

The Hidden Pandemic of Post-Operative Complications

Meeting Report



Authors:

Prof Guy Ludbrook
Ms Wendy Keech
Ms Francesca Zappia

Prof Bernhard Riedel
Dr Rob Herkes
Ms Kathy Heyman

Prof Paddy Phillips
Dr Ecushla Linedale
Dr Robyn Billing

Contents

Summary	3
Definitions	4
Principles for high quality perioperative care	5
Recommendations for achieving the value proposition within perioperative care	9
References	16
Appendix 1	17
Appendix 2	20
Appendix 3	21

Context

Surgery is a critical component of an effective healthcare system, with one third of the global disease burden, and two-thirds of cancers and injuries, managed by surgery. In Australia, this is reflected in approximately 2.5 million surgical procedures performed annually.^{1,2} Complications and death after surgery are common. Currently, one in six people suffer major complications after surgery, and death within 30 days of surgery ranks as the 3rd leading cause of death worldwide.² Left unaddressed, this is estimated to increase substantially as our population ages, and with its increasing burden of chronic disease, by as much as 10% annually for the next 30 years.^{1,2} There is increasing evidence that changes in healthcare delivery before and after surgery can generate higher value care, with improved patient outcome and reduced costs. More detail is available at: <https://thehiddenpandemic.com>¹⁻⁵

Summit Purpose

The National Summit on this "hidden pandemic" brought together clinicians, professional groups, administrators, funders, consumers, researchers, safety, quality and excellence commissions, and academics, involved in the public and private healthcare systems in Australia and New Zealand, with guests from the UK and USA (Appendix 1). The purpose of the Summit was to initiate a discussion on implementing change in the healthcare system to improve the delivery of perioperative care, and thereby: reducing the risk of complications after surgery, improving patient outcomes, and increasing healthcare sustainability.

Summit Process

A discussion paper was provided prior to the Summit on March 6th 2020¹ and draft principles were presented for further discussion and development at the Summit.

The focus of Summit discussions was on:

- a) principles underpinning high quality perioperative care
- b) priority themes and actions

E-polling prior to group discussion revealed that 'action to prevent and manage postoperative complications' was a high priority for 86% of attendees, and a medium priority for 14%.

Summit Outcomes

Group discussion generated 8 Principles, or a set of rules, to underpin activities to deliver high quality care. Further discussion generated 34 specific Recommendations on future activity, grouped into 9 Themes. These recommendations are accompanied by an estimation of achievable timeframes. It is proposed that this document provides guidance for jurisdictions wishing to undertake activities to deliver high value perioperative care. The website <https://thehiddenpandemic.com> will provide a repository for future information and feedback following this Summit, and a follow up meeting in 2021 to share progress is proposed.

Definitions

<i>Perioperative</i>	The journey from when surgery is contemplated until recovery to optimal functioning after surgery.
<i>Preoperative</i>	The period in the perioperative journey from when surgery is considered until anaesthesia and surgery commence.
<i>Postoperative</i>	The period in the perioperative journey from when anaesthesia is ceased until recovery to optimal functioning after surgery.
<i>Consumer</i>	The patient, as well as their relevant carers and family members.
<i>Systems</i>	Relates to a group of interacting or interrelated entities that form a unified whole. A system is described by its spatial and temporal boundaries, surrounded and influenced by its environment, described by its structure and purpose and expressed in its functioning. Relationships to healthcare are available in references. ^{1,6}
<i>Timelines</i>	Stratifies actions into: <u>'early'</u> : those which can commence (or have already commenced) and be completed quickly (months); <u>'intermediate'</u> : those which can be completed in 1-2 years; <u>'longer-term'</u> : those which can be completed in 2-3 years.
<i>Decentralised care</i>	Refers to healthcare provided across homes, communities, institutions and hospitals.

Developing a set of principles underpinning the delivery of the value proposition within perioperative care

Principles:

- *Healthcare per se, and perioperative care specifically, are complex systems. In complex systems, strategies are more likely to be successful if there is a simple set of rules or principles which can be applied at all levels including the clinic and bedside.*
- *Principles need to be: (i) consumer-centric; (ii) evidence-based; (iii) easy to understand and implement; (iv) adaptable to local strategies; and (v) applicable to public and private healthcare systems in Australia.*

Principles for high quality perioperative care

The following set of Principles were developed at the Summit and align with the topics and views of Summit participants. It is anticipated that these can be used to guide improvement in perioperative care in Australia, and deliver the aims of high quality, high value, surgery and perioperative care.

