

## General Commissioning Policy

<b>Treatment</b>	<b>Sleep Studies and Full Polysomnography</b>
<b>For the treatment of</b>	<b>Sleep related breathing disorders (sleep apnoea) and sleep disorders in adults and children</b>
<b>Background</b>	<p>Sleep disorders constitute a broad range of difficulties and include:</p> <ul style="list-style-type: none"> <li>• sleep related breathing disorders (snoring and sleep apnoea – where breathing is interrupted during sleep)</li> <li>• insomnia (difficulty sleeping)</li> <li>• hypersomnias (inappropriately falling asleep, eg. narcolepsy)</li> <li>• parasomnias (activities during sleep, eg. sleepwalking and sleep terrors)</li> <li>• sleep related movement disorders (eg. restless leg syndrome).</li> </ul> <p>A simple sleep study, used to diagnose sleep apnoea, consists of a device that records nasal flow, oxygen levels and breathing patterns from belts around the body. Studies may be done at home or as an inpatient.</p> <p>A full Polysomnography study measures these respiratory factors in addition to their relation to neurological measurements such as an electro-encephalogram (EEG), electro-oculogram (EOG), electrocardiogram (ECG) and electro-myogram (EMG), as well as other sleep/wakefulness tests and a visual (video) recording so that multiple physiological variables are simultaneously measured during sleep.</p> <p>This commissioning policy is needed in order to clarify the criteria which must be fulfilled before patients may be referred for diagnostic studies in order to properly investigate the symptoms of sleep related breathing disorders (sleep apnoea) and other sleep disorders.</p> <p>Certain referrals will not be not routinely commissioned and are thus currently considered via the Individual Funding Request (IFR) process.</p>
<b>Commissioning position</b>	<p><b>Adults:</b></p> <p>NHS Hull Clinical Commissioning Group (CCG) will routinely commission GP referral to the local <u>Thoracic Medicine Sleep Study Clinic</u> for screening and treatment of suspected obstructive sleep apnoea (OSA) in cases where the following criteria are met:</p> <ul style="list-style-type: none"> <li>• the patient has symptoms of excessive daytime sleepiness (EDS) that score &gt;10/24 on the Epworth Sleepiness Score (1) and which significantly interfere with activities of daily living (eg. high risk patients such as occupational drivers)</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• the patient displays symptoms of chronic snoring as well as witnessed apnoeic episodes or daytime sleepiness with a score of &gt;10/24 on the Epworth sleepiness scale. (For chronic snoring without apnoeic episodes the referral would be to an ENT specialist in the first instance).</li> </ul> <p>Before referral, GPs should ensure that:</p> <ul style="list-style-type: none"> <li>• Thyroid function is checked and/or optimal</li> <li>• Diabetic status is recorded and/or optimised</li> </ul>

### Notes

1. This Policy will be reviewed in the light of new evidence, or guidance from NICE.

2. General Commissioning Policy Statements are agreed by the Planning and Commissioning Committee on behalf of NHS Hull Clinical Commissioning Group.

