COLLEGE OF PHYSICIANS AND SURGEONS OF BRITISH COLUMBIA

Diagnostic Accreditation Program

ACCREDITATION STANDARDS

Pediatric Polysomnography

Diagnostic Accreditation Program
College of Physicians and Surgeons of British Columbia
300–669 Howe Street
Vancouver BC V6C 0B4

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Introduction

In addition to the global polysomnography accreditation standards, these specific accreditation standards for pediatric polysomnography provide additional mandatory requirements and best practices for facilities that provide pediatric polysomnography services.

Age-specific polysomnography testing involves tailoring the assessment, diagnosis and treatment of sleep disorders to the specific needs and characteristics of individuals within different age groups.

Physiologically, children differ from adults in various ways. As a result, sleep disorders management and diagnosis must be cared for by trained staff that have knowledge of these distinctions.

Developmentally, children are different from adults based on their cognitive and emotional characteristics. Therefore, careful considerations must be included during their care.

Age-based classification for pediatrics can be defined using the following:

- **0 to 3 years of age. Infants/toddlers.** These children have irregular sleep-wake cycles, spending a substantial portion of their time in REM sleep and require frequent feeding and diaper changes. **This patient cohort must be tested in a specialized pediatrics laboratory that has the expertise, resources and staff to manage the patient.**
- **4 to 11 years of age. Early childhood.** These children routinely transition to more consistent sleep patterns with a reduction in night arousals. Generally, spend around 12 hours of sleep per night.
- **12 to 18 years of age. Adolescents.** During the onset of puberty children have a shift in their circadian rhythm, leading to a tendency for later bedtimes. This cohort of patients may present similarly to adults and does require clinical correlation by a qualified individual to verify.

General pediatrics

No.		Description	Risk	Reference	Change
PPSG1.0		**GENERAL PEDIATRICS**			NEW
PPSG1.1		**Pediatric patients are evaluated for the test being performed.**			New
PPSG1.1.1	**M**	Consultation includes the evaluation of age, development and physiological characteristics of the patient.	H	POLY-AC-24	New
PPSG1.1.2	**M**	Patients aged less than four years are tested in a specialized pediatric laboratory. *Guidance: This cohort of patients present with unique challenges and risks. Therefore staff, equipment and resources for this patient population must reflect appropriate training and knowledge for the management of sleep related disorders.*	H	POLY-AC-24CPSO	New
PPSG1.1.3	**M**	There is a process to triage patients aged four to 12 years to determine if the require a specialized pediatric laboratory for testing.	H	CPSO	New
PPSG1.1.4	**M**	Parents and/or caregivers are considered and included in all aspects of evaluation and testing.	H	ASA 2017	New
PPSG1.1.5	**M**	There is a process in place to deal with children with neurodevelopmental disorders.	M	POLY-AC-24	New
PPSG1.1.6	**M**	The timing of the test is considered and evaluated based on the patient's sleeping patterns (e.g. bedtime routine).	M	ASA 2017	New
PPSG1.1.7	**M**	Staff providing set-up duties for pediatrics have demonstrated knowledge of working with children.	H		New
PPSG1.1.8	**B**	Sleep preferences are discussed to encourage sleep (e.g. favorite pillow, blanket, teddy).		ASA 2017	New
PPSG1.2		**Patients and/or caregiver are prepared for the test being performed.**			New
PPSG1.2.1	**M**	Information provided by the referring physician or specialist is reviewed prior to receiving the patient. *Guidance: Detailed information provides relevant clinical information, medical history and current medications (e.g. consultation letter, referral).*	H	AAST 2021	New

