



ACCREDITATION OF SLEEP DISORDERS SERVICES

Including Standards for Paediatric Laboratories

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CONTENTS

Introduction

1. Preamble	3
2. Definition	3
3. Purpose of Accreditation	3

Administration

1. Coordinator	4
2. Process	4
3. Granting Accreditation	6
4. Re-Accreditation of an Accredited Service	7
5. Confidentiality of Assessment Procedures	8

Standards for Accreditation

1. Identifying Information	9
2. Historical Overview	9
3. Organization and Administration	9
4. Staffing and Direction	10
5. Policies and Procedures	12
6. Staff Development, Teaching, Research	14
7. Facilities and Equipment	15
8. Provision for Emergencies	16
9. Quality Assurance Programme	16
10. Meetings	16
11. Policies and Procedures Manual	16
12. References	17

Application Form

1. Identifying Information	18
2. Historical Overview	18
3. Organization and Administration	18
4. Staffing and Direction	19
5. Policies and Procedures	20
6. Staff Development, Teaching, Research	21
7. Facilities and Equipment	22
8. Provision for Emergencies	22
9. Quality Assurance	22
10. Meetings	23
11. Policies and Procedures Manual	23
12. Reference	23

Accreditation Forms	<i>(A, B & C to be attached to the front of application)</i>	24-26
Re-Accreditation Forms	<i>(D, E, F & G to be attached to the front of application)</i>	27-30



ACCREDITATION OF SLEEP DISORDERS SERVICES

INTRODUCTION

1. PREAMBLE

Accreditation of sleep disorders services is, at present, voluntary. The Thoracic Society of Australia and New Zealand (TSANZ) and the Australasian Sleep Association (ASA) established an accreditation process to foster excellence in the approach to management of sleep disorders. The Australasian Sleep Association took over governance of this process from July 1 2009. The process seeks to define uniform minimum standards for services in Australia and New Zealand. *It is intended that, while rigorous, the process be "user friendly". It will be revised periodically and constructive suggestions for improvement are welcomed by the ASA Clinical Committee.*

The process assesses the service's organization and administration, staffing and direction, policies and procedures, staff development and education, facilities and equipment, and quality assurance programmes. Its general approach is influenced by programmes established by the Australian Council of Healthcare Standards (ACHS) and the American Sleep Disorders Association. It is hoped that consistency with ACHS guidelines will decrease the amount of work necessary to prepare the application for those laboratories that have already been involved in ACHS accreditation procedures (e.g. hospital accreditation) and help prepare the way for ACHS accreditation where this is anticipated.

The first phase of the process involves answering a detailed questionnaire which has been designed to assess the laboratory's readiness for accreditation. Self Assessment is a key feature of this phase of the process. Ability to satisfactorily respond to the questionnaire, guided by the *Standards for Accreditation* detailed below, should indicate to the applicant service its likely ability to comply with the requirements for accreditation. If satisfied that its responses are adequate the service submits a completed application. If the ASA Assessment Panel is satisfied that the application meets the required standard a site visit follows. These procedures are detailed under *Administration* below.

Laboratories that intend to study children of 12 years of age or younger must be separately accredited for that purpose. Children over 12 years without complex medical conditions or nursing requirements can be studied in adult accredited laboratories provided adequate resuscitation facilities including appropriately trained staff are available.

2. DEFINITION

Accreditation is the process whereby the professional standards and competence of a Sleep Disorders Service is formally recognised by the ASA.

3. PURPOSE

- a) To encourage appropriate standards of medical and technical practice, to ensure that a service is effective.
- b) To grant recognition to services which achieve these standards.
- c) To foster the standards of service by consultation and advice rather than by regulation, consistent with the voluntary nature of Accreditation.



ADMINISTRATION

1. Coordinator

- 1.1 The process of Accreditation will be administered by the ASA
- 1.2 The Clinical Committee of the ASA will oversee the process through an ASA Accreditation Subcommittee. The Chair of this Committee will have expertise in Clinical Respiratory Physiology and Sleep Disorders and be a member of the Clinical Committee
- 1.3 The Chairperson of the Accreditation Subcommittee of the ASA will be responsible for the process of Accreditation, appointment of an Assessment Panel, supervision of each Accreditation process including production of a report which is clear and reasonable in its comments and recommendations. There is a Deputy Chairman of this process in case of inability to perform these tasks or to adjudicate in case of disputes

2. Process

- 2.1 Applications for Accreditation will be received by the Executive Officer of the ASA.
- 2.2 The Executive Officer will respond to all applications by providing applicant laboratories with Accreditation guidelines and the application forms which seek information regarding the laboratory and investigations/measurements that it performs ("the accreditation package"). These forms include questions designed to indicate the laboratory's readiness for accreditation. Self assessment is a key feature of this phase of the process. Once satisfied it can respond to the questions adequately the laboratory completes the forms and returns them to the Executive Director, along with an "initial assessment" fee (\$AUS 1,500 incl. GST) which covers the cost of initial assessment of submitted material. Copies of all correspondence will be sent to the Accreditation Coordinator. A further fee (the "site visit" fee of \$3,500 incl GST) will be charged if the application is found to be acceptable and a site visit is arranged (see below). These fees, which are set to recover costs, will be determined by the ASA and revised from time to time. The current fee schedule is obtainable from the ASA office.
- 2.3 On receipt of the "initial assessment" fee and application forms an Assessment Panel will be appointed. The assessors will be recognized experts in the diagnosis and management of sleep disorders &/or the technical aspects of their assessment. The assessment panel will have three members, at least one of whom (ideally the Chairperson) will be from a city other than the one in which the service undergoing accreditation is located. The Chairperson will be a full member of the ASA and will be appointed by the Chairperson of the Clinical Committee of the ASA. The other two members of the panel will be nominees of the ASA.. One member will be a sleep technologist.

The assessment panel for paediatric laboratories should include a paediatrician trained in respiratory/sleep medicine and a paediatric sleep technologist.

