

Title of project	Cheshire and Merseyside Diagnostic Sleep Pathway
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Date	April 2025

Cheshire and Merseyside Diagnostic Sleep pathway

Introduction

Sleep medicine is one of the busiest specialities in medicine. It is often a subspeciality of Respiratory medicine (but sometimes Neurology) and according to GIRFT (Getting It Right First Time) makes up about 50% of referrals into Respiratory medicine.

Despite this there is often little investment in Sleep services either in terms of medical, physiology or admin support. Patients trying to access Sleep services are often socially disadvantaged with multiple physical and mental comorbidities (Cowen et al, 2023¹).

OSA (Obstructive Sleep Apnoea) is a very common medical condition affecting up to 1 in 8 people and can affect daytime functioning, mental health and ability to perform tasks. It is a risk factor for worsening cardiovascular outcomes and is strongly correlated with obesity and diabetes. It is often ignored or misdiagnosed by patients and health care professionals but, treatment is often lifechanging.

New NICE guidelines² have been published in August 2021 and an Optimal Sleep pathway³ by NHSE as well as Sleep System Improvement⁴ from NHS Futures has been released in November 2024. In addition, there is now NICE guidance on Home Sleep testing⁵ from May 2024, which is relevant to this pathway. We would also draw your attention to the GIRFT report⁶ from 2021.

¹ Cowen, J., Harrison, S., Thom, L. *et al.* Use of historical remote monitoring data to determine predictors of CPAP non-compliance in patients with OSA. *Sleep Breath* **27**, 1899–1908 (2023).
<https://doi.org/10.1007/s11325-023-02806-3>

² NICE Guideline NG202 - Obstructive sleep apnoea/hypopnoea syndrome and obesity hypoventilation syndrome in over 16's, August 2021 - [1 Obstructive sleep apnoea/hypopnoea syndrome | Obstructive sleep apnoea/hypopnoea syndrome and obesity hypoventilation syndrome in over 16s | Guidance | NICE](#)

³ Optimal Sleep Pathway, NHSE, November 2024 -
<https://future.nhs.uk/PhysiologicalMeasurements/view?objectId=237834597>

⁴ Sleep System Improvement, NHS Futures, November 2024 -
<https://future.nhs.uk/PhysiologicalMeasurements/view?objectId=229959653>

⁵ NICE: Home testing devices could increase the number of people diagnosed with sleep apnoea, May 2024 -
nice.org.uk/news/articles/home-testing-devices-could-increase-the-number-of-people-diagnosed-with-sleep-apnoea

⁶ Getting It Right First Time, Respiratory Medicine: GIRFT Programme National Speciality report, 2021 -
gettingitrightfirsttime.co.uk/reports/respiratory-medicine-report/

This paper is guided by these recommendations. We have discussed the ideal pathway in a working party and where possible come up with recommendations. In some cases, procurement processes will be required so an option appraisal has been suggested as part of the paper.

Aintree hospital has developed a digital Sleep pathway utilising a sleep management software (Sleep health solutions) and new sleep diagnostic equipment (Watchpat, Zoll Itamar). This has transformed waiting lists and cost effectiveness and has proved a pilot case for this pathway.

General principles

The goals of the optimal sleep pathway⁷ include:

- To limit unnecessary follow ups, encourage one-stop clinics when appropriate, discharge at first appointment when able
- To increase virtual consultations, move care closer to home, provide personalised care
- To reduce time to treatment
- To increase efficiency and reduce waste e.g. duplication of investigations
- To deliver equity of access to services, expertise and treatments
- To improve patient experience and outcomes
- To collect appropriate data for this cohort of patients to allow the future presentation of a sleep dashboard.
- To include some key metrics to report of Key Performance Indicators (KPIs) and quality.

Geographical Area covered

C&M (Cheshire and Merseyside) for patients 16 and over. There will need to be discussion with Lancashire regarding existing cross boundary pathways into Sleep diagnostics.

In addition, pathways between Macclesfield and South Manchester may need to be discussed. Macclesfield have expressed a need to expand their current sleep service.

