researcher who held a leadership position within the organisation with assistance from a steering group. Consensus groups comprised discipline specific groups of stakeholders from clinical (surgery, anaesthetics, nursing, allied health), non-clinical and leadership disciplines. Additional frontline clinicians were consulted where necessary to achieve consensus on implementation plans. Due to the differing ways in which surgical disciplines worked, the consensus approach could be adapted to suit each discipline. As such, two different methods were used: i) face-to-face team-based discussions where key representatives from each group met regularly and ii) a leadership driven approach, where hospital leadership worked closely with one discipline leader (eg, surgeons) to develop consensus on a pathway. This pathway was then disseminated to the remaining group members for feedback and agreement. Following agreement by consensus groups, all pathways were disseminated for final agreement from each surgeon within the discipline.

Qualitative Approach and Data Collection

A modified, constructivist grounded theory methodology utilising participant observations and semi-structured interviews was employed to examine the different criteria for agreement.^{33,34} We adopted a modified approach to reflect the pragmatic nature of recruitment, using convenience sampling as the primary strategy. Additionally, our aim was to develop a practical framework rather than generate a formal theory, and the approach was adapted accordingly to suit these objectives. All hospital staff from clinical, non-clinical and leadership disciplines involved in consensus discussions as part of the larger observational study were considered eligible to participate in both observations and interviews. Local hospital staff involved in the delivery of care for the specified surgical cohorts were also considered eligible to participate in a semi-structured interview. This ensured the selection of especially knowledgeable cases about all aspects of the consensus and implementation process using this strategy.³⁵

Eligible staff were recruited by hospital coinvestigators from the research team to participate in an interview and/or observation using a convenience sampling approach. Participants were provided with an information form prior to consenting, and verbal or written informed consent was obtained prior to participation. Participants could withdraw their consent for an interview or opt-out of participating in the observations at any time throughout the study period.

Naturalistic participant observations of consensus meetings were conducted by one researcher (LP) with experience in conducting qualitative research in healthcare. Field notes were taken in real time to document the context of the meetings

and more detailed typed field notes were completed following the observations. Observations were not guided by a pre-determined schedule which allowed ideas to evolve inductively with what was emerging in each context. Meeting agendas and draft perioperative pathways developed during consensus meetings were also collected to supplement field notes and add further context.

Concurrent to participant observations, individual, face-to-face semi-structured interviews were conducted by the same researcher (LP). Interviews followed topic guides developed by the research team ([Additional File 1](#)) using principles from relevant existing literature and by the research teams' own experiences with using the strategy 'conducting local consensus discussions'.⁹ Questions were open-ended with flexibility in the order and wording of questions, and probes or additional questions were used to clarify statements where necessary. Each interview took approximately 30–60 minutes to complete and were digitally recorded and transcribed verbatim in preparation for analysis.

An audit trail of methodological decisions made during the research were recorded. Memo writing, including theoretical memos, was used throughout to document insights, and support reflexivity. Data collection and analysis occurred concurrently.³⁶ Insights from observations and interviews (from all participants) were triangulated to enable expansion and a deeper understanding of emerging concepts, supported by constant comparison throughout the analysis. As data collection progressed, interview questions were refined in response to emerging concepts. Theoretical sampling was used to recruit participants who could elaborate on developing concepts and extend the depth of the analysis. For later participant observations, sampling was guided by emerging theoretical insights, with specific interactions focussed on testing and refining the evolving conceptual categories. Data collection was discontinued when the team was satisfied that no new concepts had emerged, supporting the conclusion that theoretical saturation had been achieved.³⁷