No.		Description	Risk	Reference	Change
PPSG1.2.2	**M**	All referrals are triaged by a qualified physician or designate prior to testing. *Guidance: A designate must be assigned by the medical director and have received appropriate training.*	H		New
PPSG1.2.3	**M**	Any recent changes in the patient's medical condition are documented and considered prior to testing.	H	ASA 2017	New
PPSG1.2.4	**M**	Patients are orientated to the testing schedule, that includes a description of hook-up and lights on/off procedures.	M	ASA 2017	New
PPSG1.2.5	**M**	Patients are orientated to their sleep environment (e.g. sleep room, bathroom, changing room, etc.).	M	ASA 2017	New
PPSG1.2.6	**M**	Patients are informed that the test includes audio and video recordings.	H	AASM 2022	New
PPSG1.2.7	**M**	Patients are informed of the procedure to contact staff for assistance, or in case of emergency.	H		New
PPSG1.2.8		There is a procedure to obtain a pre-sleep and post-sleep questionnaire.	L	POLY-AC-24	New
PPSG1.2.9	**M**	Patient set-up process is conducted in a safe and comfortable manner that is age appropriate.	M	POLY-AC-24	New
PPSG1.2.10	**M**	Appropriate skin preparation is performed prior to the placement of electrodes.	L	AAST 2021	New
PPSG1.2.11	**M**	An impedance check is conducted for each electrode to verify adequate contact with the skin. *Guidance: Impedance checks ensure the quality and reliability of the signal.*	L		New
PPSG1.2.12	**M**	The technologist is trained in age-appropriate techniques for setting up a sleep study.	M	CPSO	New
PPSG1.2.13	**B**	Sensors or probes that produce heat (e.g. oximeter, TcCO2) are repositioned during the study. *Guidance: Some sensors or probes may produce heat that could cause skin damage and attempts at repositioning are made without disturbing the patient during the sleep test. Manufacturers' recommendation is considered during this process.*		ASA 2017	New
PPSG1.3		**Equipment is evaluated and used for the test being performed.** *Guidance: Special considerations for the equipment being used must be made to accommodate the patient's age and size.* *Refer to the equipment and supplies section for additional criteria and guidance.*			New

No.		Description	Risk	Reference	Change
PPSG1.3.1	**M**	There is a process in place to ensure that the sleep study equipment are sized accurately for the child's age and weight.	M	POLY-AC-24	New
PPSG1.3.2	**B**	The facility defines appropriate sensors to be used in children.		POLY-AC-24	New
PPSG1.4		**The physical environment is conducive to children.** *Guidance: Special considerations for the physical environment are made to accommodate the patient's age and size.* *Refer to the equipment and supplies section for additional information.*		POLY-AC-24 CPSO	New
PPSG1.4.1	**M**	Accommodations are made to have space for one parent or caregiver to be present for the sleep test (e.g. sleep chair that reclines fully, second bed). *Guidance: Accommodations for parent or caregiver are made to allow them to sleep or provide support to the child.*	H		New
PPSG1.4.2	**M**	The study bed has adequate side rails and end guards for safety and is appropriate to the age/size of the child. *Guidance: Size, age and developmental status of the child are considered to accommodate the safety equipment requirements for testing.*	H		New
PPSG1.4.3	**B**	Attempts are made to make the testing environment child-friendly.		ASA 2017	New

Recordings and measured parameters

No.		Description	Risk	Reference	Change
PPSG2.0		**RECORDINGS AND MEASURED PARAMETERS**			NEW
PPSG2.1		**Recordings and measured parameters are comprehensive and collected to evaluate sleeping disorders.**		AASM Scoring Manual V3.0	New
PPSG2.1.1	**M**	Sleep montages are defined and specific to the required sleep study type.	M	AASM 2022 AAST 2021 ASA 2017	New
PPSG2.1.2	**M**	Continuous data for all channels is displayed in real-time during the entire sleep study.	M	AASM 2022	New
PPSG2.1.3	**M**	Frequency (low and high) filter settings for each channel are established as per AASM recommendations. *Guidance: Filter settings are critical for ensuring that the recorded signals are accurate and relevant for sleep analysis. Deviations from acceptable filter setting ranges are documented.*	L		New
PPSG2.1.4	**M**	A standardized approach for biological calibration is done for all channels at the beginning of the test and is available for review. *Guidance: Appropriate commands should be utilized to ensure that all channels are functional.*	L		New
PPSG2.1.5	**M**	The biological calibration procedure involves communication with the patient to ensure that the system registers expected changes (e.g. open/close eyes, hold your breath, move your right/left foot, etc.).	L		New
PPSG2.1.6	**M**	Amplifier calibration (sometimes referred to as machine calibration) is performed at the beginning and end of each test. *Guidance: To ensure the voltage going into the amplifier is not degraded from the beginning to the end of the study.*	L	AASM Scoring Manual V3.0	New
PPSG2.1.7	**M**	Electrode impedance verification is performed at the beginning of the test and is available for review.	L	AASM Scoring Manual V3.0	New
PPSG2.1.8	**M**	There is a process to verify impedances are within acceptable ranges and any unacceptable ranges are documented.	L		New

No.		Description	Risk	Reference	Change
PPSG2.1.9	**M**	The 60 Hz notch filter is turned off. In the event that the notch filter is turned on, the reason is documented. *Guidance: All attempts should have been made to eliminate artifact prior to turning the filter on.*	L	AASM Scoring Manual V3.0	New
PPSG2.1.10	**M**	Sampling rates and electrode impedances are established as per AASM recommendations to ensure accurate and reliable data. *Guidance: Deviations from acceptable ranges are documented.*	M		New
PPSG2.1.11	**M**	The patient set up is conducted in a manner to ensure that each patient can be monitored without unavoidable interruption.	M		New
PPSG2.1.12	**B**	In cases where seizures, parasomnias, hypersomnolence, unusual sleep-related body movements or sleep-related paroxysmal events/ arousals are suspected an extended EEG montage with continuous video monitoring is considered.		ASA 2017 Seizure 2014	New