This pathway mainly relates to diagnostic processes but for clarity we have included some principles for treatment.

Conditions

1. Obstructive Sleep Apnoea Hypopnoea Syndrome (& central sleep apnoea)
2. Obesity hypoventilation
3. Narcolepsy
4. Idiopathic central nervous system hypersomnolence and other conditions of central hypersomnolence
5. Insomnia - advice and if associated with OSA
6. Restless Legs Syndrome and Periodic Limb Movement Disorder
7. REM sleep behaviour disorder
8. Slow wave sleep parasomnias

⁷ Optimal Sleep Pathway, NHSE, November 2024 -

<https://future.nhs.uk/PhysiologicalMeasurements/view?objectId=237834597>

OSA and OHS (Obesity hypoventilation syndrome) will make up the vast majority of referrals into the services but pathways for the other conditions need to be aligned with the overall sleep pathway. In addition, as OSA is so common it will usually need to be ruled out before investigations for the other conditions can be commenced.

Institutions that deliver Sleep diagnostics

In general, these are hospitals within C&M but CDCs (Community Diagnostic Centres) that are associated with a parent hospital/sleep service should be available in the next 12-18 months.

The following institutions offer sleep diagnostics services across C&M:

Provider	Screening (S)	Multichannel (M)	PSG (P)	CPAP Provision	Comments
Alder Hey Children's NHS Foundation Trust	✓	✓		✓	Not included within this adult pathway
Liverpool University Foundation Trust (Aintree site)	✓	✓	✓	✓	
<i>Paddington & LWH CDC</i>		✓			
Liverpool Heart and Chest Hospital Trust	✓	✓			Diagnostic service only - all treatment pathways such as CPAP are directed to Aintree
Mersey West Lancashire Teaching Hospitals NHS Trust (Whiston site)	✓	✓			Diagnostic service only - all treatment pathways such as CPAP are directed to Aintree
Warrington and Halton Teaching Hospitals NHS Foundation Trust					
<i>Halton Health hub CDC (Runcorn)</i>	✓	✓		✓	
East Cheshire NHS Trust (Macclesfield site)	✓	✓		✓	
Countess of Chester Hospital NHS Foundation Trust	✓	✓		✓	
Mid Cheshire Hospitals Foundation Trust (Leighton site)	✓	✓			Diagnostic service only - all treatment pathways such as CPAP are directed to Stoke

Wirral University Hospital Trust	✓	✓		✓	
Clatterbridge CDC	✓	✓			

Recommendation

All hospitals should be equipped with multichannel sleep study equipment and avoid using oximetry for diagnostic purposes. Oximetry can be used to investigate efficacy of Continuous Positive Airways Pressure (CPAP) or Non-invasive Ventilation (NIV) treatment where the diagnosis is known.

The type of home sleep study used has now been reviewed by NICE⁸ and only four devices have been approved.

Please see attached file with report back from eight sleep centres in the region. We would suggest moving to central procurement of Watchpat devices as a result of the NICE guidance and the Aintree evidence. Currently five out of eight sleep services within C&M use WatchPAT sleep study equipment as primary sleep diagnostic test. The standardisation of sleep diagnostics would help to improve quality and equality for all patients. There is no capitol purchase requirement for monitors which future proofs services from aging equipment and advancement in technologies.

This is likely to save many thousands of pounds and improve through put. The money saved through reduced consultant PA activity would support in funding the required software.

Staffing resources

The ability to staff and run a viable Sleep service is often precarious due to either lack of trained physiologists or medical staff with an interest in Sleep medicine. Certain aspects of Sleep medicine are quite specialist and often reliant on one individual in an organisation making it very vulnerable.

As a result, there are often long waits or referrals out of area or sudden closure of Sleep services.

The aim of this pathway would be to ensure that where possible staff are supported to deliver the Sleep service in their area with back up from the regional resources.

We have also discussed the use of digital resources and Sleep software (a clinical diagnostic support system (CDSS) - Sleep Health Solutions) to support lower band staff to deliver specialist Sleep medicine. This is also highlighted in the Future NHS report referenced above and is recommended by NHSE.