2.4 The Chairperson of the Assessment Panel will cause the documentation supplied by the applicant laboratory to be reviewed by the Panel Members and seek supplementary information where necessary. The result of the initial assessment will be given to the applicant within eight (8) weeks of receipt of the application. There will be active reminders sent by the ASA Secretariat to ensure this process proceeds in a timely fashion. If the application is unacceptable the reasons for the decision will be provided, and the laboratory given an opportunity to respond, and/or make changes. If the application is acceptable a site visit will be arranged at a mutually convenient time (within two to three months of notice of approval). The process must remain dynamic and responses from Accreditation panels or laboratories be received in a timely fashion. Laboratories who don't respond to panel report within six months will be informed that accreditation process will recommence from scratch unless there is a compelling reason for the delay. It is intended that the entire process from application received by ASA until Accreditation process is complete and signed off should take no more than 12 months

2.5 **The site visit is a critical step in the accreditation process.** At the site visit the veracity of answers provided in the application is examined. Specific questions raised by the application will be addressed and an inspection of the facilities will be undertaken. The site visit will include

- a) Inspection of patient set-up procedures and the conduct of a sleep study.
- b) An assessment of the interpretative and reporting skills of the medical director and the reporting physicians .
- c) An assessment of the practical and interpretive skills of the technicians in attendance on the night of the site visit, and of the skills of the technical staff responsible for analysis of records.

Polysomnographic records from the six (6) months prior to the site visit should be available for inspection. The panel will randomly choose up to 10 records for inspection.

A requirement for adult laboratories is that on the night of the site visit at least two (2) patients be studied in the laboratory one of whom should be scheduled for a CPAP titration study. Because of the relatively small number of patients treated with CPAP or non-invasive ventilation, a discussion of the process of titration plus a demonstration of familiarity with CPAP equipment by the staff can substitute for observation of CPAP titration in paediatric laboratories

The Chairperson of the Assessment Panel is responsible for the review process, including production of a report and recommendations which will be forwarded to the Chairperson of the ASA Accreditation Subcommittee for referral to the ASA Clinical Committee.



- 2.6 The assessment process has 2 purposes:
- a) Advisory - to advise on ways in which perceived deficiencies of a Service can be corrected.
 - b) Evaluation - to establish whether a Service is competent and effective.

3. Granting Accreditation

- 3.1 To expedite the process an Accreditation Advisory Panel is empowered to act on behalf of the ASA and grant Accreditation according to the recommendations of the Assessment Panel. The Advisory Panel will comprise the Chairperson of the Clinical Committee of the ASA and/or, Chairperson of the Accreditation Subcommittee and the Assessment Panel which assessed the particular laboratory.
- 3.2 The Assessment Panel may recommend that accreditation be awarded unreservedly or subsequent to rectification of identified deficiencies. In the latter case accreditation will be recommended on receipt of evidence that all suggested changes have been implemented. The application will lapse after 12 months from the date of issue of the recommendations in the absence of such evidence. This provision will only apply where the panel considers that the changes are relatively minor and can be implemented and verified without need for a further site visit. *The process seeks "substantial compliance" with the standards. It is recognised that local conditions may preclude absolute compliance with every standard.*
- The service will be accredited to study adults, children or both adults and children, according to the type of application and compliance with the relevant standards.
- 3.3 Where, in the opinion of a particular Accreditation Assessment Panel, a report is potentially contentious or there is disagreement over its recommendations, the report will be referred to the Accreditation subcommittee of the ASA for consideration and decision.
- 3.4 A recommendation against Accreditation will normally be referred to the President and Executive of the ASA for confirmation before the report is issued.
- 3.5 A Certificate of Accreditation will be issued on behalf of the ASA once the recommendation for accreditation has been made by the Accreditation Advisory Panel. The Certificate will be signed by the Chairperson of the Clinical Committee of the ASA and by the President of the ASA. Accreditation is granted for a period of five (5) years.
- 3.6 Laboratories that fail Accreditation will be advised of the reasons for the decision. If the laboratory wishes to challenge the decision it must do so in writing to the Chairperson of the Clinical Committee within 14 days of receiving the decision, stating the reasons for appeal. The appeal will then be considered by a meeting of the Accreditation Subcommittee of the ASA to be convened within six (6) weeks of receipt of the appeal. A recommendation against accreditation following appeal will be referred to the President and Executive of the ASA for confirmation before the report is issued. The Chairperson of the Clinical Committee will advise the laboratory of the decision on the appeal and the reasons for the decision. A laboratory that fails accreditation may reapply at any time that it believes its standards have met those required for accreditation.
- 3.7 Each Accreditation report will be seen in full by the Chairperson of the Clinical Committee of the ASA.
- 3.8 The Chairperson of the Clinical Committee will provide the Executive of the ASA with an Annual Report.