Electroencephalography

No.		Description	B	Reference	Change
PPSG3.0		**ELECTROENCEPHALOGRAPHY (EEG)**			NEW
PPSG3.1		**Application of EEG electrodes are standardized to ensure accurate monitoring.**			New
PPSG3.1.1	**M**	Surface cup/disc electrodes that can deliver high-quality and reliable data are used for routine EEGs (e.g. gold or silver electrodes).	M	AAST 2021	New
PPSG3.1.2	**M**	Abrasive gel and cotton-tipped applicators used for skin preparation are discarded after each patient use.	L	AAST 2021	New
PPSG3.1.3	**M**	EEG electrodes are placed according to the International 10-20 Electrode Placement System.	L	FST	New
PPSG3.1.4	**M**	If electrodes are repositioned due to an anomaly (e.g. skull deformity or defect), the location change is documented.	L	10-20 EP SZ	New
PPSG3.1.5	**M**	At a minimum, frontal, central and occipital derivations are required to stage sleep. *Guidance: In the event of an electrode signal loss a back-up electrode is available for continuous display (e.g. central, frontal and occipital placements).*	L	AASM Scoring Manual 2023	New
PPSG3.1.6	**B**	Electrodes are not placed over the fontanelle of infants.		ASA 2017	New

Electrooculography

No.		Description	Risk	Reference	Change
PPSG4.0		**ELECTROOCULOGRAPHY (EOG)**		AASM Scoring Manual V3.0	NEW
PPSG4.1		**Application of EOG electrodes are standardized to ensure accurate monitoring.**			New
PPSG4.1.1	**M**	Derivations E1-M2 and E2-M1 are utilized.	L		New
PPSG4.1.2	**M**	E1 is placed 1 cm below and 1 cm lateral to the left outer canthus.	L		New
PPSG4.1.3	**M**	E2 is placed 1 cm above and 1 cm lateral to the right outer canthus.	L		New
PPSG4.2		**EOG filters and sensitivities (settings) are standardized to ensure accurate results.**			New
PPSG4.2.1	**M**	EOG sensitivities are adjusted to capture subtle eye movements without compromising signal saturation.	L		New
PPSG4.2.2	**B**	EOG data is regularly verified with other sleep parameters to ensure accurate identification of REM and non-REM sleep stages.			New

Electromyography

No.		Description	Risk	Reference	Change
PSG5.0		**ELECTROMYOGRAPHY (EMG)**		AASM Scoring Manual V3.0	NEW
PSG5.1		**Application of EMG electrodes are standardized to ensure accurate monitoring.**		AASM Scoring Manual V3.0	New
PPSG5.1.1	**M**	Electrodes are placed accurately and securely to monitor muscle activity during sleep.	M		New
PSG5.2		**Application of chin EMG electrodes are standardized to ensure accurate monitoring.**		AASM Scoring Manual V3.0	New
PPSG5.2.1	**M**	Three chin (submental/mentalis) electrodes are placed accurately: Chin Z, 1 and 2.	L		New
PPSG5.2.2	**M**	The Chin Z electrode is placed 1 cm above the inferior edge of the mandible.	L		New
PPSG5.2.3	**M**	The Chin 1 electrode is placed 2 cm below the inferior edge of the mandible and 2 cm to the right of the midline.	L		New
PPSG5.2.4	**M**	The Chin 2 electrode is placed 2 cm below the inferior edge of the mandible and 2 cm to the left of the midline.	L		New
PPSG5.2.5	**M**	When Bruxism is suspected, electrodes are placed 2 to 3 cm apart of the masseter muscle.	L		New
PSG5.3		**Application of leg EMG electrodes are standardized to ensure accurate monitoring.**		AASM Scoring Manual V3.0	New
PPSG5.3.1	**M**	Activity for each leg is monitored using two electrodes. *Guidance: Refer to the limb movements section (PPSG9.0) for additional criteria for monitoring leg movements.*	L		New
PPSG5.3.2	**M**	Separate channels for each leg are utilized.	L		New