⁸ <https://www.nice.org.uk/guidance/dg62/resources/hometesting-devices-for-diagnosing-obstructive-sleep-apnoea-hypopnoea-syndrome-pdf-1053928761541ces> for diagnosing obstructive sleep apnoea hypopnoea syndrome

In addition, we should consider the possibilities of training further staff with resources available as PGCert in Sleep Medicine funded by NHSE and ensuring we are offering studentships within our Sleep clinics. It should be possible to have centrally funded posts in our departments and we would encourage Sleep lab managers to investigate these posts by contacting the ARTP or British Sleep Society for further information. We should also consider setting up Sleep medicine rotations for Sleep Healthcare Scientists across the region to ensure that we are a robust service. The use of NHS Digital Passport can enable this.

Referral process

The purpose of the pathway is to provide information for referrers and to enable patients to be assessed and diagnosed as close to home as possible. The process should be consistent across the region so that patients requiring MDT discussion or referral to tertiary services will have the same information available and are not required to have duplicate testing.

If not able to attend or pick up diagnostic equipment, then alternatives such as telephone consultations and posting out of equipment should be available.

It was discussed whether C&M would prefer a central referral hub and this was the supported and preferred model.

Primary care

Whilst this model could also be run in a GP hub practice it was not thought to be viable by the taskforce. The purpose of this pathway is to maintain secondary care sleep services rather than to move this into primary care. We also want to ensure that primary care is not burdened and that there are clear communication links between the Sleep services and primary care at all points in the pathway. Primary care should not have to re-refer or ask Sleep services about follow up of CPAP patients for instance.

We do not expect proformas to be filled in for the referral process.

Pre-test assessment and blood tests to rule out other conditions

We discussed where this should take place and whilst we can get some information from primary care it was decided that we only need basic information (outlined below) for the referral as per NICE guidance.

Most primary care referrers carry out routine blood tests as patients may present with fatigue or vague symptoms.

We would suggest completion of sleep blood tests required on referral from the GP to rule out any other health related conditions which may cause sleep apnoea or fatigue. For example, patients with hypothyroidism should be considered on an individual basis given the length of time it may take to allow the patients thyroid to be controlled.

It is recognised that there is a requirement for a system to allow multiple organisations to access the results following the completion of tests e.g. writing back sleep bloods and sleep study into ICE.

Recommendation

Implement a central referral hub where primary care can refer to. There should be an admin checking process where certain criteria will be searched for prior to allowing the referral to go through.

1. Postcode of the patient should be within C&M unless prior agreement.
2. Symptoms of a sleep disorder as per NICE guidance.

These would be: Symptoms of sleepiness, poor sleep, snoring, witnessed apnoeas, waking headaches, nocturia, choking, insomnia, cognitive dysfunction, peripheral oedema, hypoxaemia, unexplained polycythaemia. Any two of these if BMI > 30 should prompt referral but we would also accept any two features to the next stage of the referral process. The Epworth Sleepiness score can be used but is not necessary for referral as further information will be obtained at the next stage.

3. Completion of a sleep bloods set (this has been set up as a single tick box on ICE)- FBC, UE, HbA1C, ferritin, thyroid function, bicarbonate, BNP. A bicarb greater than 27 would indicate potential high risk for that patient and would initiate a fast-track process.

Central hub function and diagnostic process

Referrals into the hub would be vetted by Healthcare Scientists (freeing up consultant time) and accepted or rejected as per the recommended criteria.

Referrals into the central hub would then have an initial review via the telephone or booked in at a local CDC determined by postcode (digital process within the Sleep management software used at Aintree University Hospital). If at a CDC then this would also allow anthropometric measurements and observations to be carried out (BP, weight, height, sats), and blood testing if not already carried out. A piece of diagnostic kit (Watchpat) would be assigned to the patient at this point. They would wear this at home overnight and return the following day.