1. Consumer-centric: All planning must be based around the consumer and their expectations and needs; and is informed through an evidence base and individualised to the patient's risk profile.
 - The overarching goal of surgery is to achieve the informed (evidence-based, risk adjusted and individualised) outcome desired by the consumer. This goal should align with consumer's stated wishes, elucidated through a Shared Decision-Making process and/or documented in their Advance Care Directive.
 - Incremental targets towards the goal are pre-defined for each step in the pathway of care. The goal, and incremental targets, are understood and agreed to by all clinicians, institutions, and the consumer.
 - A coordinated perioperative plan of all aspects of care should be completed prior to the day of surgery and should commence within the primary care system. It should align with the consumer's wishes and expectations.
 - The Goals and Plan should be available to all stakeholders, including relevant clinicians, institutions and consumers.

2. Risk assessment should be formally determined when surgery is considered.

- Risks should be identified prior to surgery using standardised tools.
- Standard and accepted tools should be used to assist in risk recognition and estimation.
- Modifiable risk should be identified and addressed as early as possible, preferably within the primary care setting and with consumer buy-in.
- Identified risks should be mitigated by matching the patient and their defined goal and plan, with the most appropriate care pathways, and clinical and institutional expertise.
- Systems redesign may be needed to determine and enact a timely preoperative management plan to address these risks.
- Risk-benefit should be evaluated by clinicians and the consumer prior to a final decision to proceed with surgery and re-evaluated at all points in the patient journey.

3. The pathway for preventing surgical complications starts with primary care.

- This pathway starts from the time surgery is first considered. Early risk scoring and identification of modifiable risk (e.g. smoking, anaemia, diabetic control, deconditioning, nutrition, etc.) is essential and should be addressed in the primary care setting.
- Decentralised care using telehealth and community-based nursing and allied healthcare is essential and where possible managed in the consumer's home and other out-of-hospital settings (e.g. exercise, diet, smoking cessation etc).
- Decentralised preoperative care must encompass preventative care and where possible persist after surgery as part of healthy lifestyle choices.
- To enhance coordination of community- and hospital-based care the roles and responsibilities of each team member and the consumer and carer must be clearly defined and monitored.

4. Systems thinking for perioperative care should apply to all surgery and procedures.^{1,6}

- Care pathways should be designed using the best available evidence and should minimise unnecessary variation and maximise consistency.

- Evidence-based pathways and processes should be implemented, with compliance audited and fed back at all relevant levels, from clinicians to executives.
- Evaluation of performance should be based on the STEEEP™ principles of healthcare quality (safe, timely, effective, efficient, equitable, patient-centred).
- Feedback loops should be built into the system to allow assembled evidence to continuously improve the quality of care.
- Benchmarking between institutions should be considered for quality improvement and learning, through audit of both compliance and appropriate risk-adjusted outcomes. See also Principle 7.

5. The value-based proposition should accompany all activities, initiatives and improvements in the system.

- Delivery of the value proposition should be the ultimate focus of perioperative care; where value is defined by best outcomes, delivered safely, with patient satisfaction and at lesser cost.
- Evaluation and quality improvement should incorporate value assessment.
- Value assessment should include all elements of the patient journey, and all jurisdictions and fund holders.
- The value proposition should span the initial consultation and assessment, through to at least 90 days after surgery.
- The value proposition should ensure inclusion of all outcomes relevant to both health systems and consumers. Means to identify and include relevant outcomes potentially include applying the International Consortium for Health Outcomes Measurement (ICHOMS, www.ichom.org) wheel to a perioperative setting and including delayed outcome such as quality of life.
- Formal economic analysis, including cost-benefit/effectiveness, should be considered for all care elements and pathways.

6. Evidence-based approaches should be used within all elements of the system.

- Evidence gaps should be identified and addressed in a structured manner.
- The evidence underpinning the full range of care, including structures and processes, clinical care and therapeutic goods should be regularly reviewed.
- Evidence should consider patient-reported outcome measures, patient reported experience measures, clinical outcomes, economic outcomes and other outcomes relevant to other stakeholders. See also Principle 7.

7. Appropriate performance measures should be in place to guide quality and value.

- Performance measures should include structural, process and outcome measures.
- Performance measures should include patient-reported experience (PREM's) and patient-reported outcome measures (PROM's).
- Risk-adjustment should be factored into all performance measures.
- Performance should be shared openly with all stakeholders.
- High quality performance should be recognised.
- Examples of performance tools utilised in Australia on a hospital, region, or state-wide basis include: the ACS-NSQIP (against the American College of Surgeons Quality Improvement Program database) for outcomes; the European Enhanced Recovery After Surgery (ERAS) Society electronic interactive audit system for compliance with ERAS care pathways; the Healthcare Roundtable (against comparable Australian hospitals) for compliance and outcomes; and the ICHOMS standards set for patient-centric outcomes.

8. There is clear communication and accountability throughout the perioperative care journey.

- A model of shared decision making should be embraced by clinicians and involve patients, and their carers and family.
- Information should be readily accessible to all stakeholders.
- Patient progress through the system should be visible to and understood by all, to assist communication, accountability and planning.
- Telemedicine (now front and centre after COVID) should be leveraged to deliver a hub-spoke model of care, including risk-scoring and triage (by delivering an electronic Health Assessment Questionnaire; eHAQ9), prehabilitation (addressing modifiable risk), and virtual surgery school (patient education).

