



ANZCA
FPM

A framework for perioperative care in Australia and New Zealand

An initiative of the Australian and New Zealand College of Anaesthetists (ANZCA), in collaboration with representatives of:

- Anaesthesia Continuing Education (ACE) Perioperative Medicine Special Interest Group (POM SIG).
- Australian and New Zealand College of Anaesthetists Faculty of Pain Medicine (FPM).
- College of Intensive Care Medicine of Australia and New Zealand (CICM).
- Royal Australasian College of Physicians (RACP).
- Australian and New Zealand Society for Geriatric Medicine.
- Rehabilitation Medicine Society of Australia and New Zealand.
- Internal Medicine Society of Australia and New Zealand (IMSANZ).
- Royal Australasian College of Surgeons (RACS).
- Australian College of Remote and Rural Medicine (ACRRM).
- Royal Australian College of General Practitioners (RACGP).

Table of contents

Purpose and background.....	4
Defining perioperative care	5
Summary of principles in perioperative care	9
Perioperative care principles, recommendations, resources and references	11
Conclusion.....	28
APPENDIX 1 - Glossary of terms used in perioperative care	29
APPENDIX 2 - References	32

Purpose and background

Perioperative medicine (POM) has experienced significant growth over the past ten years. As the population ages and people live longer with multimorbidity, the profile of those accessing surgical services has also changed, with people at higher risk of perioperative complications being considered for surgical procedures. Concurrently, some surgical procedures have become more technically complex and resource intensive, raising issues of sensible stewardship, while other surgical procedures have become less invasive and can be offered to a broader group of at-risk patients. These less invasive procedures are performed by surgeons but also by other specialities (for example interventional cardiologists, radiologists and endoscopic proceduralists). This is also leading to an increase in surgical volume¹.

To address this changing landscape and optimise the quality of perioperative care for all patients, the Perioperative Medicine Special Interest Group (POM SIG) was established by the tripartite educational organisation of the Australian and New Zealand College of Anaesthetists (ANZCA), Australian Society of Anaesthetists (ASA) and New Zealand Society of Anaesthetists (NZSA). The POM SIG now has membership from multiple stakeholders including primary care, surgeons, anaesthetists, physicians (general and geriatricians) and intensive care physicians.

Following feedback from ANZCA fellows and working groups, the college decided to make POM a strategic priority. In 2018, we identified the need to bring multiple stakeholders in POM together and develop a guiding framework, a training and professional development plan, and resources for clinicians and health care services wishing to develop POM services. Subsequently, the Perioperative Medicine Steering Committee was formed and included broad representation from the relevant specialist colleges and societies. The committee commissioned a Perioperative Care Working Group. This working group brought together representatives from specialist colleges, professional societies and other leaders in the field of POM with the aims to:

- Form a consensus definition of perioperative care in Australia and New Zealand.
- Develop a guiding framework for perioperative care that encompasses the patient journey from contemplation of surgery through to recovery and their optimal outcome.
- Develop a resource for those wanting to develop perioperative care services.

This document is primarily aimed at equipping medical staff for their role within the perioperative medicine team (see below) and for the interactions with surgeon's and primary care doctors. It provides a high-level resource for those creating, leading and improving perioperative medical teams.

Implementing this guiding framework will integrate intentional and focused perioperative care into the patient journey. Where multidisciplinary elements of perioperative care already exist, best practice principles to ensure co-ordination of care and effective use of resources, for in and out-of-hospital care are provided. Where a multidisciplinary service doesn't currently exist, as may be the case in regional and remote areas, creation of a governance structure to develop a service, starting

¹ AIHW reports showing annual increase in emergency and elective surgery in public and private hospitals. See: <https://www.aihw.gov.au/reports/hospitals/hospitals-at-a-glance-2017-18/contents/surgery-in-australias-hospitals>

with the appointment of a suitably qualified POM lead is to be encouraged. This appointee will function as a key resource to co-ordinate and liaise with all those involved in planning for safe, effective and efficient care for patients for who surgery is a potential treatment option. This in time may lead to the development of a comprehensive and integrated multidisciplinary perioperative care team.

Defining perioperative care

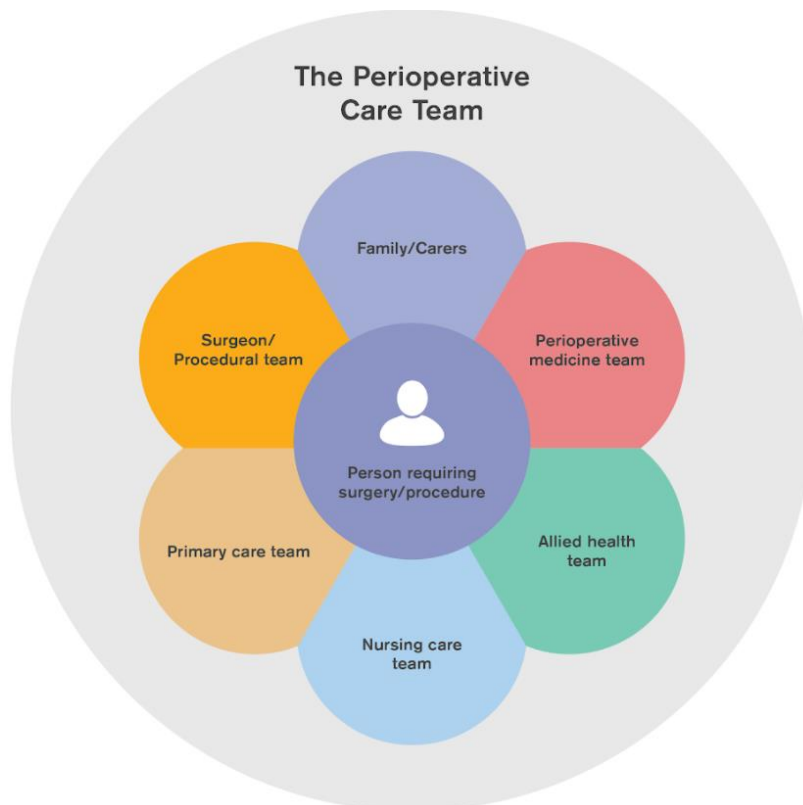
What is perioperative care?