Data Analysis

Transcripts and observation field notes were analysed using the software NVivo, V14 using grounded theory methods of analysis.^{33,38} Transcripts and field notes were read numerous times to ensure immersion prior to coding. Inductive, open, line-by-line coding of two transcripts and two field notes was conducted by one researcher (LP) which were then discussed with the core research team (MS, JL, EF-A) to create the initial coding framework. Subsequent coding was conducted by one researcher (LP) with constant comparison of data segments, supported by regular team meetings to compare interpretations and ensure rigour. Focussed coding was then completed where the most frequent and significant codes were synthesised into focussed codes and categories to identify emerging concepts, under the supervision of two researchers (MS, JL). These concepts were tested in subsequent interviews and observations. Theoretical coding was then conducted to further refine the data and integrate relationships between the emerging concepts and codes into theoretical concepts. Final theoretical concepts relating to the domains of consensus and their indicators were agreed upon by the research team. Factors and mechanisms identified from previous work³⁹ that could influence each consensus domain were mapped to each domain. All researchers were experienced in qualitative research methods and health services research.

This study received ethical approval from Macquarie University Human Research Ethics Medical Sciences Committee (Reference No: 520221219542374). The manuscript follows the Standards for Reporting Qualitative Research (SRQR) checklist ([Additional File 2](#)).

Results

Seventeen staff members were invited to participate in semi-structured interviews of which two declined, and seven did not respond. Nine interviews were completed, with one participant interviewed twice for theoretical validation. The research team attended all observation opportunities they were invited to. Approximately 16 hours of observations (n=15 consensus discussions) with 31 staff were conducted. All staff present at the meetings consented to be observed. Participant characteristics and observation details can be found in [Table 1](#).

A framework for classifying consensus criteria when conducting local consensus discussions to standardise healthcare processes was developed ([Table 2](#)). The framework contains four domains encompassing the criteria for consensus, factors influencing achieving the consensus criterion, underlying assumptions, and practical considerations. The four

Table 1 Characteristics of Interview and Observation Sources

Item	Number (%)
Observation meeting type	n=15
Consensus meeting for pathway development and/or implementation	
Spinal surgery	5 (33%)
Total hip and knee arthroplasty	3 (20%)
Cardiac surgery	3 (20%)
Breast cancer surgery	2 (13%)
Nursing committee and/or leadership meetings	2 (13%)
Observation participants	n=31*
Registered nurse	10 (32%)
Surgeon	7 (23%)
Nursing unit manager	6 (19%)
Leadership/management	4 (13%)
Anaesthetist	2 (6%)
Physiotherapist	2 (6%)
Interview participants	n=8**
Discipline	
Leadership/management	4 (50%)
Registered nurse	2 (25%)
Anaesthetist	1 (13%)
Physiotherapist	1 (13%)
Gender	
Female	6 (75%)
Male	2 (25%)
Number of years worked at organisation	
<5 years	3 (38%)
6–10 years	4 (50%)
11+ years	1 (13%)

Notes: *22 participants observed on more than one occasion. **A total of nine interviews were completed with one participant interviewed on two occasions.

domains are: i) unanimous consensus, ii) delegated consensus, iii) assumed consensus, and iv) concessional consensus. Unanimity, as Domain 1, appeared to be the desired outcome for consensus to be established. However, the organisation recognised that unanimous consensus among individual practitioners could sometimes be challenging to achieve, particularly where evidence did not clearly support one practice over another, and other reasons for agreement became more prominent. Under these circumstances, sufficient consensus was then sought using the remaining three domains. De-identified supporting quotations from interviews and relevant segments from observation field notes are presented below for each domain.

Unanimous Consensus

The first criterion was unanimous consensus which manifested as complete and explicit agreement from individuals signifying their support for the proposed pathway component. Unanimous agreement occurred when all stakeholders expressed their approval, either verbally or in writing, indicating that a proposed pathway component should be included. This type of consensus often arose when a component was regarded as ‘common practice’ by clinicians or was aligned with current evidence-based guidelines. Additionally, strong and robust research evidence, such as where pathway components were supported by randomised controlled trials, could also underpin this consensus type.

