1. Introduction

This document outlines the 'Criterion for Pre-operative Anaesthetic Referral ahead of Elective Surgery for Anaesthesia and Anaesthesia led Sedation', to determine patients that require further evaluation by the Anaesthetist ahead of admission for surgery, to reduce the risk of avoidable on the day cancellation, delayed theatre start times and increased length of stay. This is supported by the Centre of Perioperative Care (CPOC) guidance, '*Referral criteria should be established locally to support nurse-led referrals for assessment by an anaesthetist/perioperative physician* https://www.cpoc.org.uk/sites/cpoc/files/documents/2021-06/Preoperative%20assessment%20and%20optimisation%20guidance.pdf

Suitability for surgery should be made in consideration of the proposed surgery, anaesthetic type, the patients' health and functional status. In practice, high risk patients or those with additional requirements such as patients with a learning disability are often identified at the time of listing or at the time of pre-operative assessment although criterion is required to underpin practice and ensure that patients are referred to the Anaesthetist as clinically appropriate and in a timely manner. Referral for anaesthetic assessment ahead of admission supports shared decision making and allows for assessment of risk, planning, optimisation and prehabilitation in consultation with the patient, the Surgeon and the wider multidisciplinary team where appropriate.

2. Scope

This document does not cover the clinical management of the patient presenting for pre-operative assessment and preparation or anaesthetic assessment or the process of anaesthetic referral. Any clinical concerns relating to the patient's fitness to proceed to surgery or the complexity of the surgery must be escalated to the Anaesthetist and Consultant Surgeon, as appropriate and in a timely manner - It is acknowledged that some patients may fall outside of the criterion and will require referral to the anaesthetist as considered appropriate by the registered practitioner.

While outside of scope of this document, where patients are referred for anaesthetic assessment ahead of admission by the preoperative assessment registered practitioner case management should be fostered. This will ensure that the referring registered practitioner is aware of the outcome of the anaesthetic assessment, and can facilitate planning such as a higher level care bed booking, additionally acting as a central point of contact for the patient until the point of admission.

3. Recommendations, Standards and Procedural Statements

The preoperative assessment should be a holistic overview of a patient's health status. This includes assessing functional status or exercise tolerance which is a major determinant of perioperative risk. Patients should have a detailed history taken about their functional status and this should be documented. Details on limiting symptoms should be recorded. The Metabolic

Equivalent (MET) classification is used as an assessment of functional status. Patients who are able to achieve activities consistent with 4 METS are generally suitable to proceed with day case type surgery. 4 METs is the energy requirement associated with light housework e.g. hoovering, independent living and climbing a flight of stairs. If there is uncertainty about the patients functional status tools such as the Duke Activity Status questionnaire can be useful. Further guidance is given in the table below:

METS

Taking care of yourself	**<4 METS**
Walking around the house	
Walk at slow pace (2-3 mph)	
Light shopping	
Walking at normal pace (3-4mph)	**4 METS**
Light house work	
Leisure cycling	
Climbing 1 flight of stairs	
Climbing 2 flights of stairs	**>4 METS**
Walk up a hill	
Run a short distance	
Scrubbing floors	
Brisk swimming	

Surgery grades
Surgery grades aligned to SORT calculator
http://www.sortsurgery.com/index.php

ASA grades
The ASA (American Society of Anesthesiologists) Physical Status Classification System is a simple scale describing fitness to undergo an anaesthetic. The ASA states that it does not endorse any elaboration of these definitions. However, anaesthetists in the UK often qualify (or interpret) these grades as relating to functional capacity – that is, comorbidity that does not (ASA 2) or that does (ASA 3) limit a person's activity. By convention, morbid obesity BMI>40 increases a patient's ASA status by 1 step on the scale.
https://www.asahq.org/standards-and-guidelines/asa-physical-status-classification-system

Summary

Anticipated difficulty with anaesthesia should be brought to the attention of the anaesthetist as early as possible before surgery. This includes planned admission to a critical care unit, the potential need for special skills such as fibre optic intubation, obesity, complex pain problems, a

known history of anaesthetic complications or patients with learning disabilities who may require additional resources or theatre time.
Local groups such as critical care MDTs or high risk MDTs could facilitate perioperative planning of patients where high risk is identified Increased risk of mortality and morbidity (>1 in 200 risk of dying within 30 days of surgery) - https://rcoa.ac.uk/gpas/chapter-2