Perioperative care is the multidisciplinary, individualised, integrated care of patients, from the moment surgery is contemplated through to their optimal outcome. From here the term surgery and procedure will be used interchangeably.

What is the perioperative care team?

The perioperative care team (POCT) includes all individuals who may be involved in a patient's perioperative journey. This may include doctors, nurses and other health professionals in hospitals or clinics, as well as family members or other carers (Figure 1). To save repetition in the document when using the term patient, from here on it will refer to patient, family and/or carers.

Figure 1 – The perioperative care team (POCT)



*Allied health team – include where relevant physiotherapists, occupational therapists, dieticians, social workers, Indigenous liaison officers, psychologists, pharmacists, speech pathology and other non-medical support workers.

What is perioperative medicine?

Perioperative medicine (POM) is the science and practice of optimising patients prior to surgery and minimising the risk of and managing perioperative complications.

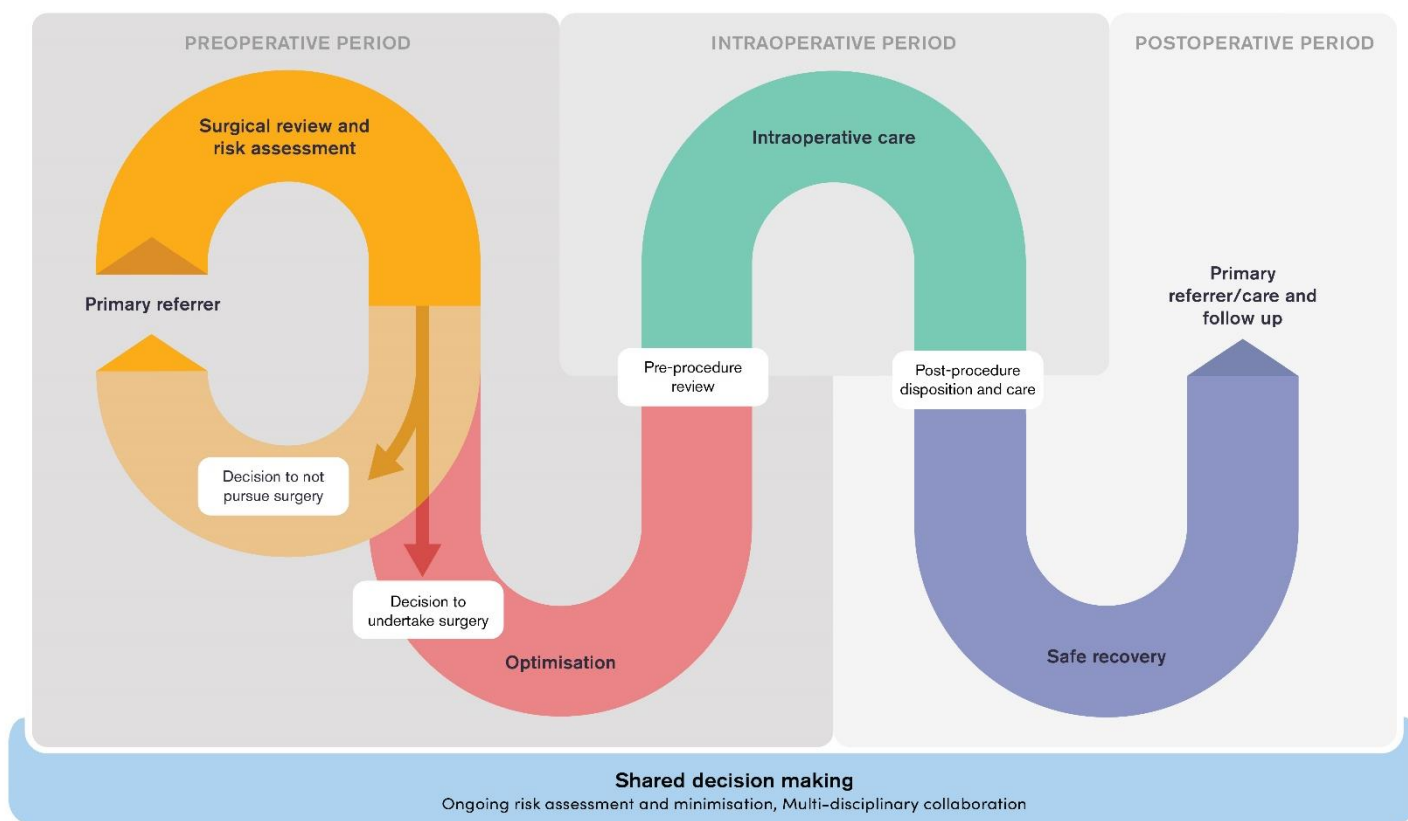
What is the perioperative medicine team?

Led by medically qualified specialists, the perioperative medicine team (POMT) performs risk and needs assessment, co-ordinates preoperative optimisation, helps prevention and management of postoperative medical complications, and supports functional recovery. The POMT complements the decision-making and care delivered by the surgical and other teams, in the preoperative, operative and postoperative phases of the patient's journey. The POMT should be consultant led and may include consultants in anaesthesia, pain medicine, internal medicine, geriatric medicine, general practice, other medical specialities, and intensive care.

The POMT works collaboratively with the surgical team and other health disciplines, primary care team, family and carers to support safe, effective and efficient care for patients for whom surgery is a potential treatment option (Figure 1). The leader and members of the team will depend on patient needs, surgical approach, and local resources, and should be individualised to meet the needs of different patient groups. The POMT also works collaboratively with primary care, nursing and allied health professionals along the perioperative journey.

The POMT can support shared decision-making and co-ordination of care in the preoperative phase (risk assessment, shared decision-making and optimisation); the operative phase (pre-procedure review, intraoperative care and post-procedure disposition and care); and the postoperative phase (safe recovery, post-acute care and handover to primary care) (Figure 2).