Electrocardiography

No.		Description	Risk	Reference	Change
PPSG6.0		**ELECTROCARDIOGRAPHY (ECG)**		AASM SCORING MANUAL V3.0	NEW
PPSG6.1		**Application of ECG electrodes are standardized to ensure accurate monitoring.**			New
PPSG6.1.1	**M**	Cardiac activity is monitored using either a single modified electrograph Lead II or a modified Lead I placement. *Guidance: The use of a single modified electrograph Lead II configuration is recommended.*	M		New
PPSG6.1.2	**M**	Instructions for electrode placement are available to staff.	L		New
PPSG6.1.3	**M**	ECG activity is monitored using established lab protocols to accurately determine cardiac rhythm.	L		New
PPSG6.1.4	**B**	There is a process to add additional leads to provide supplementary cardiac information, if requested.			New

Airflow

No.		Description	Risk	Reference	Change
PPSG7.0		**AIRFLOW**		AASM Scoring Manual V3.0	NEW
PPSG7.1		**Application of ECG electrodes are standardized to ensure accurate monitoring.**			New
PPSG7.1.1	**M**	A nasal pressure transducer and oronasal (thermocouple or thermistor) are used to detect pressure and thermal changes for monitoring airflow.	L		New
PPSG7.1.2	**M**	Airflow and pressure sensors are placed appropriately to ensure accurate measure of respiratory event.	L		New

Respiratory effort

No.		Description	Risk	Reference	Change
PPSG8.0		**RESPIRATORY EFFORT**		AASM Scoring Manual V3.0	NEW
PPSG8.1		**Application of measuring respiratory effort is standardized to ensure accurate monitoring.**			New
PPSG8.1.1	**M**	A process is in place to determine the most appropriate respiratory effort sensor to be used by the facility. *Guidance: Some examples of efforts sensors may include Piezo-crystal belts, thoracoabdominal respiratory inductive plethysmography belts, esophageal manometry or polyvinylidene fluoride belts.*	L	POLY-AC-24 JCSM 2011	New
PPSG8.1.2	**M**	The respiratory effort belt is secured in place to avoid slipping or dislodging during the sleep study.	L		New

Limb movements

No.		Description	Risk	Reference	Change
PPSG9.0		**LIMB MOVEMENTS**		AASM Scoring Manual V3.0	NEW
PPSG9.1		**Application of body movement sensors are standardized to ensure accurate monitoring.**			New
PPSG9.1.1	**M**	Separate channels for each arm are monitored.	L	POLY-AC-24	New
PPSG9.1.2	**M**	When RBD (REM sleep behavior disorder) is suspected or as per physician's orders, two electrodes are placed 5 cm apart for monitoring upper limb movements.	L		New
PPSG9.1.3	**M**	When RMD (rhythmic movement disorder) is suspected, electrodes are placed on the neck paraspinal muscles 2 to 3 cm apart.	L		New
PPSG9.2		**Application for leg movements (LMs) are standardized to ensure accurate monitoring.**			New
PPSG9.2.1	**M**	Leg movement (LMs) electrodes are placed longitudinally and symmetrically in the middle of the anterior tibialis muscle so that they are 2 to 3 cm apart.	L		New
PPSG9.2.2	**M**	Impedances for monitoring LM's are ≤10 KΩ and if this cannot be achieved the reason is documented. *Guidance: Desired impedance should be ≤5 KΩ.*	L		New
PPSG9.3		**Application for upper limb movements are standardized to ensure accurate monitoring.**			New
PPSG9.3.1	**B**	Electrodes are placed longitudinally and symmetrically, so that they are 2 to 3 cm apart over the flexor digitorum superficialis or the extensor digitorum communis.			New

Snoring

No.		Description	Risk	Reference	Change
PPSG10.0		**SNORING**		AASM SCORING MANUAL V3.0	NEW
PPSG10.1		**Application of a snoring sensor is standardized to ensure accurate monitoring.**			New
PPSG10.1.1	**M**	A snoring sensor is placed and secured in an area to detect snoring sounds accurately. *Guidance: Snore sensor may be an acoustic sensor (microphone), piezoelectric sensor or nasal pressure transducer.*	L		New
PPSG10.1.2	**M**	Snoring sensors have been evaluated to differentiate snoring sounds from other ambient noises. *Guidance: Filters and sensitivity settings can be adjusted to reduce false positives and enhance the accuracy of snoring detection.*	L		New
PPSG10.1.3	**M**	Snoring details are documented in the PSG report including its presence during different sleep stages and body positions.	L	POLY-AC-24	New