Recommendations for achieving the value proposition within perioperative care

Theme 1: How do we place the consumer at the centre of all perioperative/surgical planning and care?

Desired Outcome

All options of care are explained, including information on all associated risks and benefits, communicated in an understandable and meaningful way, so that the patient can make the best decision for them and their context.

Recommendations

1) *Develop a process for explanation / 'contractual' agreement.*

- Importance agreed by all stakeholders - focus group to define content and process
- Formalised communication skills training for all clinicians on how to communicate effectively
- Start patient conversations early in the perioperative journey (see also Primary Care)
- Provide information to consumers in a way sensitive to their preferences for information and their decision-making style – written / online
- Allow time to digest – must provide time; time with family/carers
- Check comprehension (teach back / talk back / digital feedback / confirm patients' expectations) at all points of the perioperative pathway
- Include, and confirm, people's expectations - consider Choosing Wisely recommendations⁷
- Host a single point of contact to discuss patient concerns along the perioperative pathway
- Create tools to facilitate Shared Decision Making for the patient/carer - ultimately a digital platform / on-line shared / app?
- Measure the process - audit: real time (e.g. real time independent comprehension check; postoperative phone call: "was it what you expected?"); ongoing clinical trials to evaluate and refine processes

Timeline: Intermediate

2) *Engage consumers in all levels of clinical governance, so that genuine co-design and monitoring of systems and processes occurs.*

- Consumer representation on all development and other relevant groups - diversity appropriate and with orientation
- Consumers involved in audit and outcome analysis
- Consumers involved in governance at all levels
- Key performance indicators (KPIs) agreed upon, acknowledged, and tracked

Timeline: Intermediate

3) *Create a visible pathway of care, with centralised and easy access, holding all the patient's information so that the all stakeholders have visibility of what has been done and what still needs to be done.*

- There is a defined pathway(s) - explicit and visible, mandated, defined decision points (e.g. Appendix 2)
- There is a mechanism to provide visibility to all relevant stakeholders – EMR, My Health Record, Health Pathways

Timeline: Intermediate

Theme 2: How do we ensure informed consent?

Desired Outcome

There is a defined, measured and audited process to ensure there are defined goals and plans for perioperative care; agreed to and understood by all stakeholders.

Recommendations

1) ACSQHC develops & incorporates measured and audited process into National Quality Standards for health providers.

- An evidenced based risk assessment tool for all patients
- A shared decision-making tool that helps all parties understand the goals/benefits of the procedure
- Decision aids for particularly complex decisions (e.g. treatments for breast cancer)
- Monitoring of the quality of the informed consent process vs the post-operative benefits & complications in the short, medium and long term

Timeline: Intermediate; complete June 2021

2) ACSQHC in conjunction with Health Consumer's Forum to develop an education package for healthcare providers based on best education principles of adult learning in the achievement of informed consent and decision making.

- This would include formalised training in communication skills including processes and techniques, including process for check back of patient's level of understanding

Timeline: Intermediate; complete June 2021

3) Liaise with the Commonwealth Government, in collaboration with the States, to enable development of a funding model as part of integrated care to enable appropriate informed consent.

- This may include changes to legislation to enable involvement of private health insurers.

Timeline: Intermediate; complete June 2021

4) Each state establishes a perioperative care clinical network or equivalent tasked to innovate and assist with the implementation of the standards (Champions).

Timeline: Intermediate; complete June 2021

5) A consumer education package providing information and patient experiences regarding Options, Risks & Outcomes is developed and made available on-line.

- Via various platforms e.g. YouTube, College brochures, Press, Websites)
- Pilots have been implemented to test the application of the standards and the education package

Timeline: Intermediate; complete June 2021

6) The National Quality Standards incorporate the requirement that surgery is undertaken following risk assessment and informed consent (as part of a shared decision-making process).

Timeline: Longer-term; complete end 2022

7) Relevant Colleges and stakeholders implement a monitoring process to measure the quality of informed consent and operative outcomes.

Timeline: Longer-term; from July 2023

Theme 3: How do we address patient risk?

Desired Outcome

There is a process which allows the consistent identification of risk, from early in the perioperative journey, which is shared with all stakeholders.