Figure 2 – The perioperative care framework



The Perioperative Care Working Group collaborated to develop a guiding framework (Figure 2) intended to support POM practitioners working in perioperative care by:

- Identifying key steps in the surgical patient's perioperative care journey.
- Outlining key principles and responsibilities for each step, which could be adapted to different patient groups and contexts.
- Providing recommendations about how these principles might be operationalised in practice.
- Providing examples and resources that support the evidence behind these recommendations and/or their implementation in practice.

The patient's perioperative journey can vary considerably in complexity. The perioperative care framework has been constructed to unpack each component of this journey in timeline format. Broad categories and decision points along the timeline are described, with the aim of assisting perioperative medical services to delineate responsibility lines, goals at each step and handover points.

It's designed to be a practical resource for those developing and improving POM services. We anticipate that this framework can help guide training, service development and improvement, and research in POM. Recommendations and resources will be updated as the field continues to evolve.

Shared decision-making

Shared decision-making (SDM) is a collaborative process between patients, carers and healthcare professionals to bring together the patient's values, goals and preferences with the best available evidence about benefits, risks and uncertainties of treatment, in order to reach the most appropriate healthcare decision^{2,3}. SDM underpins the communication strategy throughout the perioperative journey of a patient as is illustrated by the blue below the framework (Figure 2). Below are some SDM resources:

- [Australian safety and quality shared decision-making support tools, patient decision aids and question prompts.](#)
- [NSW consumer enablement guide.](#)
- Agency for Healthcare Research and Quality (AHRQ), [The SHARE approach; Putting shared decision making into practice: A user's guide for clinical teams](#) (includes consumer research, patient decision aids and clinician research summary resources).
- [Making shared decision-making a reality](#), The King's Fund.
- The [NSW perioperative toolkit](#).
- Royal College of Surgeons of England, [High risk general surgical patient guideline](#).
- Queensland Health Clinical Excellence Division, [COOPERATE: Collaborative older persons' elective surgery risk assessment for treatment efficacy](#), recommendations June 2018.
- [Shared decision making](#) by the Peter MacCallum Cancer Centre.

² Australian Commission on Safety and Quality in Healthcare. Shared decision making 2019. Available from: <https://www.safetyandquality.gov.au/our-work/partnering-consumers/shared-decision-making>.

³ Kupu Taurangi Hauora o Aotearoa. Health Quality & Safety Commission New Zealand. He hoa tiaki Partners in Care. What do clinicians need to know about shared decision making? 2014. Available from: <https://www.hqsc.govt.nz/our-programmes/partners-in-care/>.

Summary of principles in perioperative care

1) Primary referrer and referral

- (i) The primary referrer, in consultation with the patient, makes a diagnosis and assesses the level of symptoms and disability caused by the condition. The potential benefits and risks of a procedure are considered.
- (ii) Where a procedure is considered and estimated risk is elevated, the primary referrer initiates a discussion about advanced care planning at the time of surgical referral.

2) Surgical review and risk assessment

- (i) The surgical team discusses potential procedural and non-procedural management options in consultation with the patient. Procedural urgency, procedural risk and patient risks are discussed and assist shared decision-making.
- (ii) Patients with high-risk procedural and/or patient factors are referred to the POMT. The use of referral criteria and clinical judgement can help direct optimal referral to the POMT.
- (iii) The POMT conducts a comprehensive person-centred preoperative risk assessment, integrating patient-specific goals, patient and procedural risk, procedural urgency and facility resources to inform shared decision-making. Some patients will benefit from additional POCT collaboration and planning.

3) The operative decision

3a. Decision to not pursue surgery

- (i) The surgical team and patient decide collaboratively to not pursue surgical intervention after considering risks and benefits. Shared decision-making takes the patient's goals and wishes into account and is informed as needed by the POMT.
- (ii) The POMT may provide the patient with alternative or additional management options, including palliative and supportive care. This decision-making process is documented and communicated to the patient and the primary referrer including a plan if deterioration takes place.

3b. Decision to undertake surgery

- (i) The surgical team and patient decide collaboratively to pursue surgical intervention using a shared decision-making model. Shared decision-making prioritises the patient's goals with expert guidance by the POMT. The surgical team acknowledges the time needed to optimise a patient prior to surgery and this may require discussion with the POMT regarding timing of surgery.

4) Optimisation

- (i) The POMT aims to improve immediate and long-term morbidity and mortality by addressing modifiable patient risks in the context of the procedure and available resources.
- (ii) The POMT monitors and co-ordinates the pathway to surgery ensuring optimisation targets are met and unnecessary delays are avoided.

5) Pre-procedure review

- (i) Prior to surgery, the anaesthetist and/or the proceduralist or their delegates provides specific information to prepare the patient for the day of surgery.
- (ii) On the day of surgery, the procedural team reviews the patient's perioperative journey, confirms the procedure and confirms that their postoperative destination is appropriate and available.

6) Intraoperative care

- (i) The anaesthetist and proceduralist are responsible for ensuring appropriate staff, roles, responsibilities, procedural goals, facilities, anticipated complications and contingency plans have been identified and communicated to the intraoperative team.

7) Post-procedure disposition and care

- (i) The anaesthetist, proceduralist and when required intensivist, determine the immediate management after the procedure based on patient risk assessment, intraoperative and institutional factors.
- (ii) Appropriate handover occurs to the relevant team members who may have ongoing input in the postoperative period.

8) Safe recovery

- (i) The POMT collaborates with the surgical team and other POCT members to prevent, anticipate, detect and respond to clinical deterioration, pain and complications in the postoperative period.
- (ii) The POMT supports multidisciplinary discharge planning and early functional rehabilitation to reduce patient complications and improve short and long-term outcomes. Additional restorative care services (in hospital or the community) are accessible for patients who require them.

9) Primary referrer/care and follow up

- (i) Timely and accurate handover includes a comprehensive medical plan which considers the patient's physical, social and functional needs, including their ability to access primary, secondary and tertiary level care.
- (ii) The discharge plan is communicated to the patient, the primary referrer and their primary care team, and includes a clear point of contact for addressing concerns, complications or side-effects.

