Background Anaesthesia worsens OSA, and may lead to respiratory and cardiac complications. Three critical incidents have occurred in the Oxford Hospitals in recent years. OSA is very common at around 5–25%, but half the cases are not diagnosed. So should we screen for OSA pre-operatively?

Audit Over 9 months from July 2015 all patients completed a STOP-BANG questionnaire in a gynaecology pre-operative clinic. Those with snoring and a score of 3 or greater were referred for a sleep study. Data is presented for 102 patients (100 female; 2 transgender) with a mean $\pm$ SD age of 55.7 ± 11.4 yrs, BMI 35.8 ± 7.6 kg/m² and collar size 40.0 ± 4.8 cm.

The rate of non-attendance was high at 19/102 (19%), with those with a lower STOP-BANG score being more likely not to attend. Of those undergoing a sleep study, a new diagnosis was made in 53/83 (52%) patients. Symptoms and OSA/hypoventilation were sufficient for CPAP to be started in 23 patients and NIV in 1 (29% of those screened), with positive diagnoses more likely with higher STOP-BANG scores. The median (IQR) time to CPAP set-up was 80 (52, 100) days, thus a substantial proportion of patients had surgery before treatment.

How should we ensure anaesthetic safety for patients at risk of OSA?

Completing a sleep study and establishing OSA patients on CPAP prior to surgery would significantly slow the surgical pathway, and there is no evidence that this would improve outcome. However it seems sensible for anaesthesia of all patients deemed *at risk* of OSA (STOP-BANG 3+) to be managed with special precautions. We pragmatically recommend that all patients found to have a STOP-BANG score of 5+ or strong clinical suspicion of OSA, who are undergoing major surgery AND in whom it is reasonable to delay surgery, are referred for a sleep study prior to surgery. Patients with a STOP-BANG of 3+ not falling into this category should be informed they are at risk of OSA, and advised to seek a referral from their GP to the sleep clinic if they find symptoms of sleepiness troublesome.

Abstract P68 Figure 1 Data presented by STOP – BANG

P69 EVALUATION OF THE STOPBANG THRESHOLD IN THE PRE-OPERATIVE SCREENING FOR OBSTRUCTIVE SLEEP APNOEA AT SHERWOOD FOREST HOSPITALS FOUNDATION TRUST

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Background Undiagnosed Obstructive Sleep Apnoea (OSA) has been associated with a higher perioperative morbidity and mortality. The aim of this study is to prepare a comprehensive review of the STOPBANG score, a pre-operative screening tool for patients with possible OSA. This study investigates if the current STOPBANG threshold of $\geq 3/8$ is appropriate, or if it should be increased to $\geq 5/8$ or $\geq 4/8$ (with $\frac{3}{4}$ in the STOP category) to avoid the unnecessary cancellation/postponement of surgery and inappropriate referrals into the sleep service.

Methods This was a retrospective study of patients referred to the Sleep Service following a positive STOPBANG score (≥ 3). The Research and Development Department of the hospital deemed the study did not require ethical approval. 84 patients were included in the study. The selected patients' case notes were used to review their STOPBANG score, Epworth Sleepiness Score, type of sleep study performed, Oxygen Desaturation Index (ODI), diagnosis and treatment. If the patient had an ODI ≥ 15 , or was successfully started on treatment with a borderline ODI $> 5 < 15$, this was considered an appropriate referral for that threshold.

The sensitivity and specificity of the different STOPBANG thresholds were calculated to assess if the threshold score of STOPBANG ≥ 3 is appropriate, or if this should be adjusted to more appropriately identify those patients with OSA.

Results For a threshold of ≥ 3 , the sensitivity is very high (100%). The sensitivity is decreased for the threshold of ≥ 5 (71%), and further decreased for the $\geq 4/8$ (3 from STOP) threshold (53%). For the ≥ 3 threshold, the specificity is 0%. The specificity is dramatically increased for the ≥ 5 threshold (70%), and highest in the $\geq 4/8$ (3 from STOP) category (85%).

Conclusion The statistical analysis confirms that a threshold of ≥ 3 has a very high sensitivity, but very low specificity. A threshold of ≥ 5 has a lower sensitivity however is much more specific and may be a more useful way of identifying the high risk of OSA surgical patient. A change in protocol to ≥ 5 aims to reduce the unnecessary delay or cancellation of surgery and avoid inappropriate referrals into the Respiratory and Sleep department.

P70 CPAP COMPLIANCE IN BARIATRIC PATIENTS WITH OBSTRUCTIVE SLEEP APNOEA

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Introduction CPAP compliance is a challenge in the management of obstructive sleep apnoea (OSA). Pre-operative screening with a sleep questionnaire for OSA followed by sleep studies is common in bariatric services. The King's bariatric service performs overnight pulse oximetry in all patients considered for surgery. Therefore, additional cases may be detected in patients with lower clinical suspicion. We hypothesised that CPAP compliance in bariatric patients with OSA confirmed by routine screening would be lower than that seen in patients referred to the sleep clinic for suspected OSA.

Method Case records of all bariatric patients screened for OSA over a 16-month period were reviewed, and CPAP compliance data retrieved for those with confirmed OSA who commenced CPAP therapy. Retrospective case-control analysis was made against 50 randomly selected patients from the sleep clinic that commenced CPAP for confirmed OSA within the same study