Recommendations

1) *Written risk assessment is undertaken consistently in sufficient time to allow modifiable risks to be addressed, and to allow triage and streaming to most appropriate pathways of care.*

- Every patient consultation gets a written risk assessment
- Ready options include ACS-NSQIP risk score - see Appendix 3; RAG (Red-Amber-Green) rating
- Should ideally occur with the GP surgical referral, and be repeated with surgical consultation and pre-anaesthetic assessment
- Mandatory before decision on booking (date/location) for surgery
- Risk is kept for risk-adjusted outcome analysis

Timeline: Early

2) *Investigations are commenced as soon as surgery is considered, to better determine risk and schedule surgery as soon as possible, and are ordered to better define conditions suspected after clinical assessment.*

- Utilise Choosing Wisely preoperative testing recommendations, starting at the time of referral from Primary Care⁸

Timeline: Early

3) *Consumers are well informed about what to expect (risks and benefits) well in advance of surgery through a public relations programme.*

- Forums to better understand and address what are patients' expectations regarding surgery and recovery, and knowledge about complications and the perioperative journey

Timeline: Early

Theme 4: How do we ensure effective interactions between Primary Care and acute perioperative care?

Desired Outcome

Risks and needs are initially assessed consistently in sufficient time to allow modifiable patient risks (e.g. deconditioning, malnutrition, smoking, anaemia, etc.) to be addressed, and to allow triage and streaming to most appropriate pathways of care.

Recommendations

1) *Written risk assessment – see under Risk Assessment, Recommendation 1.*

Timeline: Early

2) *Initial consistent written screening is performed prior to, or with, referral for consideration for surgery - patient needs (and associations with risk) occurs in sufficient time to allow modifiable risks to be addressed, and to allow triage and streaming to most appropriate pathways of care.*

Timeline: Early

- Primary care needs support - Screening tools (ideally with evidence of benefit, e.g.⁹); MBS Perioperative item number

3) The benefits of consumer engagement, early risk assessment and screening, and improved informed consent, are formally demonstrated. A clinical trial is piloted, and then formally conducted.

- Local engaged teams to trial implementation
- Trial in a small group(s) - e.g. country town / specific practices with established relationships; e.g. a single surgical area/specialty/procedure
- Pilot the process - informed goals of treatment and patient expectations recorded; Risk assessment (e.g. NSQIP, RAG rating, App) recorded; Complex case referral – flows from risk/needs; Communication (e.g. bundle all three into My Health Record/letter to surgeon with copy kept by GP/ post op- discharge letter
- Monitor and measure - processes undertaken; outcomes achieved; recovery/complications; expectations met

Timeline: Intermediate

Theme 5: What system responses are needed to drive ensure quality improvement?

Desired Outcome

A more accountable, ‘restorative and just’ culture and practice into the system, reducing blame and encouraging open disclosure.

Recommendations

1) Provide education and promotion for clinicians, and administrators - difficult conversations; shared decision making; patient stories posted in the jurisdiction(s).

- Teaching and education key
- Needs resourcing and incentives to drive change

Timeline: Early

2) Drive behavioural change, including leadership.

- Identify leaders and first movers
- Make it relevant to those in the system - performance is acknowledged and incentivised

Timeline: Early

3) Create feedback systems - to allow anyone to provide feedback.

Timeline: Early

- Include: patients/carers/family – their stories are powerful; all healthcare workers and assistants
- Inclusive mechanisms/tools to ensure equity (not all have smartphones/computers/internet access)

4) Identify relevant performance criteria.

- Involve ACSQHC, professional groups, funders...
- Consider: standards; benchmarks; relative change/improvement
- Risk-adjustment is essential
- Include accounting for human factors and performance management

- Ensure what is measured is important to one's system (what matters may be contextual)
- Must include what matters to, or includes action by, consumers - e.g. 'prehabilitation' engagement, smoking, exercise....

Timeline: Intermediate

5) Provide objective analysis of activities, processes and outcomes.

- Ensure data are relevant - see Action 4
- Reporting and feeding back to all stakeholders, including out-of-hospital care, consumers
- Loop closure with change and action, and reporting
- Promote culture of auditing, sharing information and learnings, and transparency
- Greater communication between those working in quality and safety and those working 'on the shop floor'
- Regular and ongoing auditing/date collection and reflection - make it a requirement not opt-in

Timeline: Early

6) Regulatory improvement.

- See under – Informed Consent; Recommendation 4 above

Timeline: Intermediate

Theme 6: What key data are needed to drive quality, both on process and outcomes?

Desired Outcome

To decrease and measure unwarranted variability in peri-operative complications by effectively and accurately measuring patient outcomes, and transparently sharing data in a way that can be used to implement and drive change and inform the shared care team of the risk and benefit of the surgery/procedure.

Recommendations

1) Define the ideal model of care, with evidence-based, best practice protocols, pathways and models of care for the entire patient journey, from referral to return to best functioning.

- Involve Colleges, Special Interest Group, States/Territories or Commonwealth – see Appendix 2 for work underway
- Initial focus on high impact areas
- Identify the points at which we can measure against them

Timeline: Early

2) Identify relevant performance criteria for the entire patient journey, from referral to return to best functioning.