Body position

No.		Description	Risk	Reference	Change
PPSG11.0		**BODY POSITION**		AASM Scoring Manual V3.0	NEW
PPSG11.1		**Application of a body position sensor is standardized to ensure accurate monitoring.**			New
PPSG11.1.1	**M**	The body position sensor is secured in place to avoid disposition during the sleep study. *Guidance: The sensor is attached in a manner that does not cause discomfort or interfere with the patient's natural movements.*	L		New
PPSG11.1.2	**M**	Body position data is recorded alongside all other measured parameters. *Guidance: The PSG software integrates and displays body position data, correlating it with sleep stages and respiratory events.*	L		New

Oxygen saturation

No.		Description	Risk	Reference	Change
PPSG12.0		**OXYGEN SATURATION**		AASM Scoring Manual V3.0	NEW
PPSG12.1		**Application of measuring oxygen saturation is standardized to ensure accurate monitoring.**			New
PPSG12.1.1	**M**	Pulse-oximetry is used to monitor oxygen saturation.	L		New
PPSG12.1.2	**M**	The pulse oximeter sensor is secured in place to avoid slipping or dislodging during the sleep study.	L		New
PPSG12.1.3	**M**	The sensor site (e.g. fingertip, earlobe) is appropriately selected and cleaned from any obstruction that may interfere with the readings (e.g. nail polish, acrylic gel).	L		New
PPSG12.1.4	**M**	The sensor site is appropriately evaluated for adequate peripheral flow to ensure an accurate signal (e.g. Marfan Syndrome).	M		New

Audio/video

No.		Description	Risk	Reference	Change
PPSG13.0		**AUDIO/VIDEO**		AASM SCORING MANUAL V3.0	NEW
PPSG13.1		**Application of recording audio/video is standardized to ensure accurate monitoring.**			New
PPSG13.1.1	**M**	A microphone is used to record audio data during the polysomnogram.	L		New
PPSG13.1.2	**M**	The microphone is sensitive enough to ensure relevant sounds are recorded clearly and accurately.	L		New
PPSG13.1.3	**M**	A video camera is used to record video data of the patient during the polysomnogram.	L		New
PPSG13.1.4	**M**	The video camera is positioned appropriately to capture relevant details and full body for accurate monitoring.	L		New
PPSG13.1.5	**M**	The video camera has adequate capability to clearly record in nocturnal low lighting environments.	L		New
PPSG13.1.6	**M**	The audio/video recordings are conducted as per the facilities privacy information policy. *Guidance: The facility policy evaluates all relevant laws and legislation to ensure patient safety and rights are respected.*	H		New

Capnography

No.		Description	Risk	Reference	Change
PPSG14.0		**CAPNOGRAPHY**		AASM Scoring Manual V3.0	NEW
PPSG14.1		**Application for capnography device is standardized to ensure accurate monitoring.**			New
PPSG14.1.1	**M**	There is a defined policy of when to use capnography.	L		New
PPSG14.1.2		Transcutaneous PCO_2 or end-tidal PCO_2 is used for detection of hypoventilation during a diagnostic study. *Guidance: Specific methods for monitoring CO_2 may require specialized equipment.*	L		New
PPSG14.1.3	**M**	For end-tidal PCO_2 monitoring, the nasal cannula is securely placed to ensure consistent sampling of exhaled air.	L		New
PPSG14.1.4	**M**	For $TCPCO_2$ monitoring, apply the sensor to a well-perfused area of the skin.	L		New
PPSG14.1.5	**M**	Appropriate calibration as per the manufacturers' instructions is conducted prior to use.	L		New
PPSG14.1.6	**M**	Ensure that the capnography data is synchronized with other PSG channels.	L		New
PPSG14.1.7	**M**	A baseline CO_2 level is recorded during the wakeful resting period before sleep onset.	L		New

Polysomnogram

No.		Description	Risk	Reference	Change
PPSG15.0		**POLYSOMNOGRAM – OVERNIGHT SLEEP TEST**		AASM 2022 POLY-AC-24	NEW
PPSG15.1		**Overnight sleep tests are standardized and recorded in a manner to ensure accurate results for interpretation.**			New
PPSG15.1.1	**M**	Attempts are made to ensure the patient is comfortable and informed about the sleep test before the lights are turned off.	M	ASA 2017	New
PPSG15.1.2	**M**	After "light outs" the patient is allowed to fall asleep naturally and, in a position that they normally do.	L	ASA 2017	New
PPSG15.1.3	**B**	Efforts are made to ensure that a supine sleep position is recorded.		POLY-AC-24	New
PPSG15.1.4	**M**	There is a verification process to ensure all equipment connections are secure and do not cause discomfort or disrupt the patient's ability to sleep.	M	AAST, 2021	New
PPSG15.1.5	**M**	The recording time in bed (lights-out to lights-on) is for a minimum of six hours. When this cannot be achieved the reason is documented.	L	ASA 2017	New
PPSG15.1.6	**B**	Data analysis and scoring another study is at the discretion of the technologist. *Guidance: The quality and safety of the study is not impacted by non-scheduled activities.*		POLY-AC-24	New
PPSG15.1.7	**M**	Monitoring equipment ensures that each patient can be monitored without unavoidable interruption and allow patients to communicate with technical staff in the event they require assistance.	L		New
PPSG15.1.8	**M**	Disruption to the patient is minimized during the sleep study. *Guidance: If a lead or signal requires physical adjustment efforts are made for minimum disruptions.*	L		New
PPSG15.1.9	**M**	The sleep study is conducted in a manner to ensure patient comfort, safety and privacy is not compromised throughout the entire study.	L		New
PPSG15.1.10	**M**	Throughout the entire study the patient is continuously monitored through all physiological signals and video recordings.	M		New

