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**Acronyms:**

<b>AMRH</b>	Al Masarra Hospital
<b>CPAP</b>	Continuous Positive Airway Pressure
<b>ECG</b>	Electrocardiogram
<b>EEG</b>	Electroencephalogram
<b>EMG</b>	Electromyogram
<b>EOG</b>	Electro-oculogram
<b>MSLT</b>	Multiple Sleep Latency Test
<b>MWT</b>	Maintenance of Wakefulness Test
<b>PSG</b>	Polysomnography
<b>AHI</b>	Apnea Hypopnea Index



## **Policy and Procedure of Sleep Disorder Unit**

### **1. Introduction**

Sleep disorders are conditions that prevent a person from getting a restful sleep and as a result can cause serious physical, mental and emotional problems. Sleep disturbance accompanied most of psychiatric illness. Prevalence of sleep disturbance in psychiatric conditions can reach up to 80% as in major depressive disorders. Sleep disorders have complex relationship with psychiatric condition. It can be a cause or a predictor of medical, neurological or psychiatric illness. The good news is that all sleep disorders are treatable and can improve quality of life and the course of psychiatric illness. The most common sleep disorders are: insomnia, sleep apnea, restless leg syndrome, parasomnias and hypersomnia like narcolepsy. Most of the sleep disorders can be diagnosed by careful history and examination and some patient will need sleep study. The wide need of sleep medicines, severe shortage of centers and technologies impacts the understanding of sleep disorders.

### **2. Scope**

This policy and procedure is applicable to health care workers concern in Al Massarra Hospital (AMRH) who works directly or has an impact on care of patient with various sleep disorders.

### **3. Purpose**

- 3.1 To provide a full guide of job description to assigned health care workers in sleep disorders unite in Al Massara hospital to effectively assess, formulate and develop a management plan for people with various sleep disorders.
- 3.2 To raise awareness about sleep disorders unite to other health care workers in the hospital.



#### 4. Definitions

**4.1 Overnight Sleep Studies (Polysomnography or PSG):** a comprehensive test used to diagnose sleep disorders where the patient is hooked to an assortment of equipment that records and measures a large variety of body activity including brain waves, eye movements, heart rate, oxygen level, breathing, body movements and more. PSGs are the golden standard test for most of sleep disorders including sleep related breathing disorders, sleep related movement disorders, circadian rhythm disorders, parasomnias, hypersomnia, insomnia.

**4.2 Multiple Sleep Latency Test (MSLT):** is a daytime sleep study performed after an overnight PSG used to patient with excessive daytime sleepiness. It measures the time elapsed from the start of a daytime nap period to the first epoch of sleep called sleep latency. Also known as a daytime nap study, the MSLT is the standard tool used to diagnose narcolepsy and idiopathic hypersomnia.

**4.3 Maintenance of Wakefulness Test (MWT):** a daytime sleep study that measures how alert the client is during the day and his/her ability to stay awake. They are usually performed after a PSG and can help determine if your sleepiness is a safety concern.

**4.4 Continuous Positive Airway Pressure (CPAP)** is a non-invasive technique for providing single levels of air pressure from a flow generator, via a nose/nose-mouth/whole face mask. The purpose is to prevent the collapse of the oropharyngeal walls and the obstruction of airflow during sleep, which occurs in obstructive sleep apnea (OSA).

**4.5 Split-Night Study:** is a combination of diagnostic study and therapeutic study performed with a three-hour period of baseline sleep study recording, followed by a



CPAP titration study if it is determined to be indicated by the presence of clinically significant sleep apnea.

**4.6 Titration Study:** a type of in-lab sleep study used to calibrate Continuous Positive Airway Pressure (CPAP) therapy. CPAP is a common treatment used to manage sleep-related breathing disorders including obstructive sleep apnea, central sleep apnea and hypoventilation and hypoxemia.

**4.7 Hypnogram:** it is a graph produced in the long report after overnight sleep study that represents the stages of sleep as a function of time. It was developed as an easy way to present the recordings of the brainwave activity from an electroencephalogram (EEG) during a period of sleep.