- See also under Systems Responses, Recommendation 4

Timeline: Intermediate

3) Develop measuring systems to audit compliance with best practice models of care.

- Identify and access the funds to achieve measurement tools
- Provide central data storage and analysis system

Timeline: Intermediate

4) **Develop measuring systems to audit best practice outcomes.**

- Identify and access the funds to achieve measurement tools
- Provide central data storage and analysis system

Timeline: Intermediate

Theme 7: What financial incentives are required to drive equity in private and public sectors?

Desired Outcome

To acknowledge and encourage compliance with best practice.

Recommendations

1) **Provide a definition for cases complexity against which to measure and acknowledge.**

- See above ideal model of care against STEEEP
- Template goes in My Health Record

Timeline: Early

2) **Determine a funding system which acknowledges compliance.**

- Consider a bundled payment system – with acknowledgement of compliance
- To include primary care, geriatrics, prehabilitation, rehabilitation, allied health etc
- To include in- and out-of-hospital care

Timeline: Longer-term; from July 2023

3) **Determine a funding system which acknowledges good outcomes.**

- Define relevant outcomes (health system and consumer) – see before
- Ensure risk-adjustment
- Consider a bundled payment system – with acknowledgement of compliance
- To include primary care, geriatrics, prehabilitation, rehabilitation, allied health etc
- To include in- and out-of-hospital care

Timeline: Longer-term; from July 2023

Theme 8: What regulatory changes are required?

Desired Outcome

To establish a more accountable system, culture and practice.

Recommendations

1) **Gather a coalition of “standard setters” to agree to a vision document that will set the direction to ensure improvements in perioperative care.**

Timelines: Early

2) **Standard setting – establish evidence-based standards through collaboration between inter-professional, multidisciplinary standard setters.**

See also under Key Data

Timelines: Intermediate; complete end 2022

Theme 9: How can we improve outcomes and generate high value care for unplanned surgery?

Desired Outcome

To improve psychological and physical morbidity and mortality for acute surgical patients; to improve recognition of the burden of unplanned surgery and the need to appropriately fund at a health system/service level.

Recommendations

1) *Outline elements and issues relatively specific to unplanned surgery against the ideal model of care.*

- See also Key Data, Recommendation 1
- Rapid multi-disciplinary expert decision maker is readily available, with review frequently against patient goals of treatment; includes decision not to operate; contingency planning and appropriate limitations of care including goals of care; and includes early planning of discharge
- Consider organization of services, e.g. centralization of services; separation of acute and elective work; co-location of acute surgical specialties to enable efficiencies of scale and quality of care
- Internationally-recognised standardised risk assessment is used to stratify care for the individual patient and drive quality at a system level – see also Risk Assessment
- Risk assessment and multi-disciplinary feedback is used in shared decision making with patients – see also Consumer at the Centre
- Acute surgical patients have a separate pathway from elective surgery from start to finish - avoid cross-over; improved in-hours access to surgery; minimizes cancellation of elective surgery – see also under Key Data
- Effectively use data for quality assurance, quality improvement and research – see also under Key Data

Timeline: Early

2) *Develop KPIs for acute surgery.*

- Include under Regulatory Change and Key Data
- Development of quality indicators which will enable health care staff, systems and patients compare outcomes across services
- Focus on common challenges / problems: falls, delayed discharge, hospital acquired infections
- Use risk-adjusted/stratified outcome measures across Australia
- Feedback and benchmarking of outcomes to health services and individual clinicians

Timeline: Early

3) *To acknowledge and encourage compliance with best practice.*

- Include under Financial Incentives, Recommendations 1-3

Selected references/resources

1. <https://www.thehiddenpandemic.com/discussion-paper>
2. <https://thehiddenpandemic.com/summit-presentations>; “The hidden pandemic”
3. <https://thehiddenpandemic.com/summit-presentations>; “The nature of problems”
4. <https://thehiddenpandemic.com/summit-presentations>; “Our future population”
5. <https://thehiddenpandemic.com/summit-presentations>; “The science of change”
6. Locock L. Healthcare redesign: meaning, origins and application. *Qual Saf Health Care* 2003;12:53–58. Systems thinking: *“healthcare systems fail to provide treatments that are known to work, persist in using treatments that don’t work, enforce delays, and tolerate high levels of error. Healthcare leaders are now recognising . . . that the healthcare system needs radical redesigning . . . Healthcare redesign can be broadly defined as thinking through from scratch the best process to achieve speedy and effective care from a patient perspective, identifying where delays, unnecessary steps or potential for error are built into the process, and then redesigning the process to remove them and dramatically improve the quality of care.”*
7. ANZCA Choosing Wisely
<https://www.choosingwisely.org.au/recommendations/anzca#>
“Avoid initiating anaesthesia for patients with limited life expectancy, at high risk of death or severely impaired functional recovery, without discussing expected outcomes and goals of care”.
“Avoid initiating anaesthesia for patients with significant co-morbidities without adequate, timely preoperative assessment and postoperative facilities to meet their needs.”
8. ANZCA Choosing Wisely
<https://www.choosingwisely.org.au/recommendations/anzca#>
“Avoid routinely performing preoperative blood investigations, chest X-ray or spirometry prior to surgery, but instead order in response to patient factors, symptoms and signs, disease, or planned surgery”
9. Ludbrook G et al. A call centre and extended checklist for pre-screening elective surgical patients – A pilot study. *BMC Anesthesiol* 2015 May 19;15:77.

