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| **REFERRAL GUIDELINES: “Obstructive Sleep Apnoea Syndrome”**  |

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| **Document purpose*** Raise awareness of obstructive sleep apnoea syndrome (OSAS) and its complications
* Ensure that the patients who will derive most benefit from diagnosing and treating their OSAS are the ones sent to the Sleep Apnoea Clinic, Department of Respiratory Medicine, University Hospitals Southampton NHS foundation trust
* The adult sleep clinic in the respiratory department is primarily geared towards sleep disordered breathing, obstructive and central sleep apnoea. Parasomnias and suspicion of narcolepsy or nocturnal epilepsy should be referred to adult neurology colleagues (Dr Lucy Kinton, UHSFT).
* **Insomnia is a common but underfunded condition nationally, and whilst on a case by case basis these patients *may* be seen to ensure the basics are done i.e. sleep hygiene, advice for psychological input, etc., or if suspicion of coexistent OSA, if more complex, patients with insomnia should be referred to specialist clinics**, nearest being Oxford (Dr Zaiwalla) or a London hospital (please consult their services for referral criteria). Suspicion of sexsomnia should also be referred to London or Oxford
* Apnoeas in sleep- up to 5 per hour - are normal and if there are no features of sleep fragmentation or significant comorbidity then it may be reasonable to reassure and offer conservative advice where appropriate. Please use the Epworth score and Modified Oxford Screening Questionnaire (attached) to help with this process.
* Should the Epworth score be >9/24 and the Oxford score questions be mostly to the right of the page we would recommend referral to us as the individual may have OSAS and CPAP may be highly beneficial. Should the Epworth be low, unless there are clinical reasons why OSA is suspected and may need to be treated, referral may not be appropriate. Such scenarios include:
	+ Patient complaining of excessive somnolence yet not rating questions highly (sometimes the Epworth score does not capture the clinical picture)
	+ Patient complaining of symptoms which are often misrepresented as somnolence i.e. fatigue, mood issues, but with a highly suggestive history for OSA e.g. snoring, apnoeas
	+ Patient with a suggestive history and comorbidity which may relate to OSA, or at risk of worse cardiovascular outcome with OSA (e.g. hypertension, type 2 diabetes mellitus)
	+ Patient undergoing operative procedure with anaesthetic concern over OSA (this is especially relevant for bariatric surgery)

Patients who should NOT be referred includeSimple snoring , i.e. without symptoms to suggest OSAS. These patients should also not be referred to ENT, unless there is a primary nasal disorder during the day which has not responded to primary care interventions i.e. the CCG will not fund ENT surgical interventions for simple snoring. It is most appropriate to give life style advice (and see section on MAD below if this fails) |

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| **Change Control** |  |
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| **Approved by:** | Southampton City CCG and West Hampshire CCG |
| **Version number:** | 01 |
| **Notes:** | Provided by the Sleep Apnoea Clinic to ensure that those patients who will benefit from specialised assessment are seen and treated by the service in a timely manner. |
| **Date published:** | July 2018 |

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| **1. OBSTRUCTIVE SLEEP APNOEA SYNDROME** |
| **DIAGNOSIS** | * **Obstructive Sleep Apnoea Syndrome. This is the combination of BOTH the symptoms from sleep fragmentation AND a supportive sleep study**
* Excessive daytime **sleepiness**
* **Poorly refreshing sleep,** despite seemingly having an adequate time asleep
* History of heavy **snoring**
* Witnessed **apnoeas**
* Sometimes waking with **choking**/coughing episodes
* Upper body obesity, **neck size** ≥ 17ins and/or
* Relative **retrognathia**
* Enlarged **tonsils** (more often relevant in children)