**4.8 Continuous Positive Airway Pressure:** (CPAP) is a non-invasive technique for providing single levels of air pressure from a flow generator, via a nose/nose-mouth/whole face mask. The purpose is to prevent the collapse of the oropharyngeal walls and the obstruction of airflow during sleep, which occurs in obstructive sleep apnea (OSA).

**4.9 Epoch:** it's a 30 seconds display of a PSG recording.

## 5. Policy

5.1 Sleep disorders unite at AMRH is committed to provide a high standard, evidence-based service for all patients with sleep disturbances. Healthcare workers concern must be aware of the function of sleep clinic and referral polices for patients with sleep disorders.



## 6. Procedure

### 6.1 Prior Sleep clinic

- 6.1.1 Arrangement of Sleep clinic appointments
- 6.1.2 Receiving patient on clinic day.
- 6.1.3 Initial assessment is done for new patients such as measurement of height, weight and neck size.
- 6.1.4 Distribution of Epworth sleep scale form to patient's prior seeing the sleep specialist.

### 6.2 During sleep clinic

- 6.2.1 Sleep specialist shall be responsible for the full assessment of patients who were referred to the sleep clinic.
- 6.2.2 Assessments include a detailed history, physical examination, sleep questionnaires, blood investigations and sleep study request if needed. (*See Appendix 3. Epworth Sleepiness Scale*)
- 6.2.3 Sleep specialist shall be explaining the procedure of the sleep study to the patient and family members. (*See Appendix 1. Instructions for Sleep Study*)
- 6.2.4 Sleep specialist shall be responsible for obtaining the signature for Sleep Study (PSG) consent from close patient's relatives or the patient himself if he can sign the consent. (*See Appendix 2. PSG Consent Form*)
- 6.2.5 Sleep specialist shall explain and interpret the result of sleep study with the follow up patient and discuss the treatment options and plan for the patient and their relative.

### 6.3 After sleep clinic

- 6.3.1 The sleep technologist shall receive the sleep study request through Al Shifa system.



- 6.3.2 The sleep technologist shall arrange the appointment with the patient and re-explain the procedure for further clarification.
- 6.3.3 The sleep technologist shall give the patient instruction sheet that explains the preparation needed prior the sleep study night.
- 6.3.4 Patient is notified that a call will be received to confirm the appointment of sleep study followed by a text message of the date and time.

#### **6.4 Sleep test procedures:**

- 6.4.1 At night upon arrival to the sleep facility, each patient will have an assessment completed by the sleep facility technologist for data collection and to determine any immediate needs or concerns.
- 6.4.2 Assessment includes:
  - 6.4.2.1 Vital signs checked by triage staff
  - 6.4.2.2 Current medication
  - 6.4.2.3 Any special needs (e.g., wheel chair)
  - 6.4.2.4 Measurement of Height, weight and neck size.
  - 6.4.2.5 Sign PSG consent form and fill up ESS.
- 6.4.3 **Polysomnography**
  - 6.4.3.1 Recorded parameters:
    - 6.4.3.2 EEG
    - 6.4.3.3 EOG
    - 6.4.3.4 Chin EMG
    - 6.4.3.5 Leg EMG
    - 6.4.3.6 Airflow
    - 6.4.3.7 Respiratory effort
    - 6.4.3.8 Oxygen saturation
    - 6.4.3.9 Body position
    - 6.4.3.10 ECG