Appendix 1 – Summit Attendees

A/Prof. Amal Abou-Hamden, Royal Australasian College of Surgeons (SA), Central Adelaide Local Health Network (SA)
 Dr Rachel Aitken, Royal Australasian College of Physicians
 Dr David Alcock, Royal Hobart Hospital (TAS)
 Mr Adrian Anthony, Royal Australasian College of Surgeons
 Dr Vanessa Beavis, Australian and New Zealand College of Anaesthetists
 Ms Katie Billing, Commission on Excellence and Innovation in Health (SA)
 Dr Robyn Billing, Central Adelaide Local Health Network (SA)
 Dr Chris Bolen, Primary Care (SA)
 Ms Julianne Bryce, Australian Nursing and Midwifery Federation
 Dr Matthew Burstow, Logan Hospital (QLD)
 Ms Katherine Byrne, Consumer
 Ms Lynda Condon, Consumers Association
 A/Prof Charlie Corke, College of Intensive Care Medicine
 Ms Shannon Daly, Consumer Engagement and Cultural Advisor for Top End Health Service (NT)
 Dr Shelley Dolan, Peter MacCallum Cancer Centre (VIC)
 Prof. Katina D’Onise, Wellbeing SA
 Ms Lesley Dwyer, Central Adelaide Local Health Network (SA)
 Dr Jeremy Fernando, Australian and New Zealand College of Anaesthetists, Perioperative Medicine SIG and Perioperative Care Working Group
 Mr Adam Fitzgerald, Australian and New Zealand College of Anaesthetists
 A/Prof Arthas Flabouris, Central Adelaide Local Health Network (SA)
 Dr Aisling Fleury, Logan Hospital (QLD)
 Prof Christian Gericke, Royal Australasian College of Physicians
 Dr Katy Gibb, Central Adelaide Local Health Network (SA)
 Prof Mike Grocott, University of Southampton, Royal College of Anaesthetists, UK Centre for Perioperative Care (UK)
 Mrs Heather Gunter, Consumer (NZ)
 Prof Robert Herkes, Australian Commission for Safety and Quality in Health Care
 Prof Ken Hillman, University of New South Wales (NSW)
 Dr Tony Hobbs, Calvary Healthcare
 Ms Margaret Holmes, Consumer
 A/Prof Annmarie Hosie, Australasian Delirium Association
 Ms Kate Ireland, Consumer
 Mr Peter Jankowski, BUPA (AUS)
 Mr Jay Jiang, Sydney Local Health District (NSW)
 Ms Wendy Keech, Health Translation SA
 Dr Nick Kendall, Accident Compensation Corporation (NZ)
 Ms Sharonon Kendell, Calvary Health Care (AUS)
 Mr Robert Kluttz, Commission on Excellence and Innovation in Health (SA)
 Dr John Koncelik, Team Health Anesthesia (USA)
 Mr Paul Lambert, Central Adelaide Local Health Network (SA)
 Ms Kira Leeb, Victorian Agency for Health Information (VIC)
 Dr Ecushla Linedale, Health Translation SA
 Dr Courtney Lloyd, Central Adelaide Local Health Network (SA)
 Dr Margot Lodge, Alfred Health/Peninsula Health (VIC)

Appendix 1 – Summit Attendees (cont.)