	<ul style="list-style-type: none"> <li>• An Epworth sleepiness score has been performed and enclosed with the referral.</li> <li>• All current medications are listed.</li> </ul> <p>In the majority of cases a sleep study should take place in the home. An inpatient sleep study will only be commissioned:</p> <ul style="list-style-type: none"> <li>• where the home sleep study produces a negative result for sleep apnoea and further investigation is required</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• where it is not clinically safe to undertake a sleep study in the home</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• where there are complications with a home sleep study, or problems with compliance.</li> </ul> <p>Tertiary referrals to a regional Sleep Clinic for <u>Full Polysomnography</u> (including neurological monitoring) will NOT be routinely commissioned in adults and requests must be submitted by a secondary care consultant for approval by the Individual Funding Request (IFR) Panel.</p> <p>Referrals will normally be for sleep related problems, comprising a neurological component and/or sleep disordered breathing, where any underlying contributory factor condition has been correctly diagnosed and treated (including OSA) and where the sleep related symptoms have not responded to simple therapy. (see pages from <a href="http://www.nhs.uk/conditions">www.nhs.uk/conditions</a>)</p> <p>Examples of requests that may be considered include:</p> <ul style="list-style-type: none"> <li>• Suspected cases of narcolepsy with or without cataplexy that require a definitive diagnosis or have not responded to initial therapy</li> <li>• Chronic insomnia that is interfering with activities of daily living and has not responded to primary interventions such as good sleep hygiene, daytime exercise, behavioural treatment (eg. CBT), addressing underlying contributory factors and brief, time limited use of hypnotic medication.</li> <li>• Complex parasomnias or parasomnias where there is uncertainty about the type or significance of the symptoms</li> <li>• In the differential diagnosis of circadian sleep disorders</li> <li>• In nocturnal movement disorders where EEG and neurology monitoring is required</li> <li>• In cases of persistent hypersomnolence (&gt;3 months) or cyclical hypersomnolence not explained by other causes</li> <li>• And to assess the response to therapeutic interventions for these severe sleep disorders.</li> </ul> <p>(This list is not exhaustive. Requests for indications not listed will be considered against the available evidence).</p> <p><b>Children:</b></p> <p>Whilst there is a lack of published evidence evaluating the clinical usefulness or cost effectiveness of sleep studies / polysomnography in the diagnosis or management of sleep related disorders in children, their use has been established in a number of clinical pathways (2) such as:</p> <ul style="list-style-type: none"> <li>• Sleep disordered breathing, including obstructive sleep apnoea syndrome in otherwise healthy children and those with an</li> </ul>
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	<p>underlying condition</p> <ul style="list-style-type: none"> <li>• Review of children with Down’s Syndrome who are at high risk of OSA/ sleep disordered breathing</li> <li>• Congenital central hypoventilation syndrome</li> <li>• Severe and recurrent acute life threatening events in infancy</li> <li>• Sleep related neurological disorders (Narcolepsy, idiopathic hypersomnia, sleep related epilepsy, REM parasomnias)</li> <li>• Children with excessive daytime sleepiness or circadian rhythm disturbance</li> <li>• To rule out a primary sleep disorder in selected cases of suspected Chronic Fatigue Syndrome where excessive daytime sleepiness is a prominent feature and no other cause is apparent</li> <li>• Suspected periodic limb movement disorder causing daytime symptoms</li> <li>• And to assess the response to therapeutic interventions for these severe sleep disorders.</li> </ul> <p>(This list is not exhaustive. Requests for indications not listed will be considered against the available evidence in Ref 2).</p> <p>Similar to the commissioning position in adults, NHS Hull CCG will routinely commission GP or Consultant referral to the local Thoracic Medicine Sleep Study Clinic for screening and treatment of sleep disordered breathing but will NOT routinely commission tertiary referrals to a regional Sleep Clinic for Full Polysomnography for the indications listed above without individual approval from the IFR Panel.</p> <p><b>[NB.</b> This policy does not apply to the use of PSG in the management of complex craniofacial abnormalities through the nationally commissioned and designated craniofacial service.]</p>
<b>Effective from</b>	<p>Oct 2014 (replaces previous version dated Sept 2012 )</p>
<b>Summary of evidence / rationale</b>	<p>There is some evidence that clinical history and physical examination alone are not as reliable for diagnosing obstructive sleep apnoea as an overnight sleep study (3) and treatment pathways suggest that PSG is the most accurate means of confirming a diagnosis of adult sleep apnoea (4). However, some guidelines have suggested that a home based sleep study may be a useful, cost-effective and convenient for patients and can significantly speed up the investigation pathway, compared with an overnight inpatient stay. (5)</p> <p>It is suggested in a review by a leading sleep specialist (6) that it is a common misperception among clinicians that detailed and expensive investigations are invariably needed for precise diagnosis of parasomnias in adults and children. It is argued instead that a working knowledge of parasomnias and the spectrum of their presentation will allow a confident diagnosis and treatment, if needed, to be made in most cases from the history alone. Indeed, in practice, it is relatively rare for overnight Polysomnography complete with full EEG recording, video monitoring, and multiple limb EMG channels to provide additional worthwhile diagnostic information. However in complex situations, especially if there is no witness or bed partner, the input from a sleep clinic experienced in managing parasomnias is undoubtedly helpful and examples are given of where overnight sleep studies could be useful:</p> <ul style="list-style-type: none"> <li>➤ Where there is doubt whether abnormal motor behaviour during</li> </ul>