### **6.5 Step by step direction for patient hook up:**

- 6.5.1 Have all equipment ready when patient comes into the room.
- 6.5.2 Inspect all electrodes.
- 6.5.3 Instruct patient to change into clothes to sleep in.
- 6.5.4 Have patient sit in the chair.
- 6.5.5 Explain procedure to patient.
- 6.5.6 Clean the site of each electrode on the patient before placement.
- 6.5.7 Fill each electrode cup with conductive paste.
- 6.5.8 Attach the EEG sensors and the ground (F4, C4, O2, and M1).
- 6.5.9 Place the left oculogram electrode (EOG) above the midline of the left outer canthus.
- 6.5.10 Place the right oculogram electrode (EOG) under the midline of the right outer canthus.
- 6.5.11 Place one chin EMG electrode on the midline of the inferior edge of the mandible.
- 6.5.12 Place ventilatory effort bands above the breast bone and around the midline of the abdomen. Ensure there is a separation between the bands.
- 6.5.13 Attach the pulse oximeter.
- 6.5.14 Prep the patient's legs with alcohol for the EMG electrodes placement.
- 6.5.15 Place the EMG electrodes below the inferior edge of the mandible to the right and left of the midline. Secure electrodes with tape.
- 6.5.16 Tape the snore microphone on the left or right side of the Adams apple.
- 6.5.17 Connect all patient cables headbox and oximetry probe.
- 6.5.18 Instruct patient to lay supine and very still, eyes open.
- 6.5.19 Perform bio-calibrations prior to lights out and after lights on while recording.
- 6.5.20 Begin testing.



- 6.5.21 Diagnosis will be completed by an appropriately licensed physician and will be reviewed by an individual board certified in sleep medicine. Review data for artifacts, change electrodes/sensors as needed.
- 6.5.22 All equipment and sensors, masks and belts coming into contact with the patient will be handled as contaminated per sleep facility policy and procedure. Clean and dirty equipment must be kept in distinct areas designated as clean or dirty. All dirty equipment must be cleaned and disinfected after each use according to manufacturer guidelines. Single use items are to be discarded after each use.
- 6.5.23 Patient is instructed to come to the follow-up appointment to discuss the result and review the treatment plan with sleep physician.
- 6.5.24 Report and documentation:
- 6.5.24.1 Full PSG scoring is done the next morning, including scoring of EEG, respiratory events, leg activity, heart rate, Spo2, snoring and chin activity
  - 6.5.24.2 Long report is created that includes detailed information about the study.
  - 6.5.24.3 A summary report will be given to the physician to review the result and discuss with the patient.
  - 6.5.24.4 All reports are saved and uploaded to the als+hifa system

## **6.6 split-night study:**

- 6.6.1 The diagnostic portion of the split night sleep study should be performed according to the AASM Practice Parameters for the Indications for Polysomnography and Related Procedures. Split night testing may be considered when the total AHI > 40 events per hour with a minimum of 120 minutes of recorded sleep during the diagnostic portion of the sleep study, provided if there are no known or documented contraindication to application of positive airway pressure therapy.



### **6.7 Procedure for MSLT:**

- 6.7.1 The MSLT must be performed immediately following polysomnography recording.
- 6.7.2 The initial nap opportunity begins about one and a half to three hours after the patient has awakened from the all-night sleep study.
- 6.7.3 Throughout the day no caffeine or stimulant medications are permitted and unusual exposures to bright sunlight should be avoided.
- 6.7.4 Sleep rooms should be dark and quiet during testing. Room temperature should be set for the patient's comfort level.
- 6.7.5 The MSLT consists of five nap opportunities given two hours apart.
- 6.7.6 Between naps the patient is kept out of bed and is visually monitored to ensure that no napping occurs. In each nap opportunity, the patient is told to try to fall asleep.
- 6.7.7 The patient is given 20 minutes to fall asleep. If the patient falls asleep in 20 minutes or less, he or she is monitored for 15 minutes (clock time) from sleep onset before ending the test.
- 6.7.8 The MSLT is recorded with standard polysomnography using the following montage: REOG, LEOG, chin EMG, EEG (C3-A2 or C4-A1), EEG (O1-A2 O2-A1) and EKG.
- 6.7.9 The mean sleep latency is determined across all naps. Sleep latency is defined as the time from lights out to the first epoch of any state of sleep scored according to most recent version of the AASM Scoring Manual.
- 6.7.10 The test is ended after 20 minutes if no sleep occurs. If sleep does occur, the test is ended 15 minutes after the first 30 second epoch of scored sleep according to the criteria of the AASM Scoring Manual.
- 6.7.11 If there are at least two REM onsets, then a fifth nap does not have to be performed.
- 6.7.12 At the end of the last nap, turn off polygraph or exit computer.