4. Re-Accreditation of an Accredited Service



- 4.1 No less than 12 months before the end of the five (5) year accreditation period the Executive Officer of the ASA will provide to the Medical Director of the Service:
 - a) a copy of the previous Assessment Panel report,
 - b) the current accreditation guidelines and application for initial accreditation,
 - c) a request for re-accreditation.
- 4.2 The request for re-accreditation will elicit information regarding the laboratory and the investigations/measurements it performs. Additionally, the Medical Director will be asked to detail changes to the Service since the previous accreditation. Emphasis will be placed on the implementation of recommendations suggested by the previous Assessment Panel report.
- 4.3 The Service completes the request for re-accreditation and returns *only these forms* to the Executive Officer, along with the site visit fee current at the time of application. The Service must also complete the application for initial accreditation and update laboratory manuals to reflect current practice. The application for initial accreditation and laboratory manuals are to be retained by the Service for review at any subsequent site visit. Copies of all correspondence will be sent to the Chairperson of the Accreditation subcommittee
- 4.4 On receipt of the request for re-accreditation the Chairperson of the Accreditation subcommittee will appoint an Assessment Panel and its Chairperson as described in paragraph 2.3. Where practicable at least one member of the re-accreditation Assessment Panel will be from the previous assessment panel.
- 4.5 The Chairperson of the Assessment Panel will arrange for the request for re-accreditation and the previous Assessment Panel report to be reviewed by the Panel Members. The result of this review will be provided to the Service within six (6) weeks of receipt of the request. If the request for re-accreditation is unacceptable then reasons for the decision will be provided and the site visit fee refunded. If the request for re-accreditation demonstrates that the Service has adequately addressed the recommendations contained in the previous Assessment Panel report a site visit will be arranged. Normally, the site visit will occur at least three (3) months before the end of the current five (5) year accreditation period. At the site visit attention will focus on problems or deficiencies identified during the previous accreditation. Compliance with any new or revised standards introduced since the previous accreditation will also be examined as may any aspect of the Service's operations. The Chairperson of the Assessment Panel is responsible for the review process including producing a report and recommendations that will be forwarded to the Chairperson of the Accreditation subcommittee.
- 4.6 The process of granting re-accreditation will be as described in Section 3 (Granting Accreditation).



5. Confidentiality of Assessment Procedures

All information provided by a Service in relation to preliminary enquiries or to an application for Accreditation and all information obtained in the course of, or in connection with, an assessment of the Service is considered by the ASA to be completely confidential. Such information is received and studied only by members of the AAC, the AAC assessors and the ASA Executives, and these persons are all made aware of the confidential nature of this information. The ASA requires that all documents associated with Accreditation of a Service be maintained in strict confidence. This requirement imposes particular obligations on assessors. An assessor must not disclose any information gained during an assessment to any person other than a member of the AAC. Under normal circumstances there is little need for an assessor to retain a copy of the briefing notes provided for an assessment or a copy of his or her report. It may be prudent for an assessor to keep a copy of the report temporarily to obviate loss in the mail, but this copy should be destroyed once acknowledgment of receipt is received by the AAC. If an assessor retains copies of briefing notes or reports, they must be kept in a secure place. They are not to be incorporated into the general records system of the assessors' employer in a manner which would allow unauthorised access by others.



STANDARDS FOR ACCREDITATION

This document outlines the minimum standards required for accreditation of a sleep disorders service. It must be read in conjunction with the questionnaire in the application for accreditation. It should be referred to when completing the application to ensure that the laboratory is likely to meet the requirements before submission.

1. IDENTIFYING INFORMATION

That information identifying the applicant service be specified at the front of the application (Form A).

2. HISTORICAL OVERVIEW

That a brief overview of the history of the development of the service be provided with the application.

3. ORGANIZATION AND ADMINISTRATION

That the service is organized and administered to meet its objectives and the needs of the population it serves.

3.1 Goals and Objectives

That the service's goals and objectives are specified and that they reflect its role and responsibilities.

3.2 Relationship to Host Institution, Other Laboratories

That the relationship(s) of the service to its host institution and to related laboratories are appropriate to the discharge of its responsibilities. These relationships must be specified and clearly defined. There should be evidence of commitment by the host institution to its support.

3.3 Relationships with Other Specialities

Services are encouraged to develop a broad range of skills in the management of sleep disorders. Where this is limited (eg to sleep breathing disorders) the service should have established appropriate relationships and communication with other specialities with a common interest in sleep disorders to ensure that clinical problems are directed to clinicians with relevant expertise and to facilitate advancement in clinical standards. This applies, for example, to the management of a patient referred with excessive somnolence to a "respiratory" sleep disorders service in whom sleep disordered breathing is subsequently excluded as a cause.

3.4 Referrals

That the sources and types of referrals to the service are relevant to the services provided. Each patient should have had an appropriate clinical evaluation prior to a diagnostic study. While the service can perform tests requested by other clinicians without direct consultation with the patient, one of the reporting consultant medical staff of the service must obtain and review sufficient information prior to the test to ensure that it is appropriate to the patient's condition. Polysomnography should only be performed for those disorders of sleep for which it is of established diagnostic value. In the case of children, each patient should be evaluated by a paediatrician with expertise in sleep and/or respiratory medicine prior to a diagnostic study.



3.5 *Workload*

That the service's resources (staffing, equipment, facilities and finances) are sufficient to meet its workload without compromising the minimum standards set elsewhere in this document and in the TSANZ guidelines^{1,2}.

3.6 *Demand*

That the service attempts to adequately cope with the demand for its services. Where demand exceeds capacity, the service should have a system for prioritizing cases perceived to be urgent. Urgent cases should be assessed and studied in less than two (2) weeks.

3.7 *Budget*

That the service's financial plan and budget covers its operational costs or that there is a commitment by the host institution or company to underwrite budget deficits.

4. **STAFFING AND DIRECTION**

The service is directed and staffed to achieve its objectives.

4.1 *Staff Structure and Direction*

That the service has a medical director responsible for overall clinical standards and development of policies governing the service. These should be ratified by other committees in the host institution as necessary.

That there are clear, documented lines of accountability/ responsibility between medical director and all staff members. These must represent the actual manner in which the service is organised, be regularly reviewed and readily available to all staff.

That a single designated consultant is responsible for each patient's investigation and advice regarding management.

4.2 *Staff Qualifications and Experience*

That staff members are appropriately qualified for their tasks by education, training, and/or experience, and that their roles and responsibilities are specified by job description. The medical director should have specific, detailed training in sleep disorders and meet the criteria set by TSANZ guidelines¹. Consistent with the criterion set by TSANZ guidelines for advanced trainees² wishing to practice predominantly in sleep disorders medicine, the medical director is expected to have the equivalent of two years full-time training in sleep disorders. Other reporting consultant medical staff are expected to have completed the equivalent of at least one year full-time training in sleep disorders medicine, consistent with the guidelines for trainees wishing to make sleep disorders medicine an important area of their practice.

