NHS
Greater Glasgow and Clyde

# CLINICAL GUIDELINE

# Obstructive Sleep Apnoea and Anaestheia

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

| | |
|---|---|
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| **Approval Group:** | Anaesthesia Cross Sector Governance Group |

**Important Note**:

The Intranet version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

GREATER GLASGOW & CLYDE

# Obstructive Sleep Apnoea and Anaesthesia

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Patients with OSA are at increased risk of complications following surgery[1]:

- Increased sensitivity to opioids with increased respiratory depression due to an upregulation in opioid receptors with frequent hypoxaemia
- The surgical stress response can interfere with a patient's sleep patterns resulting in fragmentation and sleep deprivation
- Anaesthetic agents suppress the body's response to carbon dioxide and reduce the tone of the musculature of the upper airways
- The majority of patients with OSA are likely to be obese however OSA may also occur in other patient groups such Downs Syndrome, Acromegaly and neuromuscular disorders

## Risk Scoring[2]

**A** **Severity of sleep apnoea** (from sleep study)
Measured via Apnoea-Hypopnoea Index
(>15+symptoms likely to be on CPAP)

| | | |
|---|---|---|
| **None** | AHI <5 | **0** |
| **Mild** | AHI 5-15 | **1** |
| **Moderate** | AHI 15-30 | **2** |
| **Severe** | AHI >30 | **3** |

**B** **Invasiveness of surgery and anaesthesia**

| | |
|---|---|
| Superficial surgery with local/ peripheral block | **0** |
| Superficial surgery with sedation/GA | **1** |
| Peripheral surgery with spinal/ epidural/sedation | **1** |
| Peripheral surgery with GA | **2** |
| Airway surgery with sedation | **2** |
| Major surgery with GA | **3** |
| Airway surgery with GA | **3** |

**C** **Requirement for postoperative opioids**

| | |
|---|---|
| None | **0** |
| Low dose | **1** |
| High dose/parenteral/neuraxial | **3** |

Risk Score = A + (greater of B or C)

| Score = 4 | Score >**4** |
|---|---|
| may be at increased perioperative risk, keep in monitored area until discharge criteria below are met | may be at **SIGNIFICANTLY INCREASED RISK DISCHARGE TO MONITORED AREA** |

## Intraoperative Management[2]

Consider modifying your anaesthetic technique in patients with OSA:

- Consider peripheral and neuraxial blockade
- Awareness of potential difficult airway management
- Awareness of possible increased opioid sensitivity
- Ensure full reversal of neuromuscular blockade
- Consider extubation to CPAP

## Theatre Suite Requirements[2,3]

- Difficult airway equipment
- CPAP capabilities (advise patient to bring their own machine)
- Ventilator equipment
- Radiology and laboratory access
- Clear transfer arrangements to nearby inpatient and critical care facilities

## Postoperative Recovery[1,2]

- Observe patients for an additional 3 hours prior to discharge (should be done on AM list or 1st on PM list)
- Observe for longer (7 hours) in the event of any airway obstruction or apnoeic episodes
- Discharge to an unmonitored area should only occur after a patient's oxygen saturations return to baseline on room air and no episodes of hypoxaemia or airway obstruction occur when the patient is left undisturbed
- Patients established on CPAP should bring their machine with them for use in recovery


**References:**

1. Adebola O,et al. Perioperative management of obstructive sleep apnea. Chest 2010: 138(6):1489-1498
2. Gross JB, Apfelbaum JL, Caplan RA, et al. Practice Guidelines for the Perioperative Managment of Patients with Obstructive Sleep Apnoea: An updated report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnoea. Anesthesiology. 2014; V120 No2.3
3. Candiotti K, Sharma S, Shankar R. Obesity, obstructive sleep apnoea, and diabetes mellitus: anaesthetic implications. British Journal of Anaesthesia. 2009 103 (suppl 1): i23-i30



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