Dr Ming Loh, Australian and New Zealand College of Anaesthetists, Perioperative Medicine SIG
 Ms Simone Louza, Consumer
 Prof Guy Ludbrook, Summit Committee; Central Adelaide Local Health Network; University of Adelaide (SA)
 Dr James Mackie, Clinical Excellence Commission (NSW)
 Prof Guy Maddern, University of Adelaide (SA)
 Dr John Maddison, Australian and New Zealand Society for Geriatric Medicine
 Ms Jane Marshall, Consumer
 Dr David Martin, Australian Orthopaedic Association
 Dr Rod Mitchell, Australian and New Zealand College of Anaesthetists
 Dr Chris Moy, Australian Medical Association (SA)
 Prof Alison Mudge, Internal Medicine Society of Australia and New Zealand
 Prof Michael Mythen, University College London (UK)
 Ms Phoebe Navin, Australian and New Zealand College of Anaesthetists
 Dr Suzi Nou, Australian Society of Anaesthetists (apology)
 Prof Paddy Phillips, Commission on Excellence and Innovation in Health (SA)
 A/Prof Luis Prado, Epworth HealthCare (VIC)
 Prof Ray Raper, College of Intensive Care Medicine (AUS)
 Ms Ellen Rawstron, Agency for Clinical Innovation (VIC)
 Dr David Reid, Central Adelaide Local Health Network (SA)
 Dr Simon Reilly, Australian and New Zealand College of Anaesthetists, Perioperative Care Working Group
 Prof Karen Reynolds, Flinders University (SA)
 Ms Jennifer Richter, Southern Adelaide Local Health Network (SA)
 Prof Bernhard Riedel, Peter MacCallum Cancer Centre (VIC)
 Dr Nick Simpson, Commonwealth Department of Health (AUS)
 Dr Mark Sinclair, Australian Society of Anaesthetists
 Mrs Judith Smith, Australian College of Nursing
 Prof Julian Smith, Monash Partners - Monash University & Monash Health (VIC)
 Ms Teri Snowdon, Australian and New Zealand College of Anaesthetists
 Dr Tony Sparnon, Royal Australasian College of Surgeons
 Prof David Story, University of Melbourne (VIC)
 Dr Linda Swan, Medibank Private
 Dr Lorwai Tan, Royal Australasian College of Surgeons
 Ms Stephanie Thomson, Perioperative Medicine Review Committee (NZ)
 Dr Katie Thorne, Capital and Coast District Health Board (NZ)
 Dr David Tivey, Royal Australasian College of Surgeons
 Dr Jill Van Acker, Australian and New Zealand College of Anaesthetists, Perioperative Medicine SIG
 Mr Tony Van Vugt, Consumer
 Dr Zoe Wainer, BUPA
 Dr Richard Walsh, PARC Clinical Research, Central Adelaide Local Health Network (SA)
 Mr Frank Wanganeen, Welcome to Country (SA)
 Prof David Watters, Safer Care Victoria and Victorian Perioperative Consultative Council (VIC)
 Prof Steve Wesselingh, South Australian Health and Medical Research Institute (SA)
 Ms Lyn Whiteway, Consumer

Appendix 1 – Summit Attendees (cont.)

Prof Andrew Wilson, Safe Care Victoria (VIC)

Dr Bianca Wong, Northern Adelaide Local Health Network (SA)

Dr Katherine Worsley, St. Vincent's Health (AUS)

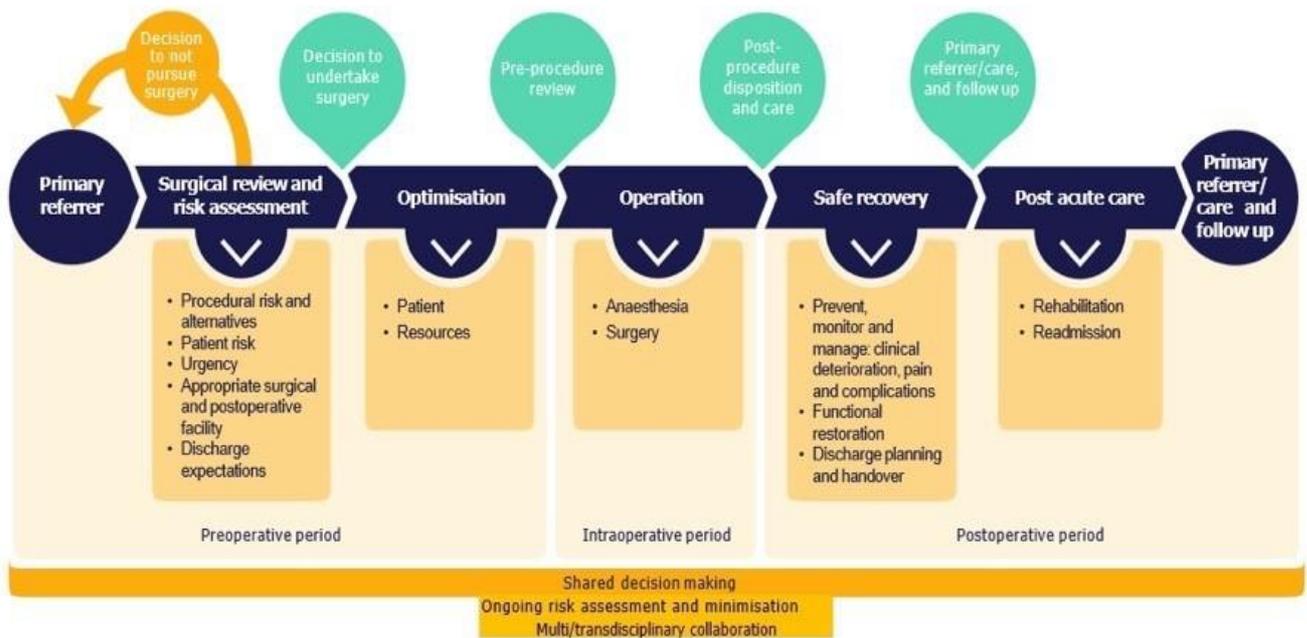
Dr Su-Jen Yap, Australian and New Zealand College of Anaesthetists, Perioperative Care Working Group