6.7.13 General cleaning up is done once the test is over and the patient is notified that the result will be discussed in the follow up appointment.

6.7.14 Sleep stage scoring is done by assigned sleep technologist based on the AASM Scoring manual.

## **6.8 CPAP clinic Procedure:**

### **6.8.1 CPAP Education:**

**6.8.1.1** Explain how the CPAP machine functions and demonstrate the main important parts of the machine such as memory card, humidifier tank, reusable filter, mask and the tube.

**6.8.1.2** Explain the different type of masks available such full face, nasal and nasal pillow.

**6.8.1.3** Provide a list of CPAP machine suppliers to the patients to contact for purchase.

### **6.8.2 CPAP trial**

**6.8.2.1** Upon Sleep physician request we give patients appointments for Overnight CPAP trial.

**6.8.2.2** A proper Mask fitting is taken on the night of the trial.

**6.8.2.3** The mask should fit from the end of the nasal bone to just below the nares. Be careful in ensure the mask rest above the upper lip. Placement in the area immediately above or on the lip may increase the likelihood for leaks. The mask should fit the patient comfortably. The mask sizing gauge may be used to assist in selection.

**6.8.2.4** The decision of the mask type is made according to patient comfort ability.



- 6.8.2.5** Place the mask over the patient's nose and select proper spacer size. Attach spacer to the mask. Attach heads strap to mask. Apply mask and head strap to patient. Adjust the straps until all significant leaks are eliminated. Avoid over tightening, which may cause leaks and patient discomfort.
- 6.8.2.6** Assemble circuit and connect to the CPAP device. Ensure proper placement of exhalation valve (facing outward and unobstructed).
- 6.8.2.7** The CPAP machine is auto operation and start at a pressure of 4 cmH<sub>2</sub>o giving patient soft start up to 20 minute.
- 6.8.2.8** Assess the patient every 2 hours, if they need any help or the machine needs to be adjusted.
- 6.8.2.9** In the morning wake up the patient around 5:30.
- 6.8.2.10** Announce the end of the CPAP trial and take the memory to download the result
- 6.8.2.11** Download the recorded data and ensure correct patient information.
- 6.8.2.12** Print out the result and give the patient first impression on their result.
- 6.8.2.13** Upload the CPAP report on Al shifa system.

### **6.8.3 CPAP download:**

- 6.8.3.1** This service allows patient with home CPAP machine to visit our CPAP clinic every 3 months to check up on their machine settings and report any arising concerns.
- 6.8.3.2** Patients bring their CPAP memory card to download the past three months' result.



**6.8.3.3** Check on three important parameters (air leakage, AHI, pressure reached).

**6.8.3.4** All patient information documented in excel sheet. To keep updated patient data.

## **7. Responsibility**

### **7.1 Sleep technologist:**

- 7.1.1** Collect, analyze and integrate patient information in order to identify and meet the patient-specific needs (physical/mental limitations, current emotional/physiological status regarding the testing procedure, pertinent medical/social history).
- 7.1.2** Determine final testing parameters/procedures in conjunction with the ordering physician or clinical director and laboratory protocols.
- 7.1.3** Review the patient's history and verify the medical order.
- 7.1.4** Follow sleep center protocols related to the sleep study.
- 7.1.5** When patient arrives, verify identification, collect documents and obtain consent for the study.
- 7.1.6** Explain the procedure and orient the patient for either in center or home sleep apnea testing.
- 7.1.7** Provide age-appropriate patient education.
- 7.1.8** Select appropriate equipment and calibrate for testing to determine proper functioning and make adjustments, if necessary.
- 7.1.9** Apply electrodes and sensors according to accepted published standards.
- 7.1.10** Perform routine positive airway pressure (PAP) interface fitting and desensitization.
- 7.1.11** Prepare the department for receiving the patient
- 7.1.12** Ensure patient's safety.
- 7.1.13** Check pre-PSG checklist.
- 7.1.14** Monitor equipment and other supplies.