This process is currently in place at Aintree where all patients referred into the service have an initial review within 6 weeks of receiving the referral. This is by trained technical officers who take the patient through a “guided consultation” which is also information gathering via a detailed sleep history but also can be used for triaging purposes (for instance to prioritise HGV drivers or those with features of obesity hypoventilation). Aintree sleep service database confirms 20.8% of patients diagnosed with OSAHS also have a raised venous bicarbonate and features of obesity hypoventilation.

The information is saved on a central server with cloud log in and security to enable data sharing across the region and is provided by Sleep health solutions (SHS) for this purpose.

This has been recommended by GIRFT and has been approved by NHSX with ORCHA and DTAC accreditation. It has been discussed by the working party and has been put forward as the preferred option. However, this would have a cost and a procurement process via NHS framework.

Options

1. Use centralised hub to free up consultant time at parent hospital and Aintree model at CDC/local hospital using Sleep health solutions software. Would save five PAs of Consultant time at Aintree site alone.
2. Use current pathway at local hospital/CDC. Would not allow data sharing and possibly lead to duplication of work if transferred to another hospital or requires further tests.

Estimated referrals per week - 300 (based on information from Warrington survey) but would need 10% increase per year. Since starting this pathway in 2022 the referrals to Aintree have increased by +40% in one year and +47% across the region in the past 12 months. March 2025 data show 334 patients attended sleep studies per week across the region.

Current staffing within C&M has enough staff to carry out 290 diagnostic tests per week (although some are simple oximetry) but this is rough estimate. This does not take into account reporting or consultant time if a consultant is required at this point depending on current local practice.

Data collection should be made on rejection of referral of and the reason behind the rejection of the referral.

Secondary care

It was considered that the Sleep diagnostic pathway would be carried out in secondary care either in a hospital setting or within CDCs. There is funding from NHSE to develop CDCs which could be attached to a parent clinic. This would enable closer to patient diagnostics.

Patients should not be disadvantaged by attending a CDC versus the hospital setting and the assessment at a CDC should mirror that of the parent clinic. There is also a need to ensure that data flow is secure and that waiting lists in the region either for diagnostic or treatment are aligned.

This will require considerable admin and IT support and infrastructure but is possible if booking processes are pooled which is one of the priorities of the C&M ICB. This would enable resources to be used more efficiently but may involve travel by the patient especially if deemed urgent.

Tertiary care

The tertiary Sleep centre is within Aintree Sleep service for more complex Respiratory sleep disorders and for non-Respiratory sleep such as Narcolepsy.

As already mentioned, OSA is very common so we would suggest ruling out simple sleep problems such as OSA even if the referral is primarily for sleepwalking.

The case could then be discussed at a regional MDT to decide whether further tests at Aintree are required or whether a diagnosis can be made with the information available.

MDT and referrals across region

It is hoped that using digital pathways would enable safe and easy transfer of information across the region. This would ensure ease of access and reduce duplication.

We would aim to have a regional Sleep MDT once a week, involving nominated Healthcare Science Lead for each service, who may bring any cases for discussion. This will also enhance collaborative working across the network and provide shared teaching experiences.

Suggested patients to be discussed:

- Triage queries e.g. patients with excessive daytime sleepiness/narcolepsy.
- Patients with non- respiratory Sleep- may not need further tests but advice can be given from the MDT.
- Possible narcolepsy
- OHS patients not stable on CPAP therapy.

We need to clarify whether patients on treatment would be included in this MDT but we are assuming we could also include patients with residual sleepiness on CPAP for instance.

Other – Alternative treatment pathways at Aintree regional service

As per the NICE guidance we should also be developing pathways for alternative treatment to CPAP. For example, dental pathways for jaw advancement devices, hypoglossal nerve stimulation (NICE approved and with central funding).

Diagnostic tests

The NICE guidelines have given recommendations about the minimal criteria for diagnosis and advise multichannel rather than simple oximetry. Please see earlier comments and only four devices are approved for adults (>16yrs) via the Dec 2024 NICE criteria.

The devices should be centrally procured at a fixed price via a C&M regional contract.