Perioperative care principles, recommendations, resources and references

1) Primary referrer and referral

- (i) The primary referrer, in consultation with the patient, makes a diagnosis and assesses the level of symptoms and disability caused by the condition. The potential benefits and risks of a procedure are considered.

Recommendations

- Primary care physician discusses non-surgical and surgical management options, and may refer patient for surgical review for further diagnosis and discussion of management options.
- Primary care physicians are provided with teaching/training, education materials and communication regarding risk factors for poor perioperative outcomes.
- Tools are made available to primary care providers to assess perioperative risk.
- Referral guidelines and e-referral templates include simple perioperative risk screening tools.
- Where high risk criteria are identified, the primary care physician considers early and/or simultaneous referral for surgical review and POMT comprehensive risk assessment. [1]
- The primary referrer should also have easy access to specialist advice regarding where elevated risk is recognised (i.e. a point of contact within the hospital/health service).

Resources

Risk assessment tools

- [ACS NSQIP risk calculator.](#)
- [NZ Risk.](#)
- [Surgical Outcome Risk Tool \(SORT\).](#)

Frailty tools

- [Clinical Frailty Scale \(CFS\).](#)
- [Edmonton Frailty Scale.](#)

Guidelines

- [NSW Agency of Clinical Innovation Perioperative Tool Box.](#)
- [RCoA perioperative medicine pathway.](#)

Example of referral criteria to POMT in older patients

- [Perioperative Care of Older Patients Undergoing Surgery \(POPS\) UK.](#)

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- (ii) Where a procedure is considered and estimated risk is elevated, the primary referrer initiates a discussion about advanced care planning at the time of surgical referral.

Recommendations

- Early advanced care planning is considered for patients at high risk of perioperative complications. [1, 2]
- More complex discussions with the multidisciplinary team (surgeon/proceduralist, anaesthetist, physician or other specialists) may need to take place as it relates to the procedure, but an initiation of this discussion by primary care is to be encouraged.

Resources

- [Health Navigator New Zealand care planning.](#)
- [Advance Care Planning Australia.](#)
- [RACGP Advance Care planning practice tools.](#)
- [Advance Care Planning New Zealand.](#)
- [Serious Illness Conversation Guide Aotearoa.](#)

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2) Surgical review and risk assessment

- (i) The surgical team discusses potential procedural and non-procedural management options in consultation with the patient. Procedural urgency, procedural risk and patient risks are discussed and assist shared decision-making.

Recommendations

- Surgical procedures with high procedural risk and high procedural urgency are identified. [1, 2]
- Risk assessment scores are used to broadly risk stratify patients and help identify high-risk surgical patients. [2-5]
- Where patients fulfil pre-determined high-risk criteria, the POMT is consulted early.
- Some high-risk patients may require POMT input prior to the surgical discussion of management options.
- Procedural and non-procedural management options presented to patients are based on individualised risk assessment and discussed using a shared decision-making technique.
- An assessment of decision-making capacity may need to be carried out.
- Certain patients may require specialist geriatrician or physician assessment of surgical decision-making capacity. Health services are encouraged to follow local guidance for the provision of a temporary guardian to assist the patient in surgical decision making.
- Surgical risk assessment informs prioritisation of perioperative resources and facilities including postoperative high dependency and intensive care.
- Surgical risk assessment is routinely documented on procedural booking forms to increase awareness and optimise communication among the POCT.

Resources

Surgical risk and urgency

- [NCEPOD surgical urgency definitions.](#)
- [2014 ESC/ESA Guidelines on non-cardiac surgery surgical risk estimate.](#)
- [British United Provident Association \(BUPA\) surgical risk scores.](#)

Patient risk assessment tools

Non-cardiac elective surgery

- [ACS NSQIP Risk Calculator.](#)
- [NZ Risk.](#)
- [Surgical Outcome Risk Tool \(SORT\).](#)

Emergency abdominal surgery

- [NELA Risk Calculator.](#)
- [P-POSSUM.](#)

Frailty tool

- [Clinical Frailty Scale \(CFS\).](#)

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- (ii) Patients with high-risk procedural and/or patient factors are referred to the POMT. The use of referral criteria and clinical judgement can help direct optimal referral to the POMT.

Recommendations

- Patients with high procedural and/or patient risk are referred to the POMT by the surgical team and/or other defined referrers (for example pre-assessment clinic nurse). [1-3]

- Objective risk scores or criteria in conjunction with clinical judgement help identify patients likely to benefit from POMT input [4]. These criteria might include complex comorbidity, frailty, cognitive or functional impairment, obesity, or high-risk medications (for example anticoagulants, insulin, immunosuppressants, and opioids).
- The POMT referral pathway is clearly defined and institution-specific.
- Clinicians referring to the POMT communicate the role of the POMT to the patient.
- Patients should be offered the support of the hospital chaplains or other spiritual support (karakia/way/clearing/spiritual settling) as a preparation for surgery to assist with spiritual wellbeing of the patient.

Resources

Example of referral criteria to POMT in older patients

- [Perioperative Care of Older Patients Undergoing Surgery \(POPS\) UK.](#)

High-risk general surgical patient guideline 2018

- [Royal College of Surgeons England.](#)

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- (iii) The POMT conducts a comprehensive person-centred preoperative risk assessment, integrating patient-specific goals, patient and procedural risk, procedural urgency and facility resources to inform shared decision-making. Some patients will benefit from additional POCT collaboration and planning.