**7.1.15** Indent supplies.

**7.1.16** Take overall responsibility for the management of the clinic and care of the patient

**7.1.17** Be responsible to the performance of PSG procedure according to the policy and procedure.

**7.1.18** Maintain complete and appropriate documentation.

**7.1.19** Adhere to the safe management according to the safety guideline.

## **7.2 Sleep Specialist:**

**7.2.1** Provide the pre-polysomnography (PSG) consultation to determine if the client is an appropriate candidate for the test.

**7.2.2** Obtain referral form for PSG test.

**7.2.3** Complete an assessment and decide upon eligibility for test.

**7.2.4** Complete consent form, explain the risks and benefits to clients/relatives in detail and answer all their questions.

**7.2.5** Supervise PSG technician in the session of the client to evaluate client's condition.

**7.2.6** Supervise PSG technician during hooking up the patient with all electrodes.

**7.2.7** Continue to follow and assist the patient after the test to observe any abnormalities. Follow up the patient after the sleep study in the clinic to discuss the result.

## **7.3 Medical Orderly:**

**7.3.1** Assist in transferring the client from and to the wards/Emergency Department with the help of the escort nurse.

**7.3.2** Clean the equipment and get the client ready for the PSG procedure.

**7.3.3** Manage the waiting area and organize the flow of client to the treatment room.

**7.3.4** Assist in preparing the patient for the PSG procedure.



7.3.5 Assist the nursing staff with the direction from the PSG staff.

7.3.6 Maintain the unit equipment clean.

#### 7.4 Biomedical Staff:

7.4.1 Check Polysomnography (PSG) machine every six (6) months for maintenance.

### 8. Document History and Version Control

Document History and Version Control			
Version	Description of Amendment	Author	Review Date
1	Initial Release	Mohammed Al Ruziqi Alya Al Wahabi Asma Al Hajri	March 2022
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Written by	Reviewed by	Approved by	
Mohammed Al Ruziqi Alya Al Wahabi Asma Al Hajri	Dr. Said Al Kaabi	Dr. Bader Al Habsi	

### 9. Related Documents

9.1 Appendix 1. Instructions for Sleep Study.

9.2 Appendix 2. PSG Consent Form.

9.3 Appendix 3. Epworth Sleepiness Scale.

9.4 Appendix 4. PSG Machine Devices.





9.5 Appendix 5. CPAP machine

9.6 Appendix 6. Audit Tool.

## 10. References

<b>Title of book/journal/articles/ Website</b>	<b>Author</b>	<b>Year of Publication</b>	<b>Page</b>
"Sleep Studies".	WebMD.	2012	1
"What Are Sleep Studies?"	National Heart, Lung and Blood Institute,U.S. Department of Health & Human Services.	2012	1
A The AASM Manual for the scoring of Sleep and Associated Events: Rules Terminology and Technical Specifications, Version 2.0. Darien, IL: American Academy of Sleep Medicine.	Berry, Richard et al.	2012	1



## Appendices

### Appendix 1. Instructions for Sleep Study



Sleep Disorders Unit  
Al Monera Hospital

#### مستشفى المصرة وحدة اضطرابات النوم


تعليمات دراسة النوم

الرجاء إتباع التعليمات التالية:

Avoid caffeine-containing beverages throughout the day (eg tea, coffee, soft drinks, chocolates)	امتنع عن تناول المشروبات التي تحتوي على الكافيين طوال اليوم (مثل الشاي، القهوة، المشروبات الغازية، الشوكولاتة)
Refrain from sleeping during the day	امتنع عن النوم خلال النهار
please shower with shampooing and then drying it to facilitate the paste of electrodes.	قبل دراسة النوم الرجاء الاستحمام مع غسل الشعر بالشامبو ثم تجفيفه لتسهيل لصق أجهزة التخطيط
Do not put cream or any kind of oils on your hair, just leave it dry	لا تضع كريم او أي نوع من الزيوت على شعرك، فقط اتركه جافا
Take your medicine and dinner as usual	تناول علاجك وعشاءك كالمعتاد
Bring with you a small bag containing the things you may need during the night you will stay at the lab (such as medicines, toothbrush, toothpaste, towel, comfortable nightwear and a heavy piece of clothing (if the room is cold for you)	جهاز حقيية صغيره تحوي الأشياء التي قد تحتاجها خلال الليلة التي ستقضيها مثل (الأدوية، فرشاة ومعجون الأسنان، منشفة، ملابس نوم مريحة بالإضافة لقطعة ملابس ثقيلة (في حال كان جو الغرفة باردا بالنسبة لك)
Be at the department by 8:00 pm on the day of appointment	الحضور للقسم في تمام الساعة الثامنة مساء ليلة التتويم.
Enter from emergency department, a person from emergency department will call sleep lab to receive you.	الدخول للقسم من مدخل قسم الطوارئ وسيقوم أحد الموظفين بالاتصال بقسم اضطرابات النوم للحضور لاستقبال المريض
You will spend the night in the sleep lab at the sleep disorder unit.	التتويم سيكون في قسم اضطرابات النوم بجنب قسم الأشعة
For inquiries contact 24873284 (8:30 am to 1:30 pm)	للاستفسار ٢٤٨٧٣٢٨٤ من (٨:٣٠ صباحا الى ١:٣٠ مساء)



## Appendix 2. PSG Consent Form

 <p>سلطنة عمان وزارة الصحة SULATANATE OF OMAN MINISTRY OF HEALTH AL MASARA HOSPITAL</p>	<b>Sleep Study CONSENT FORM</b>	<b>PATIENTS STICKER</b>
--	---------------------------------	-------------------------

Address :-----	
Diagnosis :-----	
<p>I ..... have been fully explained by the treating doctor the nature and the purpose of the sleep study . I also understand that my study will be video and audio recorded to document certain sleep problems.</p> <p>I accept full responsibility and do willingly give consent for the conduction of sleep study for this purpose to myself/to my</p> <p>_____ (relationship )</p>	<p>انا ..... اقر اني قد اطلعت بواسطة الطبيب المعالج على طبيعة فحص النوم والهدف منه . ايضا تم ابلاغي بان الفحص سيكون مسجل بالفيديو والصوت لتوثيق اضطرابات نوم معينة.</p> <p>وعليه اقبل تحمل المسؤولية الكاملة ووافق على اجراء فحص النوم لي/ل</p> <p>----- (صلة القرابة)</p>
Signature : -----	التوقيع:-----
Relationship to patient :-----	صلة القرابة :-----
Address:-----	العنوان :-----
Telephone No:-----	رقم التلفون :-----
Witness:-----	الشهود:-----
Date : -----	( Signature and stamp of the Doctor )



### Appendix 3. Epworth Sleepiness Scale

#### EPWORTH SLEEPINESS SCALE

#### مقياس إيبورث لدرجة النعاس أثناء اليوم

HOW LIKELY ARE YOU TO DOZE OFF OR FALL ASLEEP  
IN THE FOLLOWING SITUATIONS, IN CONTRAST TO FEELING JUST TIRED?

ماهي احتمالية ان يثقل النوم، أو أن لا تستطيع/ تستطيعين مقاومة نعاسك، في المواقف التالية، الرجاء ملاحظة أن هذا يختلف عن مجرد الشعور بالتعب

*This refers to your usual way of life in recent times. Even if you have not 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:*

المقصود هنا هو ما يحصل في حياتك الطبيعية مؤخراً. في حال أنك لم تقم/تقومين بعمل بعض هذه الأشياء، حاول/حاولي تخيل كيف يمكن لها أن تؤثر عليك لو قمت بها