Table 2 Classification of Consensus Domains

Consensus Domain	Domain Definition	Factors and Mechanisms which Influence Achieving Consensus Domain	Assumptions	Considerations
Unanimous consensus	Total and explicit agreement from all individuals signifying their support for a proposed component. Can manifest as: - Approval verbalised - Written approval	<ul style="list-style-type: none"> - Proposed component recommended by published clinical guidelines - Presence of strong evidence supporting a component - Component is considered 'common practice' by clinicians - Consensus meetings are held face-to-face, enabling group discussion of pros and cons 	<ul style="list-style-type: none"> - Unanimity is the overarching goal of consensus discussions - Participants are aligned in their values and overall objectives for the consensus process - Equitable and active participation by all participants - All consensus participants have access to the same information - Decisions have been made through a structured process of open discussion - All participants have equal influence in the decision-making process, and power dynamics do not skew the contributions or final agreement 	<p>Processes:</p> <ul style="list-style-type: none"> - Clear communication among participants and an understanding of issues for debate are required to achieve unanimity - The consensus process is at risk of being dominated by select members when unanimity is the only aim - Power imbalances can inhibit open discussion, and the influence of medical hierarchy may sway the decision-making process - Consider how equitable participation can be encouraged - The group may defer to perceived experts, even if their views are not fully representative or accurate. <p>Outcomes:</p> <ul style="list-style-type: none"> - May result in increased buy-in and commitment to the end-product
Delegated consensus	Individuals are steered towards agreeing on a component or to following a decision by influential group members strongly advocating for practice changes or issuing a directive to adopt a practice. Often results in a commitment to follow a decision.	<ul style="list-style-type: none"> - Advocacy from discipline leadership or managerial leadership - Presence and influence of respect for and trust in discipline leadership - Presence of ambiguous evidence for any given practice or when clinicians are uncertain about a practice prompting clinicians to consider peer practices - Broad, multidisciplinary representation is required to enhance support of decisions 	<ul style="list-style-type: none"> - Fundamental trust in the expertise of discipline leads to adopt practices associated with favourable patient outcomes - Individuals are likely to align with the views of those in authoritative positions - Clinicians view peer practice as a credible source of evidence - Commitment to follow a practice, even if it is not the preferred choice, is sufficient to establish consensus within a group - Only a select few individuals may need to achieve consensus on behalf of a group - For some disciplines, obtaining consensus from a smaller group of people is sufficient, with broader agreement then required for surgeons and anaesthetists 	<p>Processes:</p> <ul style="list-style-type: none"> - Relies on guidance from peers within the proceduralist (eg surgeons) sphere - Healthcare disciplines can also be influenced by cross-disciplinary or managerial directives - Important to avoid confrontational approaches to minimise conflict <p>Outcomes:</p> <ul style="list-style-type: none"> - Consider whether the consensus reflects genuine agreement or if it is simply compliance with a directive - May impact on fidelity and sustainability of agreements if decisions are not fully supported or if broad, multidisciplinary representation is not obtained in the decision-making process - Consider effects of medical hierarchy on decision-making and group dynamics