Recommendations

- The POMT preoperative risk assessment is targeted towards the specific patient and their perioperative goals, and surgical procedure. [1-4]
- Older, frail and multimorbid surgical patients benefit from a geriatrician-led comprehensive geriatric assessment and management. [3-6]
- Targeted and validated risk assessment tools are incorporated within comprehensive POMT assessment. [6-11]
- The proceduralist and POMT directs planning the patient's perioperative pathway including prioritising facilities and resources, and proactive discharge planning. [1-5]

Resources

- [COOPERATE: Queensland Health Collaborative Older Persons' Elective surgery Risk Assessment for Treatment Efficacy – June 2018 Recommendations.](#)

Examples of tools which may be utilised during POMT preoperative assessment

Cardiac risk

- [RCRI.](#)

COPD

- [Modified MRC breathlessness scale.](#)
- [COPD-X severity classification.](#)

OSA

- [STOP-Bang questionnaire.](#)
- [Epworth sleepiness scale.](#)

Multimorbidity

- [Charlson comorbidity index \(CCI\).](#)

Frailty

- [Frailty phenotype.](#)
- [Edmonton frailty scale.](#)

Cognitive impairment

- [Mini-mental state examination \(MMSE\).](#)
- [Montreal cognitive assessment \(MoCA\) *users are required to be certified.](#)
- [Kimberley Indigenous Cognitive Assessment.](#)

Functional impairment

- [Duke activity status index \(DASI\).](#)
- [Timed up and go test.](#)

Anxiety and depression

- [Hospital anxiety and depression scale.](#)

Nutrition

- [Malnutrition universal screening tool.](#)

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3) The operative decision:

3a) Decision to not pursue surgery

- (i) The surgical team and patient decide collaboratively to not pursue surgical intervention after considering risks and benefits. Shared decision-making takes the patient's goals and wishes into account and is informed as needed by the POMT.

Recommendations

- The POMT identifies a specific team member to co-ordinate shared decision-making with the patient and the POCT.
- Shared decision-making prioritises the patient's goals and expectations. [1-7]
- The proposed management plan or management options are communicated to the patient using resources (written, verbal, and interpreters as needed) appropriate to their health literacy.

Resources

Health literacy

- [Australian safety and quality health literacy.](#)
- [Teach-back techniques.](#)

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- (ii) The POMT may provide the patient with alternative or additional management options, including palliative and supportive care. This decision-making process is documented and communicated to the patient and the primary referrer including a plan if deterioration takes place.

Recommendations

- Palliative surgical techniques may be an alternative to definitive surgery. When embarked upon clear expectations should be discussed and documented.
- Referrals are made to inpatient and/or community (for example home support, community rehabilitation, community palliative care) services to co-ordinate continuing treatment and support.
- Patients are given the opportunity to review and confirm their management plan with the POMT at a future date, allowing time for contemplation and discussion.
- Patients are offered the support of hospital chaplains or other spiritual support (karakia/way/clearing/spiritual settling or prayer) to assist the spiritual/wairua wellbeing of the patient, even if surgery not pursued.
- The management plan is communicated from the POCT to the primary referrer.

Resources

Non-surgical management

- [Quality focused interventions for the relief of symptoms team.](#)
- [NSW Agency for Clinical Innovation osteoarthritis chronic care program model of care 2012.](#)
- [Palliative Care Australia.](#)
- [Palliative Care New Zealand.](#)

- [My Aged Care Australia.](#)
- [Needs Assessment Service Coordination Association New Zealand.](#)
- [Advance Care Planning Australia.](#)
- [Advance Care Planning New Zealand.](#)

3b) Decision to undertake surgery

- (i) The surgical team and patient decide collaboratively to pursue surgical intervention using a shared decision-making model. Shared decision-making prioritises the patient’s goals with expert guidance by the POMT. The surgical team acknowledges the time needed to optimise a patient prior to surgery and this may require discussion with the POMT regarding timing of surgery.

Recommendations

- The proposed surgical intervention is communicated to the patient using resources (written, verbal, and interpreters as needed) appropriate to their health literacy.
- Clear communication is established between the POMT, surgical team/proceduralist and the patient regarding the optimisation targets that are required and the booking date.
- The patient understands the decision-making process and ongoing plan.
- The date of surgery is communicated to the primary referrer.

4) Optimisation

- (i) The POMT aims to improve immediate and long-term morbidity and mortality by addressing modifiable patient risks in the context of the procedure and available resources.

Recommendations

- The POMT collaborates with the POCT and patient to achieve optimisation.
- Earliest possible referral to the POMT is essential to ensure sufficient time for optimisation. This is particularly critical for the high-risk patient having major surgery, to allow sufficient time to achieve maximal physical, physiological and psychological preparation.
- Optimisation should take an individualised bundled approach and involve comorbidity management alongside collaborative behavioural change and psychological, physiological and pharmacological preparation for surgery. These may include but are not limited to the following perioperative targets for assessment and optimisation:

• Cardiovascular disease
• Respiratory disease
• Obstructive sleep apnoea
• Diabetes
• Obesity and metabolic disease
• Anaemia
• Frailty
• Cognitive impairment
• Medication rationalisation
• Smoking cessation
• Alcohol and recreational drug use
• Nutrition
• Psychology and readiness for surgery

- | |
|---------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Exercise capacity |
| <ul style="list-style-type: none"> • Respiratory muscle training |

- Early consideration of comprehensive geriatric assessment and management as a part of a perioperative work up in appropriate cases should be considered.
- Utilisation of available institutional and community resources should be targeted to those patients that would benefit most from optimisation and prehabilitation.
 - (ii) The POMT monitors and co-ordinates the pathway to surgery ensuring optimisation targets are met and unnecessary delays are avoided.

Recommendations

- The POMT collaborates with the POCT and the patient to achieve optimisation targets, ideally without delaying surgery.
- The hospital where surgery will be provided should have a designated POCT leader/clinical co-ordinator and/or POMT lead that:
 - The patient and other members of the POCT can use as the point of contact to update patient progress and present queries or problems.
 - Monitors and co-ordinates a timely pathway to surgery for the patient, ensuring unnecessary delays or miscommunication between multidisciplinary providers are avoided.

Resources

- [Prehabilitation at Peter MacCallum, Melbourne.](#)
- [NSW Agency for Clinical Innovation \(2016\). *The Perioperative Toolkit.*](#)
- [RCoA UK \(2019\) – “Fitter, better, sooner”.](#)
- [Guy’s and St Thomas’ perioperative medicine for older people undergoing surgery \(POPs UK\).](#)
- [ANZCA policy document on smoking.](#)
- [Australian Diabetes Society perioperative guidelines.](#)
- [National Blood Authority. Preoperative anaemia identification, assessment and management case study 2014.](#)
- [RCoA Centre for Perioperative Care \(June 2020\) Impact of perioperative care on healthcare resource use – rapid research review.](#)

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5) Pre-procedure review

- (i) Prior to surgery, the anaesthetist and/or the proceduralist or their delegates provides specific information to prepare the patient for the day of surgery.