	<p>sleep reflects an epileptic disorder or a parasomnia (adults or children)</p> <ul style="list-style-type: none"> <li>➤ Where recurrent arousals at the termination of severe episodes of OSA are mimicking REM sleep behaviour disorder</li> <li>➤ Where there is doubt over a diagnosis of a non REM parasomnia or a nocturnal seizure disorder. (EEG monitoring can be useful to confirm the absence of epileptiform activity during REM).</li> </ul> <p>Whilst there is a lack of published evidence evaluating the clinical usefulness or cost effectiveness of sleep studies/ polysomnography in the diagnosis or management of sleep related disorders in children, their use has been established in a number of clinical pathways (2). Whilst not always possible to do, unattended home recordings are relatively simple and likely to be more representative of the child's normal sleep.</p>
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### References:

1. Murray W. Johns - A New Method For Measuring Daytime Sleepiness: The Epworth Sleepiness Scale - Sleep 1991; 14:540-5 [http://epworthsleepinessscale.com/wp-content/uploads/2009/09/a\\_new\\_method\\_for\\_measure\\_daytime\\_sleepiness\\_the\\_epworth\\_sleepiness\\_scale1.pdf](http://epworthsleepinessscale.com/wp-content/uploads/2009/09/a_new_method_for_measure_daytime_sleepiness_the_epworth_sleepiness_scale1.pdf)
2. Royal College of Paediatric and Child Health (Feb 2009) Working Party on Sleep Physiology and Respiratory Control Disorders in Childhood. [http://www.rcpch.ac.uk/sites/default/files/asset\\_library/Research/Clinical%20Effectiveness/Endorsed%20guidelines/Sleep%20Physiology%20Disorders%20%28RCPCH%29/Report%20TextC.pdf](http://www.rcpch.ac.uk/sites/default/files/asset_library/Research/Clinical%20Effectiveness/Endorsed%20guidelines/Sleep%20Physiology%20Disorders%20%28RCPCH%29/Report%20TextC.pdf)
3. Brietzke SE, Katz ES, Roberson DW. Can history and physical examination reliably diagnose paediatric obstructive sleep apnoea/ hypopnea syndrome? A Systematic review of the literature, 2004, Otolaryngology - Head and Neck Surgery, Elsevier <http://www.ncbi.nlm.nih.gov/pubmed/15577775>
4. NICE Clinical Knowledge Summary – Sleep Apnoea <http://cks.nice.org.uk/sleep-apnoea#!diagnosisadditional/A-358754:2>
5. Scottish Intercollegiate Guidelines Network (SIGN June 2003). Management of Obstructive Sleep Apnoea/Hypopnoea Syndrome in Adults - A national clinical guideline. (endorsed by the British Thoracic Society) <http://www.sign.ac.uk/pdf/sign73.pdf>
6. Paul Reading 2007 Parasomnias: the spectrum of things that go bump in the night. Practical Neurology 2007 7: 6-15 [www.practical-neurology.com](http://www.practical-neurology.com)
7. NICE (2007) Chronic fatigue syndrome/myalgic encephalomyelitis (or encephalopathy): diagnosis and management of CFS/ME in adults and children <http://www.nice.org.uk/nicemedia/live/11824/36193/36193.pdf>

### Useful resources

- <http://www.nhs.uk/conditions/insomnia/pages/introduction.aspx>
- <http://www.nhs.uk/conditions/Sleep-apnoea/Pages/Introduction.aspx>
- <http://www.nhs.uk/conditions/Sleep-paralysis/Pages/Introduction.aspx>
- <http://www.nhs.uk/conditions/sleepwalking/Pages/Introduction.aspx>
- <http://www.nhs.uk/conditions/Narcolepsy/Pages/Introduction.aspx>