No.		Description	Risk	Reference	Change
PPSG15.1.11	**B**	Technical notes are made regularly by a sleep technologist during the recording period. *Guidance: Technical notes are made every 30 minutes. Technical comments highlight sleep stages, vital signs, relevant parameters, abnormal events, sleep positions and therapeutic settings and any changes in treatment parameters or modalities.*		AAST 2021	New

PSG data collection and monitoring

No.		Description	Risk	Reference	Change
PPSG16.0		**DATA COLLECTION AND MONITORING**		AASM Scoring Manual V3.0 AASM 2022	NEW
PPSG16.1		**Data collection and monitoring are conducted in a way that ensures meaningful, relevant and accurate data is reported for interpretation.**			New
PPSG16.1.1	**M**	PSG protocols for data collection are established and documented by the facility and promptly available for collection staff.	M	POLY-AC-24	New
PPSG16.1.2	**M**	The acquisition of signals by the sleep technologist are acceptable according to most current AASM Scoring Manual. *Guidance: Deviations from the most current manual are documented and approved by the medical director.*	M	AASM Scoring Manual V3.0	New
PPSG16.1.3	**M**	The monitoring of the signals are done in 30 second epochs.	M	AAST 2021	New
PPSG16.1.4	**M**	Signal impedances are checked, monitored and documented regularly during the night study.	L		New
PPSG16.1.5	**M**	"Lights out" time is clearly documented.	L	AAST 2021	New
PPSG16.1.6	**M**	The sleep technologist identifies artifacts and makes attempts to correct them; and documents any corrective actions performed.	L	AAST 2021	New
PPSG16.1.7	**B**	Recorded data is reviewed during the entire collection period to confirm the quality of the signal.			New
PPSG16.1.8	**M**	The frequency and content of the documentation during a PSG is defined and conducted as per lab policy. *Guidance: It is recommended that the frequency of notation made by the technologist is conducted every 30 minutes.*	L		New
PPSG16.1.9	**M**	For each test, there is a process to identify in what sleep room the study was conducted.	L		New
PPSG16.1.10	**M**	Morning calibration and "lights on" are clearly documented.	L	AAST 2021	New
PPSG16.1.11	**M**	There is a standardized process to "unhook" patients in a safe and friendly manner.	L		New
PPSG16.1.12	**M**	There is a procedure to ensure that all patients have left the testing facility after the sleep study.	M		New

Technical summary

No.		Description	Risk	Reference	Change
PPSG17.0		**TECHNICAL SUMMARY DATA SHEET**		POLY-AC-24	NEW
PPSG17.1		**The technical data summary report is standardized in a way that ensures meaningful, relevant and accurate data is reported.**			New
PPSG17.1.1	**M**	A standardized technical document is established by the facility to capture all clinically relevant information by the technologist.	M		New
PPSG17.1.2	**M**	The technical summary sheet clearly identifies the patient's name, date of the study and name of the acquisition technologist.	H		New
PPSG17.1.3	**M**	Name or identification number of the scoring technologist is included on the technical summary sheet.	M		New
PPSG17.1.4	**B**	If the recording time is less than 6 hours, it is documented on the technical notes sheet along with the reason.		AAST 2021	New
PPSG17.1.5	**M**	The technical summary includes relevant findings.	M		New
PPSG17.1.6	**M**	The technical summary includes a notation of sleep stages observed throughout the PSG study.	M		New
PPSG17.1.7	**M**	The technical summary includes documentation of ECG arrythmias.	M		New
PPSG17.1.8	**M**	The technical summary includes behavioural observations.	M		New
PPSG17.1.9	**M**	The technical summary includes details of any factors that affect the quality of the study or any issues that may be relevant to the interpreting physician.	M	POLY-AC-24	New
PPSG17.1.10	**M**	The technical summary includes an assessment of snoring (e.g. mild, moderate, loud, prolonged, intermittent).	M		New
PPSG17.1.11	**B**	The technical summary includes screenshots/notes of abnormal findings.			New
PPSG17.1.12	**M**	The technical summary includes a list of medications before bed and during the night.	M		New
PPSG17.1.13	**M**	The technical summary includes PAP titration pressure settings, leakage, breath rate, tidal volume.	M		New
PPSG17.1.14	**M**	The technical summary includes mask type and size.	M		New
PPSG17.1.15	**M**	There is a procedure for communicating urgent abnormal findings.	H		New