Recommendations

- Clearly identify high-risk patients.
- Ensure the facility is appropriate for the procedure.
- Ensure the patient is in optimal medical condition for the anaesthetic, procedure and recovery.

Resources

- [ANZCA guideline on pre-anaesthesia consultation and patient preparation.](#)
- [ANZCA Safety of Anaesthesia report 2012-2014.](#)
- [ANZCA Safety of Anaesthesia report 2009 – 2011.](#)

- (ii) On the day of surgery, the procedural team reviews the patient's perioperative journey, confirms the procedure and that their postoperative destination is appropriate and available.

Recommendations

- Proactive communication regarding surgical, anaesthetic and nursing concerns.

Resources

- [WHO Surgical Safety Checklist.](#)
- [National Safety and Quality Health Service Standards: Guide for Day Procedure Services.](#)

6) Intraoperative care

- (i) The anaesthetist and proceduralist are responsible for ensuring appropriate staff, roles, responsibilities, procedural goals, facilities, anticipated complications and contingency plans have been identified and communicated to the intraoperative team.

Recommendations

- Policies and procedures consistent with evidenced-based guidelines:
 - Anaesthetic and surgical practice in keeping with ANZCA and RACS policies and guidelines are to be used as the standard of care. Aspects of intraoperative care that have been shown to improve outcome include:

• Pain minimisation strategies
• Postoperative nausea and vomiting strategies
• Blood loss conservation
• Prevention of hypothermia, acidosis and coagulopathy
• Attention to glycaemic control
• Pre-emptive management of physiological deterioration

- Theatre and human resource management:
 - Operating theatre team time out and preoperative huddle and surgical safety checklist. [1, 2]
 - Timing surgery to support safe intra and postoperative care and optimal team performance. [5, 6]
 - The appropriate staffing of consultant specialists for appropriate and high-risk procedures.
 - Health facilities resourced for advanced recovery room care/extended stay recovery if no critical care bed available.
 - Proactive handover to ward-based medical officers regarding procedure, anaesthetic and risk of postoperative complications for patients transitioning to the ward postoperatively.

Resources

- [WHO Surgical Safety Checklist.](#)
- [ACORN Standards for Perioperative Nursing in Australia.](#)
- [RCoA Perioperative Medicine pathway.](#)

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7) Post-procedure disposition and care

- (i) The anaesthetist, proceduralist and when required intensivist determine the immediate management after the procedure based on patient risk assessment, intraoperative and institutional factors.

Recommendations

- Use of surgical safety check list to discuss appropriate postoperative disposition.
- Handover from the surgeon/proceduralist and anaesthetist to ward based POMT and intensivist care is to be encouraged.
- Patient risk is reassessed following surgery to determine the most appropriate level of physiological monitoring.
- Appropriate staffing and defined clinical processes are matched to anticipated clinical risks and needs. Planning should specifically address:
 - Staffing: numbers and skill mix, both current and available.
 - Clinical guidelines and procedures to cover the specific clinical needs identified (for example types of surgery being performed and common emergencies).
- Appropriate postoperative resources required for recovery and the management of complications should be thought of prior to surgery (such as pre-arranged access to further specialist care or units within the institution).
- Planned duration of care should be matched to anticipated clinical need to ensure recovery room capacity is sufficient.
- Defined processes and escalation pathways that promptly identify criteria-based patient deterioration.
- Legal requirements for recovery room facilities may be defined for different jurisdictions, such as in the relevant Health Act, or equivalent. These may include the physical and operational requirements under specific circumstances.

Resources

Sedation guidelines

- [ANZCA guidelines on sedation and/or analgesia for diagnostic and interventional medical, dental or surgical procedures.](#)
- [Joint position statement on office-based procedures in Australia \(RACS, ANZCA, ASPS 2018\).](#)
- [Sedation licencing: No 23 of 2016 assented to 2.6.2016. South Australia Health Care \(Miscellaneous\) Amendment Act 2016. An Act to amend the Health Care Act 2008.](#)

Recovery room

- [ANZCA statement on the post-anaesthesia care unit.](#)
- [RCoA Guidelines for the Provision of Anaesthesia Services \(GPAS\) Chapter 4 Guidelines for the Provision of Postoperative Care 2019.](#)
- [Australasian Clinical Indicator Report Edition 2010-2017: Anaesthesia and Perioperative care, page 29.](#)
- [Safety and quality consensus statement on clinical deterioration 2017.](#)
- [Electronic observation charts: Between the flags.](#)

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- (ii) Appropriate handover occurs to the relevant team members who may have ongoing input in the postoperative period.

Recommendations

- Formal admission with medical and nursing handover occurs using a structured approach. This includes:
 - Pre-determined anticipated early postoperative risks.
 - Specific clinical needs.
 - Post-recovery room destination.
- Identification and handover of the intended destination after recovery room care is defined preoperatively (and refined intraoperatively, as needed) and communicated at handover to recovery room staff.

Resources

- [Safety and quality clinical handover.](#)

8) Safe recovery

- (i) The POMT collaborates with the surgical team and other POCT members to prevent, anticipate, detect and respond to clinical deterioration, pain and complications in the postoperative period.

