Level 1.5: bridging the gap to safe ward-based care

This article discusses the joint guidance from the Faculty of Intensive Care Medicine and Centre for Perioperative Care, which provides recommendations for establishing and delivering enhanced perioperative care services.

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Introduction

In October 2020, the Faculty of Intensive Care Medicine and Centre for Perioperative Care published joint guidance, which provided recommendations for establishing and delivering enhanced perioperative care services (Faculty of Intensive Care Medicine and Centre for Perioperative Care, 2020). Enhanced perioperative care is an intermediate level of postoperative care, which bridges the gap between ward-based care and critical care for elective surgical patients who are at increased risk of adverse outcomes. Enhanced perioperative care is designed to prevent these higher-risk patients from falling into a 'service gap': they may not require admission to critical care, but they would benefit from a higher level of monitoring and intervention to identify and prevent postoperative complications from developing.

What is enhanced perioperative care?

Enhanced perioperative care provides enhanced monitoring and treatment for postoperative patients who do not require invasive ventilation or organ support in critical care, but would benefit from an enhanced level of care than on a general ward. Enhanced perioperative care should be seen as part of the continuum of critical care (Figure 1), where deteriorating patients can be seamlessly escalated to level 2 or 3 critical care units if required. Similarly, enhanced perioperative care offers an opportunity for critical care teams to step patients down to a safe environment. Importantly, enhanced perioperative care should not be seen as a substitute for level 2 or 3 critical care, but as a method to use existing resources more efficiently and to manage patients in the most appropriate clinical area. Enhanced perioperative care aims to provide the best possible postoperative care and experience, and timely discharge to level 1 care.

The model enhanced perioperative care unit

Where possible, enhanced perioperative care units should offer patients single occupancy rooms within a calm environment, with private sanitation facilities. Twice-daily ward

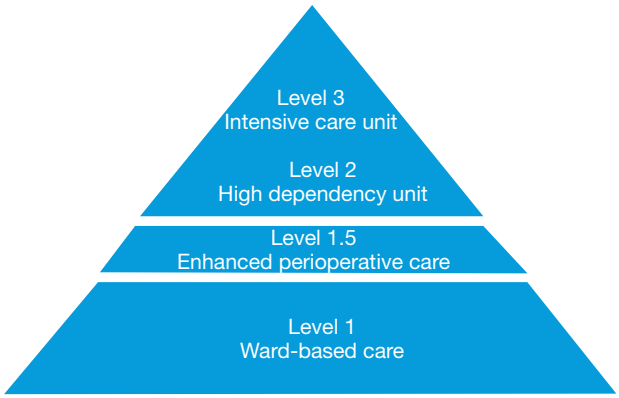

Figure 1. The place of enhanced perioperative care – a bridge between ward-based care and critical care. It reduces the workload of critical care units, aims to improve outcomes for patients at risk of adverse outcomes, and reduces 'last-minute' cancellations.

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rounds should be directed by surgical consultants, with support from senior decision makers specialising in perioperative medicine. Importantly, there should be quick access to specialist medical reviews if there are concerns that a patient is deteriorating. Care should be protocolised and evidence based but remain individually tailored to each patient. The ceiling of medical interventions is likely to be dependent on local operating policies and may include, but not exceed, the use of peripheral vasopressors or invasive blood pressure monitoring. It is expected that most patients would be discharged within 24 hours of admission, although some patients may require up to 48 hours of care.

Enhanced nurse:patient ratios of 1:3–4 are considered essential, as many postoperative patients are likely to benefit from this. Units with eight beds or more are considered to be important for operational efficiency, staff training and financial savings. Senior nursing staff should have experience in critical care nursing and be able to regularly use their advanced skills to prevent deskilling. An extensive multidisciplinary team involving physiotherapists, speech and language therapists and pharmacists would aim to reduce postoperative complications and expedite timely discharge. Continuity of care should be at the heart of workforce planning, and a core team of motivated and cross-skilled nurses and allied health professionals should be established to provide strong leadership and maintain high clinical standards.