استخدم/استخدمي المقياس التالي، لاختيار الرقم الأنسب لكل حالة

0 = would **never** doze

2 = **moderate** chance of dozing

1 = **slight** chance of dozing

3 = **high** chance of dozing

0 = من المستحيل أن نعس  
1 = احتمالية بسيطة لأن نعس  
2 = احتمالية متوسطة لأن نعس  
3 = احتمالية عالية لأن نعس

Situation الموقف	Chance of Dozing احتمالية النعاس
Sitting and reading الجلوس والقراءة	0 1 2 3
Watching TV مشاهدة التلفاز	0 1 2 3
Sitting, inactive in a public place (e.g. theatre or a meeting) (حين الجلوس، بلا نشاط في مكان عام (مثال: في مسرح، أو في اجتماع)	0 1 2 3
As a passenger in a car for an hour without a break حينما تكون راكبا في سيارة (أنت قائد السيارة)، لمدة ساعة بدون استراحة	0 1 2 3
Lying down to rest in the afternoon when circumstances permit عند الاستلقاء أو التمدد للاستراحة بعد الظهر، حينما تسمح الظروف	0 1 2 3
Sitting and talking to someone حينما تتحدث مع أحد، وأنت في وضع الجلوس	0 1 2 3
Sitting quietly after a lunch without alcohol (حينما تجلس بهدوء بعد الغذاء (غذاء لا يحتوي على الكحول)	0 1 2 3
In a car, while stopped for a few minutes in the traffic حينما تقود السيارة، وتوقف لمدة دقائق، في ازدحام مروري	0 1 2 3



هل تعاني من الشخير؟  
هل تشعر بالتعب أو الارهاق أو النعاس أثناء النهار؟  
هل لاحظ أحد توقف تنفسك أثناء نومك؟  
هل تعاني من ارتفاع ضغط الدم؟

لا نعم  
لا نعم  
لا نعم  
لا نعم

الرجاء حساب عدد إجاباتك بنعم ووضع الرقم في هذا المربع

**B**  
دليل كتلة الجسم  
>35

**A**  
العمر  
سنة > 50

**N**  
قياس الرقبة  
>40cm >15.7"

**G**  
الجنس  
ذكر

4'10"	5'0"	5'2"	5'4"	5'6"	5'8"	5'10"	6'0"	6'2"	6'4"		إذا كان الطول بالقدم والبوصة
167	179	191	204	216	230	250	258	272	287	<	و الوزن بالباوند
147	152	158	163	168	173	178	183	188	193		إذا كان الطول بالمستميتر
75	81	86	92	97	104	113	116	122	129	<	و الوزن بالكيلوغرام

فإن دليل كتلة الجسم لديك يكون < 35





### Appendix 4. PSG Machine Devices



Figure 1 Respiratory inductance peltisomnography



Figure 2 Pressure transducer



Figure 3 Thermal sensor



Figure 4 Nasal cannula



Figure 5 chest and abdominal belt



Figure 6 PSG machine head box



Figure 7 96" Gold cup electrodes



Figure 8 Pulse oximetry

### Appendix 5. CPAP machine



Figure 8 CPAP machine



Figure 9 Full Face mask



**Appendix 6. Audit Tool**

**Department:** \_\_\_\_\_

**Date:** \_\_\_\_\_

S.N.	Audit Process	Standard / Criteria	Yes	Partial	No	N/A	Comment
		<b>ASSESSMENT OF PATIENTS</b>					
1.	Observation	Is the Sleep specialist performing full assessment of referred patients to the sleep clinic?					
2.	Document review	The assessment including the following: <ul style="list-style-type: none"> <li>● Detailed history</li> <li>● Physical examination</li> <li>● Sleep questionnaires</li> <li>● Blood investigations</li> <li>● Sleep study request if needed</li> </ul>					
3.	Observation Interview	Is the Sleep specialist appropriately explaining the procedure of the sleep study to the patient and family members prior to the procedure?					
4.	Interview Document review	Is the Sleep specialist obtaining the signature for Sleep Study (PSG) consent from close patient's relatives or the patient himself if he can sign the consent?					
		<b>PREPARATION FOR THE SLEEP STUDY</b>					
5.	Observation Interview	Is the sleep technician receiving the patient and explaining the study procedure?					
6.	Interview Document	Is the sleep technician ensuring that the consent form and the pre-study questionnaire are completed by the patient?					