There is currently no recognized Australian tertiary training programme in sleep disorders evaluation for scientific/technical staff, hence individuals must receive "on the job" training in an established service. Basic qualifications will depend on the local requirements for classification as either scientific or technical staff (eg a tertiary degree). Scientific/technological staff are responsible for accurate performance of sleep studies and other tests, equipment maintenance, evaluation and development of new equipment and techniques, and patient safety during performance of tests. A minimum of two (2) years experience in a sleep disorders service and a tertiary degree in biological or physical sciences, or equivalent

qualification, is desirable for a scientist/technologist to be able to function in a supervisory capacity under medical direction.

Paediatric laboratories must have the facility to care for sick children or children with complex conditions. For most laboratories this will require nurses with paediatric experience trained in polysomnography with additional paediatric nursing support as necessary. All staff must be certified as competent in paediatric cardiopulmonary resuscitation.

4.3 *Staff Numbers*

That sufficient medical, technical and clerical staff are employed to adequately meet service needs. This will depend on the workload, organisation, and type of equipment and circumstances of the individual service. A four-bed sleep laboratory should employ approximately 2.0 full time equivalent medical staff. For sleep studies rostering must allow for the following conditions: a technologist must be in attendance throughout the study (see below for further explanation/ qualification); the study must be of at least eight (8) hours duration including at least one (1) hour for the preparation of each patient prior to study and a further hour for completion of duties following termination of the study; in general, a ratio of no less than one (1) technologist to three (3) patients should be allowed for overnight; and at least two (2) hours should be allowed for analysis of each study. A higher staff/patient ratio is required when studies of extra complexity are undertaken, for example non-invasive or invasive ventilation trials, or titration of CPAP in patients with respiratory failure. Rosters must also allow for equipment calibration and maintenance, preparation and processing of reports, and in service education/professional development. Rosters must meet relevant award requirements for meal breaks, shift work, public holidays and leave.

In the case of paediatric laboratories additional nursing requirements necessitate a higher staff-patient ratio: no less than one (1) nurse or technologist to two (2) patients. Rosters should be flexible to allow study commencement at or close to the child's normal bedtime.

Explanatory notes:

“A technologist must be in attendance throughout the study” . Short absences from the facility (eg toilet breaks taken away from the laboratory) during a routine diagnostic or CPAP titration study may be covered by staff who have limited technical expertise in sleep studies but nevertheless are able to attend to the needs of the patient and are trained in emergency procedures. More prolonged absences from the facility (eg meal breaks) in such cases, or short absences during complex studies (eg nasal IPPV trials), should be covered by another sleep technologist.

In a free standing laboratory (ie a laboratory located away from a hospital that has emergency back up) two(2) staff trained in emergency procedures should be in attendance for the duration of the study to ensure safety and security of patients and staff.

In the case of paediatric laboratories a team trained in paediatric cardiopulmonary resuscitation must be available on site for the duration of the study.

4.4 *Staff Appraisal*

That a staff appraisal system is in operation, that a written report is produced, that the staff member involved is aware of the contents of the report and that a plan to address deficiencies is defined.

4.5 *Training of Staff in Cardiopulmonary Resuscitation*

That all medical, technological and nursing staff are trained in cardiopulmonary resuscitation, and that a basic level of competence is maintained and evaluated regularly. In the case of paediatric laboratories, special training in paediatric cardiopulmonary resuscitation is required.

5. **POLICIES AND PROCEDURES**

That the service has documented policies and procedures that reflect current knowledge and practice in the conduct of a sleep disorders service and, where relevant, comply with statutory requirements.

5.1 *Patient Referral, Handling, Documentation, Follow-up*

That procedures exist for prompt, efficient handling of patient referrals, initial consultations and follow-up, documentation, communication with the referring doctor, and protection of patient confidentiality, and that these are consistent with good professional practice. It is expected that patients be clinically evaluated prior to sleep study. A patient record should be maintained, which is well ordered and contains all laboratory reports, records of consultations and procedures, copies of correspondence, working and/or final diagnoses and, where appropriate, clearly defined treatment/follow-up recommendations. Recommended treatments must be consistent with current knowledge and practice. Correspondence should be completed promptly (within five (5) working days) following each patient contact. Special care should be taken with transmission of information by facsimile. Use of the fax for this purpose should be minimised and any information transmitted by these means should be accompanied by a suitably worded warning regarding the confidential nature of the enclosed information. Patient records should be kept for a period of time that complies with legislative requirements and is consistent with good professional practice.

5.2 *Sleep Studies: Types, Methods of Measurement*

That methods for the conduct of sleep studies, are consistent with recognized standards, including the relevant TSANZ guidelines^{1,2} and, where applicable, paediatric guidelines³. Types of sleep studies performed and the parameters measured must be specified. Sleep studies must allow full disclosure of the raw signals, which must be adequately labelled and calibrated. Standard physical calibrations should be used wherever possible. Where electrical calibration is used it must be checked against physical calibration regularly. Calibrations should be done prior to each study and whenever accuracy is in doubt. Each calibration procedure should be repeated at least twice to ensure reproducibility. Calibration results should be clearly labelled. The equipment must conform to specifications (linearity, sensitivity, frequency response, signal to noise ratio, stability) that ensure collection of meaningful, interpretable results. Overnight visual monitoring of patients (by infra-red or low light video) is a desirable feature.

5.3 *Sleep Studies: Analysis and Interpretation*

That methods for the analysis of sleep studies are consistent with recognized standards, including the relevant TSANZ guidelines¹. Scoring and interpretation of the data should conform to American Thoracic Society⁴ and American Sleep Disorders Association^{5,6} recommendations. In the case of paediatric laboratories, scoring and interpretation should conform with ATS and ASDA recommendations for the analysis of polysomnographic studies in children and be age appropriate^{3,7}. While analysis of the sleep study may be performed by a well-trained technologist, interpretation is the responsibility of the patient's clinician. Computerized analysis systems are considered aids to the process: final analysis must be performed manually and involve reference to the raw data, as must interpretation by the responsible clinician. The report must clearly identify the Service, and the Patient and the date of the study. It should be consistent with TSANZ guidelines¹, containing the study results along with an interpretive summary statement signed by the interpreting clinician. The laboratory should have established methods for assessing the quality of measurements and analysis including periodic assessment of inter-observer variability in analysis of sleep studies (see also 9. Quality Assurance).