Who benefits from enhanced perioperative care?

A surgical patient is considered high risk if they have predicted 30-day mortality of ≥5% (as predicted by a validated scoring system such as the Surgical Outcome Risk Tool), and these high-risk patients still require critical care. However, a predicted mortality rate of ≥5% is a relatively high threshold for defining a 'high-risk' patient, and patients with a predicted mortality of <5% should not be considered 'low risk' (Royal College of Surgeons of England, 2018). These patients are not routinely admitted to critical care units but are likely to benefit from the extra monitoring and treatment that enhanced perioperative care provides. For example, identifying early deterioration will prevent unplanned 'rescue' admissions to critical care, which is an independent risk factor for increased postoperative mortality (Story et al, 2010).

Enhanced perioperative care is designed to meet the needs of the estimated 25% of patients with an 'intermediate' mortality risk of ≥1% 30 days after their surgery (Table 1). Enhanced perioperative care would also benefit patients requiring short-term invasive blood pressure monitoring, advanced pain management, or arrhythmia management. As stated, enhanced perioperative care should not be used for patients who require critical care, invasive ventilation or palliative care; and neither should it be used for patients who can be safely managed on a general ward. The number of patients who may benefit from enhanced perioperative care is likely to increase in the future, as the population ages and comorbid patients continue to undergo major surgical interventions.

Enhanced perioperative care will release critical care capacity

The COVID-19 pandemic has led to the NHS having an unprecedented backlog of over 4 million patients awaiting routine hospital treatment in 2021, and many of these patients will require critical care intervention after surgery. A principal risk factor for having an

Table 1. Who would benefit from enhanced perioperative care? Clinical judgement should be used in each case

Likely to benefit	Predicted 30-day mortality ≥1% at 30 days
	Specific surgeries requiring enhanced postoperative monitoring (eg flap surgery)
	Requires invasive haemodynamic monitoring
Unlikely to benefit	Predicted 30-day mortality ≥5% at 30 days
	Palliative care patients
	Complex patients with the likelihood of multi-organ failure

Key points

- Enhanced perioperative care is a bridge between ward-based care and critical care.
- Enhanced perioperative care will cater to the growing number of patients at risk of adverse postoperative outcomes who would benefit from a higher level of care that cannot be delivered consistently on a general ward.
- Enhanced perioperative care should not be viewed as a substitute for critical care.
- An enhanced perioperative care facility should be staffed by an enthusiastic and skilled workforce with low staff turnover.
- The COVID-19 pandemic has led to a vast backlog of patients awaiting surgery; enhanced perioperative care may be considered to be an opportunity to constructively and safely challenge traditional care models.

operation cancelled in the NHS is the lack of a critical care bed (Wong et al, 2018), and there are fewer critical care beds per capita in England than in similar countries (Organisation for Economic Co-operation and Development, 2020).

Preoperative assessments should aim to identify patients who are unlikely to benefit from critical care, and who can be managed safely on an enhanced perioperative care unit. By reducing the flow of elective surgical patients to critical care, their capacity can be released to focus on complex medical patients, the highest-risk elective surgical patients, and accommodating emergency admissions. Moreover, patients treated on an enhanced perioperative care unit will benefit from having fewer ward transfers, and the concomitant risks of missing vital information during patient handovers.

Conclusions

Enhanced perioperative care may provide an innovative solution to some of the pressures the NHS is facing. For patients, enhanced perioperative care will maintain the quality of postoperative care they receive and hopefully reduce the number of cancelled operations. Going forward, enhanced perioperative care is likely to be cost-effective, shorten the duration of admissions, and reduce pressures on critical care services. It is anticipated that there will be short-term financial, estate and workforce challenges to address when setting up an enhanced perioperative care facility, but with it the opportunity to seek long-term benefits for patients and clinical services.

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