Following discussion at our working group a number of centres have expressed a desire to use Watchpat as the preferred diagnostic test. This is a simple device with low failure rate that can either be used as a reusable device with the patient collecting the device and returning the next day. The alternative is a single use device that can be posted to the patient and used that night with morning upload to the cloud server. This allows remote patients better access if not able to attend a CDC.

The devices are currently in use at Aintree University Hospital and have improved the pathway by reducing the number of failed tests (from 25% to <1%) and as it can assess sleep quality it reduces the requirement for more complex multichannel tests. It can also identify atrial fibrillation and would enhance case finding for cardiovascular related conditions.

Option

1. Use WatchPAT polygraphy >80% of HSAT for OSA diagnostic purposes – this is more cost effective than replacing individual centres equipment⁹, for example the Aintree study realised a £73,000 cost saving annually for 62 Sleep studies per week.
2. Use local sleep test equipment- multichannel cardio respiratory polygraphy such as Apnoea link, SomnoTouch or NOX.

⁹ Aintree internal Cost Saving framework – Appendix 1.0

Service	HSAT - WatchPAT / Month	HSAT - other method / Month	Number of HSAT / Month	% share of WatchPAT
UHLG	295	97	392	75%
LHCH	158	90	248	64%
MWL	33	4	37	89%
Wirral	0	118	118	0%
Chester	83	4	87	95%
Mid Cheshire	60	42	60	30%
East Cheshire	0	33	33	0%
W&H	90	176	266	34%

March 2025 Activity submissions (CMPC, Zoll), to be used as guide.

Staffing for a Diagnostic Pathway

Trained staff to give out equipment and download the returned devices are required. This is again a vulnerable area of the pathway so back up plans such as attending other clinics to be explored. This also includes areas that are experiencing high volume of referrals and therefore challenges to comply with DM01. The preferred option will always be face to face study over postal study as this will enable all physical observations to be measured correctly. Aintree pathway uses Band 3 staff for this and can be trained in the guided consultation software very quickly.

As mentioned, some devices such as WatchPAT ONE are postable and the download can be uploaded to the cloud so these would be options for patients who are unable to visit their local centre or if there are staff shortages. It is important to note that the cost difference between in person or at home testing is +£30 per patient. Additionally, the failure rate of devices such as WatchPAT ONE is 4% in comparison to 0.2% for WatchPAT 300/400. This method also creates delays in DM01 as patients often do not complete first night given due to no requirement to return.

We also need band 5-6 Healthcare Science staff to review the results of the sleep study and verify the results and decide on next step. This could be CPAP, further test, virtual clinic reviews by senior physiologist or Sleep specialist nurse or consultant. We would not suggest detailed reporting of multichannel studies where moderate to severe OSA is evident. A standardised regional SOP regarding the Sleep study reporting process will be agreed and implemented to ensure a high quality diagnostic service.

Options

1. Local staff at CDC to give out equipment and carry out measurements such as height, weight, saturations, blood tests.

2. Equipment to be posted to patients and staff ask for information from patient or GP regarding height and weight.

Use of a CDC

It is envisaged that a local CDC will be involved in Sleep diagnostics but could be carried out at parent hospital.

We would suggest patient attends for one stop where basic measurements, initial review and sleep study equipment explained and given out. The patient returns the equipment the next day and staff download and check the study for validity ready for analysis, reporting and clinical decision making.

Outcome and communication

In general, we need systems to ensure patients are aware of the referral, the diagnostic pathway and where to go for assessment.

We then need to ensure the results and next steps are communicated to the patient and GP.

The use of Consultant “virtual clinics” where information from the parent hospital’s patients is fed into each week with the results of the initial review, referral, sleep study are available and the decision regarding treatment can be made. We would suggest that treatment for straightforward OSA can be made by a trained band 5-6 Healthcare Scientists in most cases. Only patients where discharge is possible or further tests required should be feedback to the virtual clinic.

Electronic letters and communication are preferred and ideally emailed to GP, referrer and patient. The Sleep health solutions software is now MESH enabled so that all results will be emailed to both referrer and patient.

Lists for MDT should also be digital and booked via MS Teams or face to face MDT.

Additional digital pathways to support the Sleep service

This ensures we are not reliant on the post for referrals and appointments.