5.4 *Other Procedures*

That the methods for multiple sleep latency testing (MSLT) and related studies are consistent with established standards⁸, including the relevant TSANZ guidelines¹. It is expected that sleep services be able to perform MSLTs, or have an affiliation with a service with that capacity, to enable the further investigation and diagnostic refinement of the sleepy patient eg. to confirm or exclude the presence of pathological daytime sleepiness in difficult cases, or to assist in the diagnosis of narcolepsy.

5.5 *Nasal Continuous Positive Airway Pressure (nCPAP) and Other Respiratory Appliances*

That procedures for the prescription and supply of CPAP therapy and its follow-up are consistent with good professional practice. This requires a diagnostic study prior to prescription of CPAP and a CPAP titration study. Early follow-up after prescription (within one month) is required to determine whether problems affecting compliance exist.

5.6 *Safety*

That the laboratory meets standards of laboratory safety consistent with State occupational health and safety regulations, including infection control, handling of gas cylinders, fire and electrical safety and general safety procedures. Electrical supply to the monitoring room and the bedrooms of the laboratory should be at minimum body protected standard (class B (AS specification)). Monitoring equipment should be supported by a certificate of type testing to AS 3200.1 (1990) or AS 3200 (1986) or equivalent.

5.7 *Laboratory Manual*

That each type of test performed by the laboratory be described in detail in a laboratory manual. Each test should be separately described with the following detail included or cross-referenced from other sources, preferably under appropriate subheadings:

The purpose of the test.

- a) A description of the equipment used, with special reference to its specifications and their applicability to the measurement.
- b) The calibration procedure.
- c) The procedure for performance of the test.
- d) Troubleshooting: problems which may be encountered in the performance of each test and their appropriate remedies.
- e) Specific quality assurance: details of quality control steps required for the method.
- f) Cleaning and maintenance
- g) Infection control and other safety requirements.
- h) Records and Reports (with samples, including interpretation of the results).
- i) Normal values and prediction equations used to interpret the results.
- j) References. If the test is based on unpublished work, relevant details of this work should be included.
- k) The date of issue of and alterations to the method.
- l) The signature of the senior laboratory officer - this indicates that the method

Appropriate cross-referencing (eg to manufacturer's manual) under each subheading could minimise redundancy while ensuring that all issues relevant to each test have been addressed.

Ideally this laboratory manual should be part of a service Policy and Procedures Manual (see 11 below).

6. STAFF DEVELOPMENT, TEACHING, RESEARCH

That staff have access to education programmes which maintain and develop their knowledge and skills.

6.1 *Staff Development*

That programmes exist to orientate new staff, and for continuing education of existing staff taking into account results of performance appraisal (see 4.4 above), service objectives and quality assurance activities (see 9 below).

That opportunities exist for senior staff to attend relevant professional meetings (state, national, international).

6.2 *Teaching*

That where the service operates in a teaching hospital environment it offers education programmes for undergraduates and postgraduates.

6.3 *Research*

That where the service operates in a teaching hospital environment it has a commitment to research. This can be demonstrated by reference to current projects, recent presentations (abstracts) and publications.



7. FACILITIES AND EQUIPMENT

That adequate facilities and equipment exist for the service to meet its objectives and comply with statutory requirements.

7.1 Consulting Rooms

- ❖ That the reception area, waiting room, offices and consultation rooms conform to generally accepted standards for medical suites in size, appearance, privacy, lighting, furniture and provision of other equipment.

7.2 Sleep Laboratory

- ❖ That the sleep laboratory has comfortably furnished bedrooms conducive to sleep and of sufficient size (minimum approximately 2.5 x 3.5 metres) to allow access in an emergency, with adequate lighting, sound-proofing, exclusion of light during the study, air conditioning, emergency oxygen and suction, resuscitation equipment, and security.
- ❖ That the rooms conform to local regulations with respect to entrances, exits and fire precautions.
- ❖ That there is a separate bedroom for each patient with comfortable bedding, wardrobe, chair and bedside lamp. In the case of paediatric laboratories the bedroom must be child-safe and age-appropriate, with age-appropriate bedding for each patient. Facilities for a parent to sleep in the child's bedroom should be available.
- ❖ That there are conveniently located and adequate toilet and shower facilities.
- ❖ That the monitoring room is located in close proximity to the bedrooms and that a patient call system is available from bedrooms to monitoring room.
- ❖ That office space exists with adequate space, furniture, lighting and privacy for analysis of sleep studies.
- ❖ That the facilities are regularly cleaned.

7.3 Equipment

- ❖ That the equipment used for the conduct of respiratory sleep studies and related tests is suitable for the purpose (see 5.2, 5.3, 5.4 above) and is regularly maintained and safety checked. In paediatric laboratories the sensors and other equipment interfaced with the patient should be appropriately sized and a range of sizes should be available for each study.

7.4 Identification

- ❖ That the service is identified by signage, telephone and stationery so that it can be easily found and/or accessed.

8. PROVISION FOR EMERGENCIES

8.1 *Medical Emergencies*

- ❖ That adequate provision is made for medical emergencies. These should include an on-call roster for medical staff, CPR training for all staff, availability of resuscitation equipment, oxygen and suction, and easy access to the laboratory and the patient.
- ❖ In the case of paediatric laboratories and a team trained in paediatric cardiopulmonary resuscitation must be available on-site for the duration of the study. All staff must be trained in paediatric cardiopulmonary resuscitation. A complete range of age-appropriate resuscitation equipment must be available in the laboratory for the duration of the studies and oxygen and suction must be available at the bedside.