*There is ever increasing evidence that OSAS interacts with, and predisposes to other comorbidities such as diabetes mellitus and hypertension, and leads to poor cardiovascular outcomes (e.g. a strong association with severe bradyarrhythmias requiring a pacemaker & debilitating or fatal stroke)* |
| **Management option 1****MANAGEMENT** **(Lifestyle measures)** | * **Weight loss** where relevant (BMI >25kg/m2, neck size ≥ 17ins) and likely to be successful. Relevant patients should be directed to the ‘Southampton Healthy Living’ website. If appropriate, consider referral to Weigh Ahead (http://www.publichealth.southampton.gov.uk/images/referral%20to%20the%20weigh%20ahead.pdf)Reduce/stop evening **alcohol, reduce sedative medications if possible**
* Stop smoking (reduces muscular tone)
* Sleep semi **propped up**
* If nasal pathology present or suspected, maintain maximal **nasal patency** (nasal steroids)
* Sleep on **side** as much as possible
* Maximize **sleep hygiene (regular bedtime/getting up time, avoiding napping, etc.)**
* Only weight loss has been shown to be effective in randomised controlled trials
* The above will not provide symptom control in a timely manner for most patients with moderate-severe OSA
* **Symptomatic** patients, particularly those with potential **driving** issues, should not have their referral delayed in the hope that the above might work
* These patients often have the components of the ‘**metabolic syndrome**’ and are worth screening for hypertension, hypercholesterolaemia and diabetes mellitus
* Check **thyroid** function – an easily reversible cause of OSA
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| **Management option 2****(MAD’s)** | * Mandibular advancement devices can be effective for simple snoring and mild OSA, the evidence for effectiveness in severe OSA is lacking.
* They are not in general funded by the NHS, do not require a prescription and must be purchased by the patient. This can be through dental professionals and over the internet, and vary considerably in price.
* If the individual is considering an online purchase of a device we would recommend that they do this through the ‘British Snoring and Sleep Apnoea Association’ web site.
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| **Management option 3****(CPAP)** | * Please refer patients who have symptoms from sleep fragmentation due to sleep disordered breathing or significant comorbidity (eg DM, hypertension) for sleep study and assessment for **CPAP therapy** – as supported by the 2008 NICE technology appraisal
* No other therapy has been shown to consistently abolish the symptoms of OSAS
* NICE showed it was **highly cost effective** and unreservedly supported its availability
* There is mixed evidence for the effectiveness of pharyngeal surgery in OSA (apart from tonsillectomy where appropriate), and patients will only be referred for consideration if OSA is severe and not responding to CPAP.
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| **Routine** **REFERRAL** | * Refer when symptoms interfere sufficiently with quality of life, **by standard referral letter + completed patient questionnaire.**
* Usually:- excessive sleepiness, affecting work, social activities, and driving
* Excessive sleepiness can be subjectively and qualitatively assessed using the Epworth Sleepiness score, >10/24 considered significant (page 8)
* Other symptoms can be assessed using the Modified Oxford Sleep Screening Questionnaire (page 6), the further to the right the scores, the more likely there is significant OSAS requiring CPAP.
* Patients with OSA undergoing anaesthesia may be at risk if unrecognised and untreated. Referral for pre-op assessment may be appropriate, especially for bariatric surgery
* Please document whether the patient is a driver, socially or professionally, also if standard or HGV license. Please document if you have given the patient driving advice, (and you may wish to refer to BTS/DVLA statement in this area – see appendix).
* Patients who are clinically obese should be offered referral for weight management support through local services such as ‘Southampton Healthy Living’ and ‘Weight Watchers’.
* Patients who smoke should be offered referral for smoking cessation advice and support through ‘Southampton Health Living’ and ‘Quit4Life’.
* **Please note, because of the high demand on our service, we do need to ensure that we appoint only patients that will benefit from our assessment. The referral may be returned if the necessary questionnaire information (Modified Oxford Screen and Epworth score) is not supplied.**

**Patients who should NOT be referred include:**Simple snoring, i.e. without symptoms to suggest OSAS. These patients should also not be referred to ENT, unless there is a primary nasal disorder during the day which has not responded to primary care interventions i.e. the CCG will not fund ENT surgical interventions for simple snoring. It is most appropriate to give life style advice (and see section on MAD below if this fails) |
| **Urgent 2 week** | * Rarely appropriate
 |
| **Urgent** | * For individuals where maintenance of vigilance is of occupational or public health importance, particularly those who drive for a living (HGV, PSV and Hackney Carriage licence holders) or in whom there has been suspicion of a driving accident related to sleepiness. We will aim to prioritise these requests.
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| **Referrals should be directed to:****Adult sleep clinic****Department Of Respiratory Medicine****UHSFT****Southampton General Hospital****Tremona Road****SO16 6YD** |
| **Dr Mark B Jackson****Dr Paddy Dennison** | **Can be contacted via secretary on 02381 206056** |
| **Email advice**  |  |

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| **ADDITIONAL INFORMATION** | For the latest DVLA guidance on whether to advise a patient not to drive until diagnosis or treatment is made, please see web links on page 7.Due to high demand, and with CCG approval, most patients at point of referral may be triaged straight to a sleep study, reported by a consultant and with any clinical decision making supported by the information in the referral. If the study is normal, unless the symptoms are severe/atypical/worrying, a letter informing the patient and GP of this reassuring result will be sent out i.e. they will not be seen in clinic. Similarly, if there is clear OSA and proportionate symptoms, they may proceed straight from sleep study to CPAP initiation, with education about the condition, treatment, DVLA requirements etc. occurring during this set-up. Patients will be seen in clinic if borderline results, disproportionate results e.g. high Epworth but mild OSA, or severe OSA but low Epworth, if problems with CPAP initiation/response to CPAP, or on a case by case basis.Current sleep studies may consist of:* Overnight oximetry - this can be taken home by the patient for return next day, and may be appropriate if the patient is unable to sleep in the UHS sleep lab unmonitored due to mobility or other health issues, or if a patient is unable to sleep in a different sleep environment. This gives an oxygen desaturation index, which can be similar, but is not the same as AHI. This is a useful test when the pre-test probability for OSA is high but can often be falsely reassuring, so most patients are more suitable for:
* Respiratory polysomnography, with nasal cannula, oximetry, thoracic and abdominal bands to calculate AHI and distinguish obstructive from central apnoeas. This study currently only occurs with the patient sleeping in the sleep lab at UHSFT, although domiciliary studies may be available in the future.
* The adult UHSFT respiratory sleep clinic does not currently do ‘full’ polysomnography with EEG recording for sleep staging. Where this is needed, this should be discussed with neurology or referred to larger sleep centres.