The sleep health solutions software allows auto-generated reports that can be emailed to patients and GPs via the Mesh system and reduces admin time. In addition, systems such as ‘Dr Dr’ can remind patients about appointments and directions.

For the most part patients have access to smart technology but we also need alternative options for those less digitally able.

Did not attend policy

Patient not attending for the diagnostic review or arriving so late that it could not take place will be registered as not attending. They will be discharged back to the referring clinician.

Patients not returning equipment will be phoned by the CDC team. If not returned within 48 hours of the agreed return date patients to be contacted once via telephone and further failure to return will result in a letter outlining legal action for reimbursement of equipment if not returned promptly. The patient will be discharged and full summary of actions detailed to

the referring clinician. they will be discharged and a letter sent to them outlining legal action if equipment not returned.

Patients with a failed home test will be offered an alternative sleep study if felt to be due to user error. If due to equipment failure, then a repeat home study will be carried out.

Recommended Diagnostic pathway

Patients are referred into a central sleep hub and accepted or referred back to referrer with advice. This should be by senior physiology team rather than sleep consultants. The patient will be registered on Sleep health software and the postcode will determine where they should attend for the diagnostic process. This would also highlight patients who are out of area.

Patients for remote testing should be identified e.g. House bound, patients in HMP, nursing home residents. HMP residents are not suitable for WatchPAT ONE devices due to limited access to mobile cellular devices.

Patients should also be identified as Fast track at this stage with professional drivers, possible OHS, patients awaiting an operation, unstable cardiovascular disease, pregnancy, non-arteritic anterior ischaemic optic neuropathy. The aim for this group is to achieve treatment within 4 weeks of referral so urgent testing is required and linked to urgent treatment slots.

Patients will then have an appointment to attend for the initial review guided consultation and to proceed to a sleep study. It is likely that all patients entering the pathway will need some form of simple sleep study. Reasons for rejection at this stage would be patients not wishing to proceed further in the pathway and a simple discharge letter back to the referrer would be actioned.

Patients will be asked if they can attend a CDC for full assessment and to collect diagnostic test equipment or alternatively the possibility of single use equipment could be considered. The patient would be asked to return the equipment the following day if not disposable.

If unable to attend, then post out remote option would be explored.

Once the sleep study is carried out the sleep study, and blood results would be uploaded into the patient's file electronically for review by a band 5-6 Healthcare Scientist. In most cases this can be an overview of the computer aided reporting and has a turnaround of a few days. Maximum one week turn around time from completion of diagnostic test to communication to patient and referring clinician.

In most cases a diagnosis can be made at this stage and the patient would proceed into the treatment pathway.

If a diagnosis cannot be made then options would be to repeat the test, refer to a virtual specialist clinic for further advice. This should be the local sleep service aligned with the patient.

A decision at virtual clinic can then be for treatment, further tests, discharge or referral to the MDT.

Exceptions to the pathway may include direct referrals by neurology to tertiary referral centres for possible narcolepsy. However, referrals for sleep walking, leg movements or other non-respiratory conditions will not be accepted directly without following the pathway. Equally referrals for “narcolepsy” based on excessive sleepiness will not be accepted unless there is clear evidence of cataplexy. Excessive sleepiness is much more likely to be due to OSA or poor sleep hygiene so the Sleep pathway should be followed.

Issuing of CPAP

As a result of a safety alert issued in June 2021 by Phillips on their CPAP and ventilators there was a 50% CPAP shortage globally. As a result of chip shortage the system went down to approximately 20% of the normal expected supply.

As repercussion of accessibility of machines, we are aware that there have been large backlogs built up across the system.

Therefore, in Feb 2023 Aintree piloted an innovative large group CPAP model (40 patients per 90-minute session) to address the backlog of patients requiring CPAP therapy.

The model comprises of two areas;

1. An educational session on OSA was conducted explaining the requirement for treatment (20 mins plus 10 mins for questions) in a lecture theatre, a demonstration of the machine and how to maintain it also took place (again in the lecture theatre).
2. The patient group was then formed into groups of 8-10 and moved to another room where their machine has been pre-programmed for them (whilst the lecture etc is being given). We then go through the various masks and fit them in the groups with members of the team available to address any patient queries.