Referral Criterion for Pre-operative Consultant Anaesthetic Review: Attending, Virtual or Medical Records review *The decision on the level of pre-operative anaesthetic assessment, such as attending for consultation, virtual consultation or medical records review will be made by the Consultant Anaesthetist*	
Previous anaesthetic problems/difficult airway/ anaphylaxis	• History of major anaesthetic related complication • Documented or anticipated difficult intubation • Family history of malignant hyperthermia/ atypical cholinesterase (sux apnoea)/ porphyria • History of genuine anaphylaxis • Genetic syndromes e.g. Down's Syndrome • Thyroid goitre
Cardiovascular disease	• Heart failure (LVEF < 50%) not optimally controlled or scheduled for major surgery (B-type natriuretic peptide BNP) • Unstable coronary artery disease or poor exercise tolerance • Unable to climb stairs without cardiac symptoms such as chest pain, shortness of breath • Coronary stents in the past year or PCI/angioplasty in the past 6 months • Patients on antiplatelet agents e.g. Clopidogrel for cardiac indication especially coronary stents – • Known/suspected severe or symptomatic aortic stenosis or mitral stenosis (Aortic Value Area (AVA)<1cm2) • Congenital or valvular heart disease with functional limitation • New previously undiagnosed cardiac murmurs warrant discussion with a view to an ECHO, although in the event of expedited surgery ECHO may be considered appropriate ahead of review • Symptomatic or poorly controlled dysrhythmia • Complete heart block, Mobitz type 2 heart block, trifascicular block < LVH, LBBB, Brugada Syndrome on pre-operative ECG • Poor blood pressure control refer to AAGBI guidance Summary guideline for pre-operative assessment https://anaesthetists.org/Home/Resources-publications/Guidelines/Measurement-of-adult-blood-pressure-and-management-of-hypertension-before-elective-surgery • Pacemaker and AICD
Respiratory disease	• Incapacitating respiratory symptoms (breathless at rest or on minimal exertion)

	• Signs of active respiratory infection or wheeze refer to GP • Oral steroid use in the preceding six weeks • COPD recently hospitalised for an acute exacerbation • PEFR<200l/min or SpO2 on air<93% • On home oxygen or home nebuliser • Brittle asthmatics (>1 hospital admission with severe asthma in past year) • Documented pulmonary hypertension • Sleep disordered breathing: Obstructive Sleep Apnoea • STOP-Bang score of 5/8 or score of 3/8 on the first three questions (triple S, **S**noring, **S**leepy, ob**S**erved) – Inform anaesthetist and referral to Sleep Medicine • STOP-Bang 3-4/8 inform anaesthetist • Cystic fibrosis • Bronchiectasis
Endocrine disease	• Diabetes HbA1c > 69mmol/mol (8.5%) • Hypoglycaemic unawareness • Newly diagnosed diabetes • Abnormal thyroid function warrants discussion • Phaeochromocytoma patients should all be seen.
Liver disease	• Liver disease • Alcohol intake>70units weeks • Alcohol dependent
Renal disease / abnormal biochemistry	• Renal failure requiring dialysis • Patient with deranged renal function (severe renal impairment Creat>177mmol/l) • Patients with significant electrolyte abnormalities (Na<125, K>6, Ca> 3 mmol/l)
Haematological problems	• Anaemia (Hb<12.5), especially those for major surgery, should be optimised preoperatively with either oral iron, IV iron and or erythropoietin. Blood transfusion may be considered depending on the urgency of surgery. • Known haemoglobinopathy • Known or suspected bleeding disorder • Clotting disorders in the absence of Haematology plan of management • Jehovah's Witnesses for major surgery or patients requiring blood less options and in consultation with the Surgeon • DVT/PE within preceding 6 months
Rheumatoid / neuromuscular / CNS disease	• Stroke or TIA within preceding 6 months • Severe arthritis involving cervical spine or jaw which significantly limits mouth opening or neck extension • Myasthenia gravis • Muscular dystrophy • Parkinson's disease should be discussed with a view to planning perioperative management of medication • Unstable epilepsy with frequent seizure despite Rx • Multiple sclerosis

	• Guillain- Barre syndrome
Major surgery	• All patients undergoing complex major surgical procedures are appropriate for discussion with an anaesthetist, particularly those who may require post-operative HDU/ITU care e.g. All open colorectal and open AAA repairs should see a consultant anaesthetist. • Major surgery includes for example, joint replacement, aortic and major vascular surgery, abdominal surgery and bowel resection. It also includes prolonged surgical procedures, and those in which there are large fluid shifts, significant blood loss or unstable haemodynamic situations
Morbid obesity / multiple comorbidities	• Morbidly obese patients with a BMI > 45 warrant discussion • Morbidly obese patients BMI > 35 with other co-morbidities (diabetes, IHD, CHF) or poor mobility, also warrant discussion. • Patients for bariatric surgery will be assessed by a consultant anaesthetist at a specialty clinic. Please do not refer these to the Anaesthetic Assessment Clinic but to the anaesthetist of the day
High risk medicines	• Patients prescribed steroids, anticoagulants, MAOIs, and Lithium • Complex chronic pain medication and/or implanted devices such as spinal cord stimulators
Other	• Patients that are pregnant • Frailty • Drug misuse and drug dependency • Chronic pain • Patients with a learning disability or those patients with additional requirements that require adjustments to their pathway of care
Consider lung function tests in those you suspect lung pathology and ECHO if you suspect ventricular dysfunction	

4. Supporting Documents and Key References

The criterion is adapted from the Royal Cornwall Hospitals NHSBT Trust and Worcestershire Acute Hospitals NHS Trust

5. Key Words

POA, Pre-operative, Anaesthesia, Anaesthetic,

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