Assumed consensus	Consensus is inferred from the absence of opposition or dissent, with silence within the group being interpreted as acceptance.	<ul style="list-style-type: none"> - Commonly occurs when sub-groups are used to reach agreement without all participants whom consensus may be required from. Feedback is then sought from those members afterwards - Competing clinical priorities create challenges in coordinating schedules, making it difficult to coordinate one consensus meeting that all members can attend - Can occur in face-to-face consensus meetings 	<ul style="list-style-type: none"> - Agreement by default, rather than explicit affirmation is sufficient to determine consensus - Other forms of communication still provide enough equal opportunity to discuss and voice concerns 	<p>Processes:</p> <ul style="list-style-type: none"> - Requires sufficient engagement with and awareness of the consensus process - Can require follow-up and nudges to achieve adequate responses from those not involved in initial discussions in their own time <p>Outcomes:</p> <ul style="list-style-type: none"> - Fidelity and sustainability of the final product may be compromised if consensus is only reached by default.
Concessional consensus	When disagreements arise on specific care components and consensus cannot be reached, allowing for 'individual preference' items as concessions allows sufficient consensus to be obtained. The focus is shifted to achieve a higher-level consensus on essential elements of care whilst allowing for trade-offs on specifics.	<ul style="list-style-type: none"> - Disagreement amongst clinicians can lead to compromises to find common ground - Where there is ambiguous or low-quality evidence, clinicians may agree to accept solutions that accommodate various interpretations of evidence - To prioritise patient care, clinicians may make concessions to uphold accountability and responsibility to patients - Participants who are willing to compromise to find a middle ground may make concessions to achieve collective agreement <p>Acknowledgement by organisations that:</p> <ul style="list-style-type: none"> - surgeons value autonomous practice - differing opinions between clinicians on some care aspects is inevitable - individuals are influenced by prior experiences and will draw on those experiences to make decisions on patient care 	<ul style="list-style-type: none"> - The consensus threshold is adjustable and can fluctuate throughout the consensus process - The consensus threshold does not have to be pre-determined - Sufficient consensus can still be achieved by agreeing on broad principles - An acceptable range of variation is permitted when standardising care practices - A give-and-take approach is needed to improve buy-in and engagement with surgeons 	<p>Processes:</p> <ul style="list-style-type: none"> - May facilitate buy-in for clinicians who value autonomous practice - May hinder buy-in if participants feel that the process does not fully meet their expectations or definitions of consensus - There is a need to define the threshold for consensus and clarify what consensus means at the outset <p>Outcomes:</p> <ul style="list-style-type: none"> - Fidelity and sustainability of the end-product may be impacted if there are too many concessions - Multiple concessions to accommodate individual clinicians may have downstream effects on the logistics of implementation and workflows for staff on the ground.

VTE [venous thromboembolism] prophylaxis is discussed with ease and no argument, they move on very quickly as all unanimously agree that this isn't really important for this patient population since they can walk within as little as one-hour post-op. [Observation, cardiac, 2024]

Delegated Consensus

Delegated consensus referred to how the actions of influential consensus group members would facilitate others towards agreement. This criterion was often observed when surgical discipline leadership or hospital executive leadership strongly advocated for practice changes, leveraging their respect and in some cases authority within the discipline to influence group opinion. These leaders then issued directives or a strong recommendation, effectively instructing or guiding their colleagues to adopt the proposed practice. Consensus was determined when there was a subsequent commitment to comply with the decision (ie all participants were willing to support the pathway component, even if it was not their preferred choice).

The facilitator repeats an interesting anecdote from the anaesthetics team about how one of the main drivers for increased length of stay was that people were getting prophylactically placed in intensive care or put on the intensive care unit list before being admitted for surgery due to having small risk factors. When the head of discipline heard this, he made a directive to the rest of the group to basically stop doing this and length of stay reduced significantly for this patient cohort. [Observation, committee meeting, 2023]

Careful consideration had to be given to avoid confrontational approaches, as when

you're asking your surgeon to say to their colleagues, 'I think that you're practising in this way and maybe you should be practising in this other way' and that's potentially confrontational. [Interview 1, management]

Executive or managerial leadership could facilitate this domain of consensus with nursing and allied health clinicians and executive opinion appeared to have more sway within these disciplines. Executive leadership appeared to have less influence over the practice of surgeons or anaesthetists. Within the medical proceduralist sphere, consensus was more likely to be facilitated when a respected peer or discipline leader, such as another surgeon or anaesthetist, advocated for the practice.

For the doctor perspective, it would need to be driven at a high level because let me tell you, they're not listening to someone like me. [Interview 6, management]

There's also a certain extent of 'this is an executive priority' and therefore it kind of just filters through as: we need to prioritise this or [...] if something's important to manager X and it's important to the Director of nursing [...] then you're kind of being told that it's important to you. [Interview 9, management]

Assumed Consensus

The third criterion was 'assumed consensus' where the absence of dissent was interpreted as consensus. This criterion often manifested as silence from the group and was common in two scenarios. Firstly, when a pathway item was proposed by the facilitator or consensus group member during a face-to-face meeting. Following rigorous discussion, if no one refuted the item or raised objections, it was assumed that consensus was achieved.