The whole session lasts about 75 mins to set up 40 patients. The session consists of the following staff members:

1. Lead physiologist/nurse - facilitating part 1 education, answering queries, medical advice.
2. Four band 5/6 physiologists, nurse or physio - mask fitting 10 patients each.
3. Admin - to book patients in/out and to process clinical outcomes (RTT stop).

Following the sessions, patient experience questionnaires were distributed with positive feedback response from patients whilst making considerable impact to the current waits. Patients enjoyed the peer support environment and having the opportunity to discuss their conditions with people experiencing the same symptoms. The feedback has been captured and included below.



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esponses-2023-06-12Free_Text_Answers_-_1

Further to this work at Aintree the model was refined to a smaller more sustainable solution within the sleep laboratory. This comprised of the same education session for a group of 12 patients in the unit MDT room. Each patient was then individually seen 1/1 for their mask fitting purposes and machine collection.

The whole session lasts about 60 mins to set up 12 patients. The session consists of the following staff members:

1. Lead physiologist/nurse - Facilitating part 1 education, answering queries, medical advice. Also assists with mask fitting.
2. Two band 5/6 physiologists, nurse or physio - mask fitting 4 patients each.
3. Admin - to book patients in/out and to process clinical outcomes (RTT stop), already present within the department reception.

Consideration should still be made for those unwilling or unable to attend a group session and therefore a one-to-one patient CPAP setup should be used in the following patient groups;

- Neurodivergent and social anxiety.
- Patients requiring carer support regarding communication or visual impairment.
- Patients requiring translator assistance.
- Patients from HMP who attends with escorts

Allowance of CPAP Patient Initiated Follow Ups (PIFU) should be made for those patients being managed by the Physiology Teams.

Networking and Sleep Peer support

There has been excellent progress made with clinical networking and peer support over the past two years to share success and best practice models. This has helped services adapt to change in practice that may include workforce remodelling, service provision with diagnostics, treatment, education and leadership support. The support offered by Aintree sleep service (see appendix 4) has helped drive change in the region where 6/8 services have visited and gained valuable intel to help drive change in their practice. This has helped create a network within Cheshire and Merseyside region.

Key Performance Indicator Metrics

To allow the collection of robust data the following metrics have been formed to show any positive impacts as a result of the implementation of the C&M Optimal Obstructive Sleep Apnoea Pathway,

- 1) Number of patients accepted at initial triage within the reporting period
- 2) Number of patients suitable for sleep studies within the reporting period
- 3) Number of patients issued with disposable equipment within the reporting period
- 4) Number of patients issues with reusable equipment within the reporting period
- 5) Average time for the completion and return of the sleep study
- 6) Average number of weeks for the review of the sleep study results/report
- 7) Number of patient results/reports awaiting review
- 8) Number of patients diagnosed with OSA within the reporting period
- 9) Number of patients identified as being high priority within the reporting period
- 10) Number of patients issued with a CPAP machine within the reporting period
- 11) Number of patients requiring MDT discussion within the reporting period
- 12) Number of patients referred to tertiary sleep centre within the reporting period
- 13) Number of patients referred on to the Dental Services within the reporting period

- 14) Number of patients referred onto the Ventilation Team within the reporting period
- 15) Number of patients discharged within the reporting period.

The Sleep health solutions software has a management dashboard that is utilised in Aintree to manage patients and audit our performance. Therefore, most of the KPIs are already being collected. For the most part these are available instantly, but we may need to ask for enhanced programming on a month-to-month basis and this could be included in the procurement costs.

Appendices



Appendix 1 - Aintree Regional Sleep Service - Sleep Studies CPI.pdf



Appendix 2 - Aintree Regional Sleep Service - CPAP CPI.pdf



Appendix 3 - Aintree Regional Sleep Service - Sleep Software CPI.pdf



Appendix 4 - Aintree Regional Sleep Service Support.pdf