8.2 *Non-Medical Emergencies*

- ❖ That provisions complying with relevant site and statutory requirements are made for non-medical emergencies (Fire and Safety).

9. QUALITY ASSURANCE PROGRAMME

That procedures exist to evaluate the quality of the service provided, correct identified problems, and advance the service's standards.

The process must include the following elements

Monitoring: regular collection of data relevant to important aspects of service delivery

Assessment: periodic assessment of the data to identify problems or opportunities to improve

Action: action to address such problems or opportunities

Evaluation: evaluation of the effects of such action

Feedback: regular communication to the staff of the results of these activities.

The process must be documented and patient confidentiality must be protected.

10. MEETINGS

That regular scheduled meetings occur, at no greater than monthly intervals, for the purposes of laboratory function and planning, quality assurance and clinical review, in-service education, and, where applicable, research. There should be records of these meetings. Action statements are encouraged where applicable.

11. POLICIES AND PROCEDURES MANUAL

That the department maintains a policies and procedures manual which specifies its organisation and administration, staffing and direction, policies and procedures (see 5.7, Laboratory Manual), staff development and education, facilities and equipment, and quality assurance programme.



12. REFERENCES

1. *Guidelines for Respiratory Sleep Studies*. Thoracic Society of Australia and New Zealand, 1994.
2. *Training Programme in Thoracic Medicine*. Thoracic Society of Australia and New Zealand, 1997.
3. Loughlin GM, Broulette RT, co-chairs. American Thoracic Society: Standards and indications for cardiopulmonary sleep studies in children. *Am J Respir Crit Care Med* 153:866-878, 1996.
4. Phillipson EA, Remmers JE, chairmen. American Thoracic Society consensus conference on indications and standards for cardiopulmonary sleep studies. *Am Rev Resp Dis* 139:559-68, 1989.
5. Sleep Disorders Atlas Task force of the American Sleep Disorders Association. EEG arousals: scoring rules and examples. *Sleep* 15:173-184, 1992.
6. Rechtschaffen A, Kales A. A manual of standardized terminology, techniques and scoring system for sleep staging of human subjects. Washington DC: US Government Printing Office, 1968.
7. Anders T, Emde R, Parmelee A, editors. A manual of standardized terminology, techniques and criteria for scoring of states of sleep and wakefulness in newborn infants. Los Angeles CA: UCLA Brain Information Service/Brain Research Institute, 1971.
8. Carskadon MA et al. Guidelines for the Multiple Sleep Latency Test. *Sleep* 9:519-24, 1986.



APPLICATION FORM

Four copies of the application must be submitted typed, single space on A4 white paper. Each question should be answered specifically but concisely. Answer each question in order and number the response accordingly. If a question is not applicable indicate why.

Some questions may be answered by reference to your laboratory manual, provided page and paragraph numbers are specified and four copies of the manual are sent with the application.

1. IDENTIFYING INFORMATION

Provide identifying information: complete form A and attach to the front of the application.

2. HISTORICAL OVERVIEW

Provide a brief historical overview of the service. Include date established, growth of facilities and names of founding staff.

3. ORGANIZATION AND ADMINISTRATION

3.1 Goals and Objectives

State general goals and objectives of the service ("mission statement"). Are these compatible with those of the host institution (where applicable)?

3.2 Relationship to Host Institution, Other Laboratories

Where applicable, describe relationship of service to host institution or to other laboratories if part of a group. Is it a public hospital or private facility?

Provide organizational flow chart, showing position within institution and lines of authority.

3.3 Relationships with Other Specialities

Describe the service's relationship to related specialities, eg respiratory medicine, ENT, psychiatry, neurology, paediatrics.

3.4 Referrals

Describe the referral base of the service. What are the service's usual sources of referrals?

3.5 Workload

Describe the workload of the service. From a recent 12 month period (last calendar or financial year) state:

- a) how many initial consultations for patients with sleep disorders were undertaken; how many follow-up consultations for patients with sleep disorders were undertaken;
- b) how many sleep laboratory beds; how many nights/week the laboratory operates;
- c) how many diagnostic, intervention or follow-up studies/week; how many take place in the laboratory and how many are domestic studies; what proportion of these are comprehensive, partial, limited duration; (complete form B) (for definitions of sleep study type refer to "Guidelines for Respiratory Sleep Studies"¹);
- d) how many treatments with continuous positive airway pressure were initiated; how many treatments with nocturnal ventilatory assistance (Bilevel or intermittent positive airway pressure or related therapies).



3.6 Demand

- a) Describe how adequately the service copes with the demand for its services.
- b) State the average time in weeks between: referral and initial consultation; initial consultation and sleep study; commencement of CPAP or other treatment and follow-up sleep study to assess efficacy.
- c) Describe how the waiting list for sleep studies is managed and prioritized.
- d) Describe how urgent studies are managed.

3.7 Budget

Describe how the budgetary needs of the service are met.

4. STAFFING AND DIRECTION

4.1 Staff Structure and Direction

- a) Provide organisational chart showing interrelationships/lines of accountability of all staff members.
- b) Is a single designated consultant responsible for each patient's care?

4.2 Staff Qualifications and Experience

- a) Provide Summary of Staff Information (Form C).
- b) Provide Job descriptions for each staff category.
- c) What training have medical staff had in diagnosis/treatment of respiratory sleep disorders?
- d) Provide CV of all medical staff. For consultant staff: Detail postgraduate qualifications, primary area of specialisation, secondary area of specialisation, hours/week spent solely in sleep medicine, experience in sleep medicine (years). For junior staff: detail proportion of time spent in sleep medicine and whether a RACP advanced trainee.
- e) What training have technologists had in polysomnographic techniques?
- f) Provide CV of chief technologist.