Secondly, this criterion was commonly observed when a leadership-driven approach to consensus was employed. Since feedback from the remaining consensus group members would only be sought after leadership had created the pathway, this approach depended on individuals engaging with the process and responding to requests to review documents in their own time. If no one responded with comments, the silence or absence of dissent was interpreted as consensus having been achieved, implying agreement by default rather than explicit affirmation.

The facilitator says that he and [discipline lead] have developed the pathway and sent it around to other surgeons asking them to speak up if they have any issues. When the facilitator says that no one has responded to the email, everybody laughs and Nurse X repeats "accepted by omission". [Observation, spinal, 2023]

There is silence from the rest of the room as no one else either confirms or denies their opinion and the facilitator takes this silence as agreement and moves on. I later confirm with facilitator whether he takes this silence as consensus, to which he answers with yes. [Observation, orthopaedic, 2023]

Questions were raised as to the effectiveness of this consensus domain when pathways are eventually implemented. If consensus has been assumed from silence,

then you'll run into that question of, well, if people didn't really know or engage in the process of development [...] how well are they going to adhere to the element. [Interview 1, management]

Concessional Consensus

Finally, allowing 'individual preference' items was used as a concession to achieve sufficient consensus in the absence of high-quality evidence and instances of disagreement or amongst surgeons or anaesthetists. Some group members seemed to acknowledge the inevitability of differing opinions between clinicians, recognising that there will always be aspects of care that clinicians would not be able to agree on. This was likely due to the value that surgeons and anaesthetists placed on their individualised and autonomous professional practice, which was widely accepted by their peers. There was a shared understanding amongst group members that

it's up to them whether they want to adopt that as part of their global way of how they see looking after their patient. [Interview 5, clinician]

For example, it was agreed by orthopaedic surgeons during consensus discussions that thromboprophylaxis should be included in the total hip/knee arthroplasty pathways based on current evidence. However, surgeons could not agree on which prophylaxis should be used due to inconclusive and low-quality evidence favouring any specific type. Until there was stronger evidence, surgeons argued that they should be able to exercise their own judgment and preferences regarding what would be suitable for each patient as

my interpretation of the evidence is B, and your interpretation of the evidence might be A [...] So the consensus was that we can't actually reach a view on what the specific thing should be here [...], everyone has to have VTE prophylaxis, but it's per surgeon [Interview 9, management]

Underpinning this criterion was the assumption by leading group members that the consensus threshold could fluctuate and be adjusted throughout the consensus-building process. It was understood that while not all aspects of care might achieve universal agreement, sufficient consensus could still be achieved by agreeing on broad principles rather than focusing on specific details, especially those for which there was no compelling evidence to support or refute. This allowed for flexibility in clinical practices and consensus, which was highly valued by surgeons and anaesthetists, while aiming for a higher level of agreement on essential elements of care pathways. By having an adjustable consensus threshold, some level of agreement could always be achieved, serving as a practical fallback.

I think, [...] the doctors will make their clinical decisions. You're not going to change those because that's their decision to do the right thing by the patient. [Interview 3, management]

However, this criterion could be a barrier to overall buy-in to the consensus process for group members who believed that consensus implied unanimous agreement on all items. For some stakeholders, the idea of accepted variation was perceived as conflicting with the fundamental goals of consensus and

going outside the very essence of what you're trying to achieve. [Interview 6, management]

Discussion

We have defined four domains of consensus when undertaking informal consensus discussions to standardise processes of care: i) unanimous consensus; ii) delegated consensus; iii) assumed consensus and; iv) concessional consensus. We also identified different indicators of when consensus is achieved, ranging from an explicit verbal statement to more

implicit forms, such as lack of objection. Whilst unanimous consensus appeared to be the ideal target, our study highlights how this was not always attainable or necessary. Concessions were made to accommodate individual clinician preferences, whilst still aiming to achieve a sufficient level of agreement. The findings also show that consensus types can be linked to specific implementation mechanisms, such as the type of evidence available underpinning a recommendation or the structure of consensus discussions.