Prof Andrew Zannettino, University of Adelaide (SA)

Appendix 2 – Australian multi-College pathway of perioperative care (draft)

The perioperative care framework

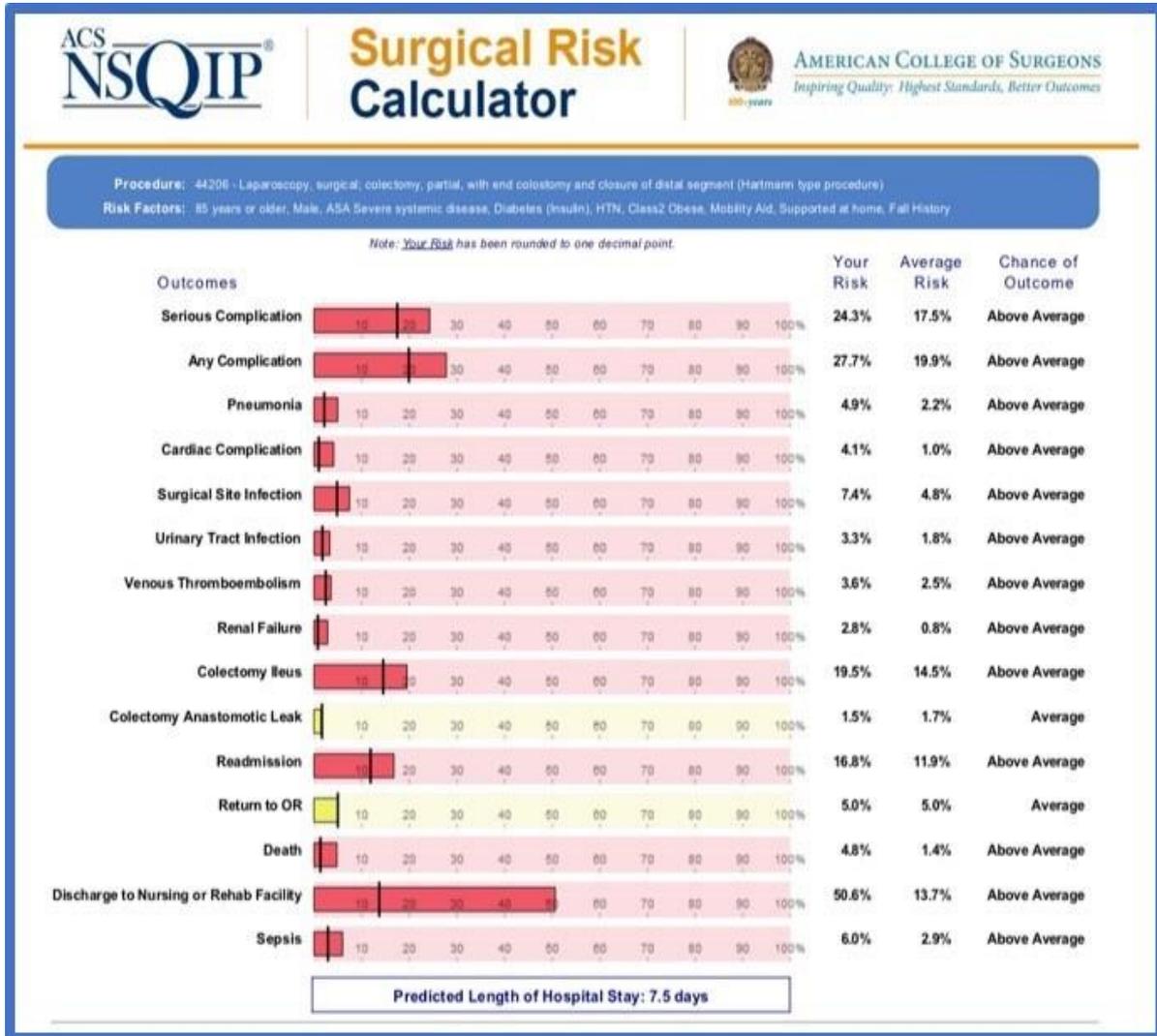
From the contemplation of surgery to recovery



ANZCA acknowledges the work of the POM Care Working Group in the development of this timeline.

© ?? 2019

Appendix 3 – An example of one risk calculator output: NSQIP



Calculator accessible at: <https://riskcalculator.facs.org/RiskCalculator/>