The treatment with CPAP is highly successful when prescribed for appropriate individuals with severe symptoms associated with OSAS. The decision to prescribe is based on both the severity of OSA on the sleep study, the severity of the symptoms, and the presence of comorbidity. Over 75% of patients prescribed CPAP are still using it for an average of > 5 hours per night 10 years later; better compliance than with anti-hypertensives, statins and asthma medication! **Once a patient is successfully established on CPAP, they will be followed up intermittently in the nurse-led CPAP clinic. This will be for machine service/maintenance, replacement of equipment, and verification of compliance for DVLA requirements. This will occur approximately every 18mths to 3 years,**  patients are also given an emergency phone service, for patients requiring advice or to renew consumable items of CPAP equipmentA consultant outpatient appointment is only made if absolutely necessary for clinical assessment e.g. not responding to treatment, a change in the pattern of symptoms.Anaesthesia is potentially dangerous in patients with OSA. Therefore patients on CPAP must take their CPAP machines with them for use in recovery, or if going into hospital for an emergency. The anaesthetist must be made aware. It also follows that patients going for surgery, particularly if obese, should be screened for OSA first if there are any suggestive symptoms, this referral can come from a GP or an anaesthetist |

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| Modified Oxford Screening Questionnaire for Sleep Apnoea symptoms - tick the relevant boxes[Self-completed by the patient where possible] |  |
| Patient’s name…………………………………. …………………………………… | Date of Birth…………………………………. |

**1) Is there a history of snoring?**

 a) Never b) Rarely c) Sometimes d) Often

1. **Is there a history that there are episodes of stopping breathing at night?**

 a) Never b) Rarely c) Sometimes d) Often

1. **Are there choking episodes at night?**

 a) Never b) Rarely c) Sometimes d) Often

**4) What is your neck circumference (collar size)?**

a) <15in b) 15-17 in c) 17.1-19 in d) >19 in

1. **Have there been any episodes of falling asleep or nearly falling asleep whilst driving?**

 a) Never b) Rarely c) Sometimes d) Often

1. **Is driving vital, i.e. used for work?**

 a) No b) Yes

1. **Does any driving involve public service vehicles or heavy goods vehicles?**

a) No b) Yes

1. **Is there a history of any of the following illnesses; diabetes, difficult hypertension, requirement for pacemaker, stroke/TIA, ischaemic heart disease?**

a) No b) Yes

1. **The patient should now fill in the Epworth Sleepiness Scale questionnaire:-**

 **EPWORTH SLEEPINESS SCALE**

[Self-completed by the patient where possible]

How likely are you to doze off or fall asleep in the situations described in the box below, in contrast to feeling just tired?

This refers to your usual way of life in recent times.

Even if you haven't done some of these things recently try to work out how they would have affected you.

Use the following scale to choose the most appropriate number for each situation:-

 **0 = would never doze 2 = Moderate chance of dozing**

 **1 = Slight chance of dozing 3 = High chance of dozing**

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| **Situation** | **Chance of dozing** |
| Sitting and reading |  |
| Watching TV |  |
| Sitting, inactive in a public place (e.g. a theatre or a meeting) |  |
| As a passenger in a car for an hour without a break |  |
| Lying down to rest in the afternoon when circumstances permit |  |
| Sitting and talking to someone |  |
| Sitting quietly after a lunch without alcohol |  |
| In a car, while stopped for a few minutes in the traffic |  |

###  Total score 🖵

Date questionnaire filled in ……………………………

Signature ……………………………………………….

***With acknowledgement to the Oxford Sleep Unit for provision of the initial template on which to base this guidance***

**Weblinks:**

NICE technology appraisal

<http://guidance.nice.org.uk/TA139/Guidance/Recommendation>

NICE management guidelines

<https://cks.nice.org.uk/obstructive-sleep-apnoea-syndrome#!scenario>

Sleep apnoea trust association – patients’ support group

<http://www.sleep-apnoea-trust.org/>

and their leaflet on going into hospital with OSA/CPAP

<http://www.sleep-apnoea-trust.org/media/Hospital%20Admissions%20%20SA.pdf>

Patients can self-refer and access mindfulness techniques/support for insomnia locally through

<https://www.steps2wellbeing.co.uk/>