4.3 Staff Numbers

- a) Give details of staff establishment (see also 4.1 a).
- b) Provide copy of technologist roster making clear how work is divided between day, evening and overnight shifts. How many "set-up" technologists are employed each night? How many monitoring technologists employed each night?
- c) Detail proportions of time spent by technologists in set-up of sleep studies, overnight monitoring, analysis, other duties (specify) including staff meetings, education and research.
- d) Describe ratio of staff to patients for set up and for overnight monitoring.
- e) Specify time allowed for analysis of each type of sleep study performed.

4.4 Staff Appraisal

Provide details of the service's staff appraisal system.

4.5 Training of Staff in Cardiopulmonary Resuscitation

- a) Are all staff trained in cardio-pulmonary resuscitation?
- b) How is knowledge in this area maintained?



5. POLICIES AND PROCEDURES

5.1 *Patient Referral, Handling, Documentation, Follow-up*

- a) How are enquiries from the prospective patients and referring doctors handled? How are referrals processed/appointments made?
- b) Are all patients clinically evaluated (history, examination) prior to sleep study? Explain procedures.
- c) What explanation of investigation(s) is provided to patients? Are they provided with written information/instructions prior to the sleep study?
- d) How are sleep studies requested and booked? Are written instructions/information provided to sleep technologists for the study?
- e) What follow-up arrangements are made?
- f) What documentation is kept regarding the patient and for how long? What information is sent to the referring doctor? Where and how is the record kept? How is confidentiality of the record protected?

5.2 *Sleep Studies: Types, Methods of Measurement*

- a) What parameters are measured for each type of study performed by the service (as specified on form B [see 3.5 above])?
- b) Give details of method of measurement and equipment used, including calibration procedures and method of data storage/retrieval? Provide date of purchase of all equipment listed.
- c) Do all studies allow full disclosure of the raw signals? Specify where not and why not.
- d) Where partial studies are performed describe criteria for selection for this type of study.
- e) Is domestic monitoring performed? State the indications and purpose of these studies. Describe methods (as above). How are results from domestic studies validated?
- f) What safety checks and maintenance procedures are used for all equipment?

5.3 *Sleep Studies: Analysis and Interpretation*

- a) Who analyses the polysomnograph?
- b) Describe the scoring system for each type of polysomnographic study. Is analysis computerised, computer assisted, or by the technologist alone. Where analysis is computerised/computer assisted what validation of method is undertaken?
- c) Describe laboratory criteria for sleep staging and scoring respiratory events, arousals, periodic limb movements and other non-respiratory events.
- d) Submit sample score sheet and sample recordings of various stages of sleep, limb movements, central and obstructive apnoeas, calibration signals



- e) Who interprets/signs final report? Does report provide data relating to sleep architecture, arousals, apnoeas (type, number, duration), oxygenation, leg movements, ECG. Provide sample report. How quickly is the final report transmitted to the referring physician?
- f) What methods are in place to assess quality of measurements and analysis?

5.4 *Other Procedures*

- a) Is the multiple sleep latency test (MSLT) performed by the service? State your indications for an MSLT and number of tests/year. Describe procedures used. Provide sample reports of a study.
- b) List other tests used by your service (eg maintenance of wakefulness test, actigraphy) along with the indications you use for such tests. Supply sample reports of such studies.

5.5 *Nasal CPAP and Other Respiratory Appliances*

- a) Describe how the laboratory arranges supply of CPAP machines when necessary, including direct supply from the laboratory (if applicable).
- b) Detail the types of machines that are offered to or prescribed for patients requiring therapeutic intervention.
- c) Describe the support and follow-up available for patients when commenced on CPAP or other ventilatory support.

5.6 *Safety*

Describe procedures to ensure adequate infection control, handling of gas cylinders, fire and electrical safety, general safety procedures.

5.7 *Laboratory Manual*

Is a manual of laboratory procedures kept? Provide **four** copies with each application (omit where submitted as part of a Policy and Procedures manual (see 11. below).

6. **STAFF DEVELOPMENT, TEACHING, RESEARCH**

6.1 *Staff Development*

- a) What programmes does the service offer: i) to train new staff; and ii) for continuing education of existing staff? How do these programmes relate to the service's quality assurance programme?
- b) What opportunities exist for senior staff to attend state, national and international meetings? Provide record of recent attendances.

6.2 *Teaching*

What educational programmes does the service offer to non-staff members (undergraduates, postgraduates)?

6.3 *Research*

What research activities is the service involved in? What is its research record?

7. FACILITIES AND EQUIPMENT

7.1/7.2 *Consulting Rooms, Sleep Laboratory*

- a) Describe location of the service.
- b) Provide floor plan of consulting rooms and sleep laboratory including dimensions of each room showing bedrooms, control room, toilets/bathroom(s).
- c) Describe lighting, floor coverings, sound-proofing, how adequately light is excluded from bedrooms at night, air conditioning, emergency oxygen and suction, fire and safety facilities, resuscitation equipment.
- d) How is security maintained for equipment, staff and patients?
- e) Describe frequency of cleaning of the facilities.

7.3 *Equipment*

(See also responses to 5.2, 5.3, 5.4 for monitoring and analysis equipment). Is there an infra-red camera/video system for patient monitoring? Describe methods of communication between monitoring room and bedrooms.

7.4 *Identification*

How is service identified?

- a) Is there a dedicated phone line?
- b) What signage is provided?
- c) Is there separate stationery?

Provide samples where applicable.

8. PROVISION FOR EMERGENCIES

8.1 *Medical Emergencies*

- a) Are all staff trained in cardiopulmonary resuscitation? How often are they retrained?
- b) Is oxygen available in the sleep laboratory/patient rooms?
- c) Is suction available in the laboratory/patient rooms?
- d) Is a "crash trolley" available?
- e) Is there on-site medical back-up available during studies?
- f) Is there an on-call roster of medical staff to cover the laboratory after-hours? Provide copy of roster where available.
- g) Is there free access to the patient in case of emergency? (See also 7.1/7.2 above)

8.2 *Non-medical Emergencies*

- a) What provisions are made to deal with fire? Are these compatible with site and statutory requirements?