	review						
7.	Observation Interview	Is the sleep technician appropriately hooking the patient up with all electrodes (EEG, EOG, EMG, ECG, oximetry, thermal and pressure sensors, thoracic and abdominal belts), check the impedance and do the calibration before starting the recording?					
8.	Observation Interview	Is the sleep technician ensuring that the patient is comfortable and has no complaints prior to the start of the recording?					
9.	Observation Interview	Are complications reported promptly to the doctor?					
10.	Observation Interview	Is the patient instructed and advised that he/she can immediately resume normal daily activities after Sleep Study Test including driving, working, and other normal routines?					
11.	Observation Document review	Is the post sleep study checklist appropriately recorded?					
12.	Observation Interview	Is the patient informed that the sleep specialist will communicate the result of the sleep with him/her in a follow up appointment?					



### Appendix 7. Document Request Form

Document Request Form			
<b>Section A: Completed by Document Requester</b>			
1. Requester Details			
Name	Mohammed Al Ruziqi Alya Al Wahabi Asma Al Hajri	Date of Request	April 2022
Institute	Al Masarra Hospital	Mobile	-
Department	Sleep Disorder Unit	Email	-
The Purpose of Request			
<input type="checkbox"/> Develop New Document	<input checked="" type="checkbox"/> Modification of Document	<input type="checkbox"/> Cancelling of Document	
1. Document Information			
Document Title	Policy and Procedure of Sleep Disorder Unit		
Document Code	AMRH/SDU/P&P/001/Vers.02		
<b>Section B: Completed by Document Controller</b>			
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Cancelled	<input type="checkbox"/> Forward To:.....	
Comment and Recommendation:			
Name	Ruvilee Ramel-Bueno	Date	April 2022
Signature	<i>R. Bueno</i>	Stamp	





**Appendix 8. Document Validation Checklist**

Document Validation Checklist					
Document Title: Policy and Procedure of Sleep Disorder Unit			Document Code: AMRH/SDU/P&P/001/Vers.02		
No	Criteria	Meets the Criteria			Comments
		Yes	No	N/A	
<b>1.</b>	<b>Approved format used</b>				
1.1	Clear title – Clear Applicability	✓			
1.2	Index number stated	✓			
1.3	Header/ Footer complete	✓			
1.4	Accurate page numbering	✓			
1.5	Involved departments contributed	✓			
1.6	Involved personnel signature /approval	✓			
1.7	Clear Stamp	✓			
<b>2.</b>	<b>Document Content</b>				
2.1	Clear purpose and scope	✓			
2.2	Clear definitions	✓			
2.3	Clear policy statements (if any)	✓			
<b>3.</b>	<b>Well defined procedures and steps</b>				
3.1	Procedures in orderly manner	✓			
3.2	Procedure define personnel to carry out step	✓			
3.3	Procedures define the use of relevant forms	✓			
3.4	Procedures to define flowchart		✓		CAN BE ADDED IN NEXT VERSION
3.5	Responsibilities are clearly defined	✓			
3.6	Necessary forms and equipment are listed	✓			
3.7	Forms are numbered	✓			
3.8	References are clearly stated	✓			
<b>4.</b>	<b>General Criteria</b>				
4.1	Policy is adherent to MOH rules and regulations	✓			
4.2	Policy within hospital/department scope	✓			
4.3	Relevant policies are reviewed	✓			
4.4	Items numbering is well outlined	✓			
4.5	Used of approved font type and size	✓			
4.6	Language is clear, understood and well structured	✓			
Recommendations..... ✓ For implementation ..... More revision ..... To be cancelled.....					
Reviewed by: <u>Kunooz Al Balushi</u> Reviewed by: <u>Ruvilee Ramel-Bueno</u>					