The organisation striving for unanimous consensus was unsurprising and is similarly regarded as the ‘ultimate authorisation’ in other traditions, such as politics or business.⁴⁰ In healthcare, complete agreement might inspire more confidence in a clinical decision if it is unanimously endorsed by clinical experts.⁴¹ A desire for unanimity appeared evident among some clinicians in our study, particularly those from nursing and allied health backgrounds. However, it is important to recognise that unanimity is not always regarded as a true reflection of consensus-building. Consensus-building literature suggests that while seeking unanimity is desirable when reached by proper deliberation, it should not be a requirement for group closure.^{40,42} The goal should be arriving at a solution that everyone can accept.²⁷ Necessitating unanimous agreement in order to complete a consensus-building exercise could lead to negative consequences, such as the group being dominated by demanding members.^{40,43} It might even hinder scientific deliberation, pushing for agreement where genuine consensus does not exist.⁴⁰ Even when a clinical practice is endorsed in healthcare, achieving unanimity may be unrealistic⁴⁴ due to other factors like logistical constraints including time pressures and scheduling difficulties, or the value placed on autonomous practice in some specialties.⁴⁵

A key learning is the need to establish the criteria for agreement at the outset so that all stakeholders are aligned in their expectations of the goal of the consensus process. Interpretations of consensus may vary among individuals from the perception that total agreement is necessary, to the perception that some variation is permitted within a ‘consensus’ statement.³⁹ Exploring the reasons behind these varying interpretations is important, as it can help uncover barriers to achieving consensus in healthcare. There could be barriers at the individual level where previous research indicates that many clinicians, particularly doctors, sometimes prioritise personal experience and familiar practices over scientific evidence which can create a resistance to change.^{3,46–48} Barriers at the group level could impact on consensus-building, such as communication issues and group conflict when there are differing goals of care between teams, which have been shown to impact team care in hospitals.^{49,50} Interestingly in our study, clinician differences often did not escalate into overt conflict. Instead, the group adjusted the threshold for consensus, accommodating for individual preferences and allowing for ‘trade-offs’²⁷ where clinicians agreed on the desired outcome but differed on the methods to achieve it.

Both concessional and directed consensus raise important questions about long-term adherence to and sustainability of consensus decisions, especially when only a subset of stakeholders are involved in decision-making. Research suggests that issues like poor collaboration and misalignment of interests among stakeholders involved in an intervention can negatively impact compliance to those interventions over time.^{51,52} Selective involvement of disciplines or leadership could therefore be problematic, as not all members may feel equally committed to the decisions made. Some political traditions hold that ‘joint acceptance’ of a decision, or delegated consensus as we observed, is enough if the minority opposing the view acknowledges the majority view and are willing to let that view stand as the groups position.⁴⁰ However, in healthcare, implementation of care practices requires more than just acknowledging a view but actual agreement to follow through with the practice. Multidisciplinary representation in consensus groups may be a valuable approach to enhance sustainability and make decisions more palatable,¹⁰ as evidence shows that involving clinicians in the development of changes or innovations improves implementation.^{53,54} For example, successful implementation of expert consensus clinical guidelines is often linked to the degree of involvement of those for whom the guidelines are intended.^{53,55}

The consensus criteria chosen by organisations may vary depending on factors such as the type of organisation or the healthcare disciplines involved. Some settings may rely solely on unanimous consensus whereas others may be satisfied with sufficient consensus. For example, executive leadership appeared to have less influence over medical proceduralist decision-making in our study but more over allied health and nursing. This difference may stem from the employment status of these professionals where those who are direct employees of an organisation (eg, nurses) could be influenced to a higher degree by their employers’ directives. In Australian private healthcare organisations, many surgeons and anaesthetists are contracted rather than employed directly, which can lead to a different relationship dynamic with

executive leadership. As contractors, they often maintain a higher degree of autonomy and may prioritise professional judgment over organisational directives.⁴⁵ We also observed that achieving consensus unfolded in two distinct stages for surgeons and anaesthetists where initially, the consensus-building process was delegated to a smaller group of individuals. Following this, a broader effort was made to ensure agreement across all surgeons and anaesthetists within the discipline, regardless of whether they were in the initial consensus group or not. This approach may also have been context-specific, where consensus among a selected group might suffice for widespread implementation in other settings. For nursing and allied health, consensus was confined to discipline leaders, whose agreement with executive leadership was deemed sufficient for implementation, with the key factor being agreement to follow the care pathways.