PSG analysis and scoring

No.		Description	Risk	Reference	Change
PPSG18.0		**PSG ANALYSIS AND SCORING (METHODOLOGY)**		AASM Scoring Manual V3.0	NEW
PPSG18.1		**PSG analysis and scoring is conducted in a way that ensures meaningful, relevant and accurate data is reported for interpretation.**			New
PPSG18.1.1	**M**	The PSG data is scored manually by a RPSGT. *Guidance: Refer to the Technical Staff Requirements and Scoring category for criteria around non-RPSGT scoring studies.*	H		New
PPSG18.1.2	**M**	The terminology and scoring of all sleep stages and respiratory events is done in accordance with the most current AASM Scoring Manual.	M	AASM Scoring Manual V3.0	New
PPSG18.1.3	**M**	Standardized definitions of all neurophysiological and respiratory events are defined and documented.	M		New
PPSG18.1.4	**M**	Standardized oxygen desaturation events are defined and documented on the report. *Guidance: Oxygen desaturation events are scored with either ≥3% or ≥4% decrease from baseline.*	M		New
PPSG18.1.5	**M**	Audio-visual data is evaluated concurrently when scoring respiratory or oxygen desaturation events.	M		New
PPSG18.1.6	**M**	The entire sleep collection data is scored in 30 second epochs.	M		New
PPSG18.1.7	**M**	Artifacts and signal loss periods are evaluated as part of the scoring process.	M		New
PPSG18.1.8	**M**	Standardized scoring of leg movements is defined and available for staff.	M		New
PPSG18.1.9	**M**	Snoring assessment is based on audio/video data and technologist comments.	M		New
PPSG18.1.10	**M**	The scoring technologists reviews the data acquisition technologist's comments prior to scoring and analysis.	m		New
PPSG18.1.11	**M**	The scoring technologists includes comments on abnormal breathing patterns (e.g. Cheyne Stokes Breathing, hypoventilation, etc.).	M		New
PPSG18.1.12	**B**	The number of RERA's are reported as per the facilities scoring policies.			New
PPSG18.1.13	**M**	The facility defines what screenshots / notes are reported (e.g. abnormal or suspicious findings).	M		New

No.		Description	Risk	Reference	Change
PPSG18.1.14	**M**	Pediatric scoring criteria and rules are applied for infants and children <18 years of age.	M		New
PPSG18.1.15	**M**	There is a procedure to determine when adult scoring criteria can be applied to children. *Guidance: AASM scoring manual considers children ≥13 years of age with an adult body habitus may be scored using adult criteria.*	M		New
PPSG18.1.16	**M**	Infant sleep staging criteria are applied for children two months post-term.	M		New

Scored data report

No.		Description	Risk	Reference	Change
PPSG19.0		**SCORED DATA REPORT**		POLY-AC-24	NEW
PPSG19.1		**The scored report is standardized in a way that ensures meaningful, relevant and accurate data is reported.**		AASM Scoring Manual V3.0	New
PPSG19.1.1	**M**	The scored data report includes the facility name.	M		New
PPSG19.1.2	**M**	If scoring is outsourced, the name of the service is included on the report.	M		New
PPSG19.1.3	**M**	There is process to identify who scored the study (e.g. name or ID number).	M		New
PPSG19.1.4	**M**	The report includes patient demographics.	H		New
PPSG19.1.5	**M**	The report includes the date of the study.	M		New
PPSG19.1.6	**M**	The report includes the lights-out and lights-on time.	L		New
PPSG19.1.7	**M**	The report includes any relevant graphical information.	L		New
PPSG19.2		**Sleep documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.2.1	**M**	Total time in bed (TIB; lights-out to lights-on).	L		New
PPSG19.2.2	**M**	Sleep onset (lights-out to first epoch of any sleep stage).	L		New
PPSG19.2.3	**M**	REM latency (sleep onset to first epoch of REM stage).	L		New
PPSG19.2.4	**M**	Total sleep time (TST).	L		New
PPSG19.2.5	**M**	Wake after sleep onset (WASO).	L		New
PPSG19.2.6	**M**	Sleep efficiency (TST/TIB).	L		New
PPSG19.2.7	**M**	Time in each stage of sleep (minutes).	L		New
PPSG19.2.8	**M**	Percentage of TST in each stage of sleep.	L		New
PPSG19.3		**Respiratory event documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.3.1	**M**	Number of apneas (obstructive, central, mixed).	L		New
PPSG19.3.2	**M**	Number of hypopneas.	L		New
PPSG19.3.3	**B**	Number of obstructive hypopneas.			New