Recommendations

- The POMT prioritises patients for regular post-operative review in collaboration with the surgical team.
- There are systems to identify high-risk patients requiring advanced monitoring in a higher care unit (for example advanced/extended stay recovery, close observation units, high dependency care and intensive care unit).
- There are systems to recognise and respond to clinical deterioration in all patients managed in an inpatient setting. [1]
- There are systems for screening, diagnosing, preventing and managing delirium in high-risk postoperative patients.
- There are systems to support prescribing and monitoring of safe and effective multimodal analgesia for postoperative inpatients.
- Ward co-management by a general physician or geriatrician is considered in high-risk patient groups (for example hip fracture, vascular surgery, emergency surgery). [2, 3]
- Clear verbal and written instructions about pain management, follow-up and potential complications are provided for patients at low risk who are not admitted to a clinical setting postoperatively (day case procedures). [4]

Resources

- [ANZCA statement on the post-anaesthesia care unit.](#)
- [Safety and quality recognition and management of the deteriorating patient.](#)
- [Postoperative analgesia.](#)
- [Enhanced Recovery After Surgery \(ERAS\) society.](#)
- [Example of Postoperative Model of Care in Older Patients \(POPS\) UK.](#)
- [ACS/NSQIP/AGS optimal perioperative management of the geriatric patient.](#)
- [Hospital elder life program.](#)
- [4AT rapid clinical test for delirium.](#)
- [Australian delirium clinical care standards.](#)

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- (ii) The POMT supports multidisciplinary discharge planning and early functional rehabilitation to reduce patient complications and improve short and long-term outcomes. Additional restorative care services (in hospital or the community) are accessible for patients who require them.

Recommendations

- Early graded mobility is encouraged and supported in all patients unless there are direct contraindications.
- Oral nutrition and hydration commence as soon as possible.
- Co-ordinated multidisciplinary discharge planning including patient-specific discharge education is commenced early in the admission to reduce readmissions. [1]
- The POMT considers referral for restorative care for patients who have had a decline in their function and/or cognition postoperatively. This can occur as an inpatient or an outpatient.
- Restorative care includes rehabilitation, geriatric evaluation and management (GEM) and, in Australia, commonwealth-funded transition care program. Access and selection of the appropriate restorative care will depend on patient needs and preferences as well as local factors.

Resources

- [Geriatric evaluation and management.](#)
- [Transition care programme.](#)
- [Enhanced Recovery After Surgery \(ERAS\) society.](#)

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9) Primary referrer/care and follow up

- (i) Timely and accurate handover includes a comprehensive medical plan which considers the patient's physical, social and functional needs, including their ability to access primary, secondary and tertiary level care.

Recommendations

- Patients are assessed for readiness to return to the care of the primary care provider (PCP) with consideration of the patient's own goals of care.
- There is clear agreement between the surgical and the POMT about their responsibilities for contributing to handover to the PCP.
- An accurate verbal and/or written handover between the hospital and PCP occurs in a timely manner particularly when the PCP is required to follow up the discharged patient.
- Clear pathways exist for two-way communication between the hospital and PCP, including a contact phone number to access the most appropriate clinician in the hospital should a complication arise. Some services may have the capacity to provide a GP Liaison service.
- Clear pathways exist to allow a patient to be returned to the care of the POCT if required.
- Effective communication at discharge includes written advice provided to patients in appropriate and accessible language. This includes:
 - Diagnosis and procedure.
 - Ongoing analgesic plans, including a plan for postoperative opioid weaning.
 - Ongoing instrumentation and drainage.
 - Rehabilitation needs and plans.
 - Planned support services.
 - Medication changes and supply.
 - Complications to anticipate.
 - How to access help if concerned (PCP or POCT).
 - Follow-up appointments.
- Consent is obtained from patients regarding the sharing of their health record or information with other health care providers including the PCP.
- Requirements for follow-up by a hospital clinician and/or PCP is clearly communicated to the patient. If appropriate, an appointment is arranged, and the details given to the patient.

Resources

Postoperative analgesia

- [The Lancet postoperative pain management and opioids series.](#)
- [Choosing Wisely Using Opioids Safely After Surgery 2017.](#)

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- (ii) The discharge plan is communicated to the patient, the primary referrer and their primary care team, and includes a clear point of contact for addressing concerns, complications or side-effects.

Recommendations

Prior to discharge

- The POMT liaises early (preferably in the preoperative setting) with community care providers for patients with pre-existing services to assist them in proactively planning for changes in care needs postoperatively.
- Prior to discharge the patient's physical, functional and cognitive condition and care needs are assessed, and consideration given to additional services required to ensure a safe and supported transition.
- Prior to handover, the POMT reconciles the prescribed medication regimen, particularly high-risk medications.

Discharge from hospital and handover to primary care

- Patients are involved in their discharge and handover.
- Handover is undertaken by clinical staff with sufficient experience and direct involvement in the care of the patient to ensure all key information is included.
- The preferred method of communication will depend on the individual patient's context and assessed risk. This may be by phone, email, letter, to a shared electronic health record, or any combination of these.
- When the care of a patient is handed over, there is clearly designated responsibility for follow-up of any outstanding test result or treatment.
- The handover highlights any aspects of the patient's care that requires follow up. This requires clarity about whether, when and why the patient should be seen again by the POMT and when to be seen by the PCP.

Discharge documentation

- Discharge summary with treating consultant is provided to all patients and their PCP on day of discharge from acute care. Consider directly contacting the patient's PCP if there are specific follow up requirements. Hospital substitution programs (for example hospital-in-the-home or post-acute discharge services) are considered to enable patients to return home as early as possible.
- Discharge education and documentation should include signs of infection or deterioration that the patient should look out for.
- Discharge letters contain specific details and tasks that the PCP is expected to perform upon review of the patient.

Resources

- [Choosing Wisely.](#)
- [Australian Department of Health home care packages.](#)

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Conclusion

Perioperative care services are essential to achieve sustainable patient access to essential surgery, with good patient outcomes. Intentional perioperative care is a multi-faceted, increasingly complex process that involves many stakeholders and requires a paradigm shift from healthcare clinical staff and health service funders.

This document provides a framework for those who want to develop perioperative care services with the goal of providing streamlined, co-ordinated care that minimise non-beneficial surgery and improves outcomes.

Adoption of this framework will set a benchmark for excellence in perioperative care and benefit all patients undergoing surgery and other procedures in Australia and New Zealand.

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APPENDIX 1 – Glossary of terms used in perioperative care

Advance care planning (ACP): ACP is the process of contemplating and planning for future health care and end-of-life care. This may involve developing an advance directive or statement of choices and appointing an enduring power of attorney (EPOA) (1, 2).