9. QUALITY ASSURANCE

- a) Summarise the quality assurance procedures followed in the service.
- b) What quality control procedures are in place to ensure that the sleep study and other investigative measurements, analysis and reporting are adequate? Are methods in place to ensure that problems identified have been adequately addressed?
- c) Are patient and referring doctor opinions of the service assessed?



10. MEETINGS

What meetings exist, who attends and how often are they held to meet the following purposes?

- a) service function/planning
- b) quality assurance
- c) clinical review
- d) in-service education
- e) research

Are records kept of these meetings? Are action statements used?

11. POLICIES AND PROCEDURES MANUAL

Does the service maintain a Policy and Procedures manual? Provide **four** copies with this application.

REFERENCE

1. *Guidelines for Respiratory Sleep Studies* (September 1994 revision). Thoracic Society of Australia and New Zealand.
2. *Guidelines for Sleep studies in adults* October 2005. TSANZ and ASA



APPLICATION FOR ACCREDITATION OF SLEEP DISORDERS SERVICES

Please return this form to the ASA office.
114/30 Campbell St Blacktown NSW 2148

FORM A

IDENTIFYING INFORMATION Date:

Attach this form to the front of the application (page 1)

Sleep Clinic Name:

Address:

Tel No:

Fax No:

Email:

Medical Director (Name):

Chief Technologist (Name):

Type of Laboratory:
(please circle)

Adult / Paediatric
(Circle both if dual accreditation sought)

Is the clinic a private or public hospital facility? (circle)

Parent Hospital (if applicable):

Academic Affiliation (if applicable):

Number of beds:

This statement must be signed by the medical director of the service:

I certify that the statements herein are true and complete to the best of my knowledge.

signed

(name) (title) (date)



APPLICATION FOR ACCREDITATION OF SLEEP DISORDERS SERVICES

Please return this form to

ASA office.

114/30 Campbell St Blacktown NSW 2148

FORM B

SUMMARY OF SLEEP STUDIES PERFORMED

from to (last calendar or financial year)

Attach this form to the front of the application (page 2)

For definitions of types of sleep study see reference (1)

Diagnostic Intervention Follow-up

LABORATORY or HOSPITAL:

Comprehensive:

- attended
- unattended
- monitored remotely

Partial:

- attended
- unattended
- monitored remotely

Limited Duration:

DOMESTIC:

Comprehensive:

- attended
- unattended
- monitored remotely

Partial:

- attended
- unattended
- monitored remotely

Limited Duration:



APPLICATION FOR ACCREDITATION OF SLEEP DISORDERS SERVICES

Please return this form to the
ASA office.
114/30 Campbell St Blacktown NSW 2148

FORM C

SUMMARY OF STAFF INFORMATION Date:

Attach this form to the front of the application (page 3)

Name:

Qualifications

%FTE

Title/Role

Experience* (years)

Clinical / Research

1. Medical staff
(attach rosters)

2. Clerical Staff

3. Scientific/Technical
(attach rosters)

4. Nursing
(attach rosters)

5. Other

*in sleep medicine



REQUEST FOR RE-ACCREDITATION OF SLEEP DISORDERS SERVICES

ASA office.

114/30 Campbell St Blacktown NSW 2148

FORM D - IDENTIFYING INFORMATION

Sleep Clinic Name:

Address:

Tel. No:

Fax. No:

Medical Director:

Head Scientist / Technologist:

Date of this Application:

Date of Previous Accreditation:

Type of Laboratory:

Adult / Paediatric

(please circle)

(Circle both if dual accreditation sought)

Is the clinic a private or public hospital facility: (please circle)

Academic Affiliation (if applicable):

Number of Beds:

Application for Accreditation updated to reflect current practice:

Yes / No

Laboratory manuals updated to reflect current practice:

Yes / No

This statement must be signed by the medical director of the service:

I certify that the statements herein are true and complete to the best of my knowledge.

signed.....

(Name)

(Title)

(Date)



APPLICATION FOR RE-ACCREDITATION OF SLEEP DISORDERS SERVICES

Please return this form to
ASA office.
114/30 Campbell St Blacktown NSW 2148

FORM E - SUMMARY OF SLEEP STUDIES PERFORMED

from..... to..... (last calendar or financial year)

*(For definitions of types of sleep study see
Guidelines for Respiratory Sleep Studies, TSANZ, 1994)*

	Diagnostic	Intervention	Follow-up
LABORATORY or HOSPITAL			
Comprehensive:			
- attended			
- unattended			
- monitored remotely			
Partial:			
- attended			
- unattended			
- monitored remotely			
Limited Duration:			
DOMESTIC			
Comprehensive:			
- attended			
- unattended			
- monitored remotely			
Partial:			
- attended			
- unattended			
- monitored remotely			
Limited Duration:			



APPLICATION FOR RE-ACCREDITATION OF SLEEP DISORDERS SERVICES

Please return this form to the
ASA office.
114/30 Campbell St Blacktown NSW 2148

FORM F - SUMMARY OF STAFF INFORMATION

SUMMARY OF STAFF INFORMATION Date:

Attach this form to the front of the application (page 3)

Name:

Qualifications

%FTE

Title/Role

Experience* (years)

Clinical / Research

1. Medical staff
(attach rosters)

2. Clerical Staff

3. Scientific/Technical
(attach rosters)

4. Nursing

5. Other

*in sleep medicine



APPLICATION FOR RE-ACCREDITATION OF SLEEP DISORDERS SERVICES

Please return this form to
ASA office.
114/30 Campbell St Blacktown NSW 2148

FORM G - CHANGES TO THE SERVICE

(use additional pages where necessary)

1. Detail changes to the Service resulting from the recommendations contained within the previous Assessment Panel report. Please use the same numbering system as the previous report.
2. List any other changes to the Service since the previous Accreditation. Include details of any staffing changes (medical or scientific).