There is limited research on the sustainability of interventions when using local consensus discussions as an implementation strategy.^{56,57} Though interest in understanding factors that influence sustainability has grown in recent years, we still do not fully understand how some strategies work to influence sustainment. ERAS protocols developed through consensus by external bodies and then implemented into organisations appear to be widely adopted; however, reduced compliance to all pathway components over time is cited as an ongoing issue.^{58–60} Implementing and sustaining a multidisciplinary program like ERAS requires substantial effort, with strong momentum and commitment from all stakeholders.⁶¹ The consensus-building process itself may be effective in enhancing the sustainability of interventions since the foundations of effective consensus building align with key factors that contribute to successful implementation.¹⁰ Implementation research highlight factors associated with implementation sustainability in healthcare including clinician engagement, ownership, relationship building, leadership involvement, modifiable and tailored interventions, and shared decision making among stakeholders;^{56,62,63} all of which can be fostered through a mutually respectful process inherent in consensus discussions.¹⁷ For example, consensus-building in our study involved leadership engagement at multiple levels, either through direct participation in discussions or by facilitating the process, active clinician involvement in decision-making and discussion of how interventions could be modified, as well as agreement to action these decisions. Some of these factors are also highlighted in our consensus framework, for example concessional consensus helps to meet a variety of interests while directed consensus hinges on different leadership levels being engaged throughout the process.

This study had some limitations. Firstly, the sample size was relatively small and drawn from a single hospital, which potentially limits the generalisability of our findings. While supplementing interviews with observations provided a richer understanding of the consensus-building process, the scope was still confined to elective surgeries conducted in a private hospital setting. Although we included a broad selection of professional disciplines, encompassing both clinical and non-clinical roles, the focus on a specific type of surgery and hospital setting may not fully capture the diversity of consensus criteria across different healthcare environments. Future research examining consensus-building in a variety of hospital settings, including public and rural hospitals, will be crucial to determine whether the criteria for agreement differ based on context.

Conclusions

This study presents a novel framework defining the different consensus domains when conducting local consensus discussions in healthcare. The four consensus domains, i) unanimous consensus; ii) delegated consensus; iii) assumed consensus and; iv) concessional consensus, broaden our understanding of how consensus can be defined when using informal methods beyond unanimous agreement. In some cases, it could reflect an absence of disagreement, a directive or a concession based on achieving some level of consensus. The framework also provides more conceptual clarity, clearer language and a structure for recognising consensus when it arises. The framework can be used to assist healthcare organisations in designing consensus strategies and guide decision-making processes, allowing organisations to evaluate the level of consensus achieved and determining when it is appropriate to move forward. The consensus-building process may enhance the sustainability of interventions by fostering key factors for successful implementation, such as clinician engagement, relationship building, leadership involvement, and shared decision-making, many of which are highlighted in our consensus framework. By more clearly defining the meaning of consensus, clinicians can also use these domains to increase transparency in decision-making and reporting processes. Future research should explore the impact of these

consensus types on decision-making efficiency, implementation success and long-term sustainability of interventions developed using this framework through implementation trials or longitudinal studies in real-world contexts.

Abbreviations

ERAS, Enhanced Recovery After Surgery; VTE, venous thromboembolism.

Data Sharing Statement

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethical Approval and Informed Consent

Approval to conduct this study was obtained from the Macquarie University Human Research Ethics Medical Sciences Committee (Reference No: 520221219542374). All participants gave their informed consent to participate in this study and could opt-out of participation at any time. Participants gave their informed consent for the publication of anonymised responses or direct quotations. The study was completed in accordance with the National Statement on Ethical Conduct in Human Research (2023).

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare that they have no competing interests in this work.

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