Carer: Carers are people who provide care and support to family members and friends who have disability, mental illness, chronic conditions, terminal illness, an alcohol or other drug issue or who are frail aged (3, 4). In New Zealand, this includes the Māori concept of **Whānau**, which can mean people with a relationship who are connected through a common ancestor or those with a common purpose or goal (5). The term carer excludes people employed by others to care for people, volunteers, and work experience students (6).

Clinical handover: The transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis (7). It can be written or verbal.

Comprehensive geriatric assessment (CGA): CGA can be defined as a multi-dimensional, interdisciplinary process used to quantify an older individual's medical, psychosocial and functional capabilities. It includes diagnosis, identification of problems, goal setting, and forming a comprehensive management plan for holistic treatment, rehabilitation, support and long-term follow up. It is part of the core skills and knowledge base of specialists in geriatric medicine (8).

Discharge planning: When the patient, carer, multi-disciplinary team and primary care provider(s) develop a personalised plan to ensure there is a smooth transition from hospital to home, residential care or somewhere else (9-11).

Discharge disposition (also referred to as separation in Australia and discharge in New Zealand): The person's location and status post-discharge following hospital admission (12).

Elective surgery: Defined as surgery for patients whose clinical condition requires a procedure that can be managed by placement on a waiting list (13). In New Zealand, elective surgery may also be termed planned care (14).

Emergency surgery: Surgery to treat trauma or acute illness subsequent to an emergency presentation. The patient may require immediate surgery or present for surgery at a later time following this unplanned presentation. This includes where the patient leaves hospital and returns for a subsequent admission. Emergency surgery includes unplanned surgery for admitted patients and unplanned surgery for patients already awaiting an elective surgery procedure (for example, in cases of acute deterioration of an existing condition) (12). Many health services consider emergency surgery is surgery required within 10 days of the decision to operate (15).

Enduring power of attorney (EPOA/EPA): EP(O)A is a legal document(s) that allows you to appoint someone you trust to make important decisions on your behalf if you can't make these decisions yourself due to illness or injury (16). In New Zealand, there are two types of EPA: personal and welfare EPA as well as property EPA (16). In Australia, the general principles of an EPOA are the same but the legislation governing the specifics vary state to state (17).

(Safety) Huddle: A brief (≤ 10 minutes), focused exchange of information about potential or existing safety risks which may affect patients, staff and any person accessing the healthcare environment (18). They are multidisciplinary and often occur at the start of a work day or procedure (19).

Multidisciplinary team: Involves a range of health professionals, from one or more organisations, working together to deliver comprehensive patient care (20). It can include but is not limited to medical, allied health professionals and nursing staff who can be hospital, community based, or a combination of both.

Optimisation: Involves improving modifiable aspects of patients' health, such as rationalising medications and addressing anaemia, malnutrition or smoking cessation (21).

Patient: The person being considered for surgery.

Perioperative care: The multidisciplinary, integrated, personalised care of patients from the moment surgery is contemplated through to an optimal outcome (22).

Perioperative care team (POCT): Includes all individuals who may be involved in a patient's perioperative journey. This may include doctors, nurses and other health professionals in hospitals or clinics, as well as family members or other carers (Figure 1).

Perioperative medical team (POMT): Led by medically qualified specialists, the POMT performs risk and needs assessment, co-ordinates preoperative optimisation, helps prevention and management of postoperative medical complications, and supports functional recovery. The POMT complements the decision-making and care delivered by the surgical and other teams, in the preoperative, operative and postoperative phases of the patient's journey. The POMT should be consultant led and may include consultants in anaesthesia, pain medicine, internal medicine, geriatric medicine, general practice, other medical specialities, and intensive care.

The POMT works collaboratively with the surgical team and other health disciplines, primary care team, family and carers to support safe, effective and efficient care for patients for whom surgery is a potential treatment option (Figure 1). The leader and members of the team will depend on patient needs, surgical approach, and local resources, and should be individualised to meet the needs of different patient groups. The POMT also works collaboratively with primary care, nursing and allied health professionals along the perioperative journey.

The POMT can support shared decision-making and co-ordination of care in the preoperative phase (risk assessment, shared decision-making and optimisation); the operative phase (pre-procedure review, intraoperative care and post-procedure disposition and care); and the postoperative phase (safe recovery, post-acute care and handover to primary care) (Figure 2).

Prehabilitation: Involves a period of working to enhance an individual's functional capacity in preparation for major surgery (23).

Primary referrer: Someone requesting specialist review of a patient. It is usually the patient's general practitioner but can also include emergency physicians, another surgical or medical specialist or nurse practitioners.

Procedural team: The healthcare team responsible for direct provision of the surgical intervention in the operating theatre. It includes medical practitioners, nurses, allied health staff and technicians (24).

Post-anaesthesia care unit (also referred to as recovery unit): A place close to the procedure room where expert care is provided in the early postoperative period, at which time rapid changes in physiology and pathology may still be occurring. Recognition and management of these changes by trained and skilled staff is required until such time that a patient's physiological variables are stable, allowing transfer to the ward or discharge from the facility (25).

Risk assessment: The act of identifying possible harm in a systematic manner, calculating how likely that harm is to happen and estimating what effects it might have if it did (26). It should be accompanied by a management plan to mitigate the identified risk. Validated tools are available to assist with risk assessment in the preoperative setting for example American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) surgical risk calculator (27) or National Emergency Laparotomy Audit (NELA) risk calculator (28).

Shared decision-making: A collaborative process between patients, carers and healthcare professionals to bring together the patient's values, goals and preferences with the best available evidence about benefits, risks and uncertainties of treatment, in order to reach the most appropriate healthcare decision (29, 30).

Surgery: An action, by a specially trained professional, which transforms living tissue in an irreversible way. It is not just the act of tissue transformation, but the care provided before, during, and after the procedure (31).

Surgical urgency (also referred to as priority category): The method used by health systems to assign a priority category to a procedure which is based on patient's clinical status and the consequences of any delay. Different health districts use varying nomenclature; however, the principals are similar. Elective and emergency surgery have different scales of prioritisation (15).

WHO (World Health Organisation) surgical safety check list: An internationally recognised and used 19-point checklist which aims to decrease errors and adverse events, and increase teamwork and communication in surgery (32).

APPENDIX 2 – References

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