No.		Description	Risk	Reference	Change
PPSG19.3.4	**B**	Number of central hypopneas.			New
PPSG19.3.5	**M**	Number of apneas and hypopneas.	L		New
PPSG19.3.6		Apnea index.			New
PPSG19.3.7		Hypopnea index.			New
PPSG19.3.8	**M**	Apnea-hypopnea index (AHI).	M		New
PPSG19.3.9	**B**	Obstructive apnea-hypopnea index.			New
PPSG19.3.10	**B**	Central apnea index.			New
PPSG19.3.11	**B**	Central apnea-hypopnea index.			New
PPSG19.3.12	**B**	Number of respiratory effort-related arousals (RERA).			New
PPSG19.3.13	**B**	Respiratory effort-related arousal index (RERA index).			New
PPSG19.3.14	**B**	Respiratory disturbance index (RDI).			New
PPSG19.4		**Oxygen saturation documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.4.1	**B**	Number of oxygen desaturations ≥3% or ≥4%.			New
PPSG19.4.2	**B**	Oxygen desaturation index (ODI) ≥3% or ≥4%.			New
PPSG19.4.3	**M**	Mean oxygen saturation.	L		New
PPSG19.4.4	**M**	Minimum oxygen desaturation during sleep.	L		New
PPSG19.4.5	**M**	Time below specified oxygen saturation threshold.	L		New
PPSG19.5		**Hypoventilation documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.5.1	**M**	Occurrence of hypoventilation.	L		New
PPSG19.5.2	**M**	Occurrence of periodical breathing.	L		New
PPSG19.6		**Snoring documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.6.1	**M**	Occurrence snoring.	L		New
PPSG19.7		**Arousal event documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.7.1	**M**	Number of arousals.	L		New

No.		Description	Risk	Reference	Change
PPSG19.7.2	**M**	Arousal index.			New
PPSG19.8		**Cardiac event documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.8.1	**M**	Mean heart rate (HR).	L		New
PPSG19.8.2	**B**	The highest and lowest HR during sleep.			New
PPSG19.8.3	**M**	The highest and lowest HR during recording time.	L		New
PPSG19.8.4	**M**	Occurrence of any and all arrythmias.	M	POLY-AC-24	New
PPSG19.9		**Limb movement documentation is reported in a meaningful and accurate manner.**		AASM Scoring Manual V3.0	New
PPSG19.9.1	**M**	Number of periodic limb movements (PLMS) of sleep.	L		New
PPSG19.9.2	**M**	Number of periodic limb movements (PLMS) of sleep associated with arousals.	L		New
PPSG19.9.3	**M**	PLMS index.	L		New
PPSG19.9.4	**M**	PLMS arousal index.	L		New

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Abbreviation	Reference
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AAST 2021	AAST. Titration Technical Guideline. 2021 Jul 30 [cited 2024 Aug 9]. Available from: https://www.aastweb.org/Portals/0/Docs/Resources/Guidelines/AAST%20Titration%20Technical%20Guideline%202021%20RB%207-30-21.pdf
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ASA 2017	Australian Sleep Association (ASA). Clinical Practice Guidelines for performing Sleep Studies in Children. 2017
CCM	Flemons WW, Douglas NJ, Kuna ST, Rodenstein DO, Wheatley J. Access to diagnosis and treatment of patients with suspected sleep apnea. Am J Respir Crit Care Med. 2004 Mar 15;169(6):668-72.
CPSO	The College of Physicians and Surgeons of Ontario. CPSO. Clinical Practice Parameters and Facility Standards. Sleep Medicine. Fourth Edition. 2016.

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FST	Fundamentals of Sleep Technology. Third Edition. Teofilo L. Lee-Chiong, Cynthia Mattice, et al. 2019
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SZ	Ellen J. Bubrick, Saad Yazdani, et al. Beyond Standard polysomnography: Advantages and indications for use of extended 10-20 EEG Montage during laboratory sleep study evaluations. Seizure. 2014.