

**Job Class Profile:**            **Polysomnograph Technologist**

**Pay Level:**                      **LX-29**                      **Point Band:**                      **752-786**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	5	4	5	6	4	5	4	2	5	
Points	233	67	32	29	120	108	83	43	54	769

## JOB SUMMARY

The Polysomnograph Technologist is responsible for performing advanced technical, diagnostic and therapeutic work in the performance of clinical polysomnography and diagnostic neurophysiology. Work involves overnight and daytime sleep disorder monitoring, management of patients, sleep scoring analysis, and interpretation of data obtained through nocturnal polysomnogram investigations and multiple sleep latency studies. Technologists work in a specialized Sleep Laboratory that provides services for the entire province.

### Key and Periodic Activities

- Performs advanced overnight polysomnographic studies for sleep and related disorders with diagnostic and therapeutic applications.
- Prepares patients for evaluation by assessing patient questionnaires, physician referrals, existing patient records; interviews patients; and explains procedures.
- Applies monitoring equipment; chooses recording techniques and parameters; adjusts protocols as necessary to ensure correct study and results; and performs a variety of tests (i.e. polysomnographic multiple sleep latency (daytime), Maintenance of Wakefulness studies, standard and advanced electrocephalograph (EEG), sleep deprivation studies, drug induced studies, extended seizure monitoring and brain death protocols), etc.; and assesses patient's clinical condition.
- Reviews polysomnographic recordings and provides a detailed sleep scoring analysis, significant events, and technical interpretation of tests or sleep stages and events which include quantification of sleep EEG's, electrocardiogram (ECG's), respiratory variables, and movement parameters.
- Recognizes and identifies significant clinical and physiological events during testing; and initiates therapeutic measures of continuous positive airway pressure and oxygen.
- Educates patients and other stakeholders regarding sleep disorders; teaches and coordinates students in related disciplines, and provides input into evaluations.
- Develops, implements, and maintains an equipment preventative maintenance program; inspects equipment; identifies and solves technical problems; conducts calibration checks on all digital equipment; and maintains data.
- Performs some administrative functions such as schedules patient appointments, responds to correspondence through written, e-mail, fax or telephone communication modes, and tabulates statistical data.
- Assists in the direction and implementation of clinical and research protocols which include developing, organizing and revising computer patient data base, and creates a method of

### Key and Periodic Activities

- storage and archiving records that allows for efficient retrieval of data collected.
- Designs and revises questionnaires and evaluation techniques for patients with sleep related disorders.
- Participates in ongoing education programs including conferences and seminars; attends staff meetings.

## SKILL

### Knowledge

#### General and Specific Knowledge:

- Diagnostic and therapeutic neurophysiologic conditions
- Neurophysiologic tests
- Equipment repair and calibration
- Organizational policies and procedures and policy development
- Current knowledge of research in best practices.

#### Formal Education and/or Certification(s):

##### Minimum:

- Polysomnography Program/Courses (approximately 1 semester)
- 2 year Diploma in Diagnostic Neurophysiology Program for which there is also a requirement to complete 1 year of clinical training which may include didactic instruction and completion of 1,000 unassisted nerve conduction studies.
- Successful completion of the Canadian Board of Registered Electroencephalograph Technologists (CBRET) exam leading to certification with the Board of Registration of Electromyography Technologists of Canada and the Canadian/American Board of Registered Polysomnograph Technologists and professional designation as a Registered Polysomnograph Technologist (R.E.T.).

#### Years of Experience:

- Minimum: 2 - 3 years of experience

#### Competencies:

- Client care
- Follow guidelines and processes
- Written and oral communication skills
- Presentation techniques
- Computer operation, equipment calibration, and troubleshooting

### Interpersonal Skills

- A range of interpersonal skills are used to listen and ask questions such as taking a concise history from patients and to listen to patients during procedures; to provide routine information and direction regarding testing procedures to patients; to communicate complex information to physicians and other health professionals; to provide care and comfort to patients during testing, in order to obtain best results and gain their cooperation as they may be upset or unable to relax in order to fall asleep; to instruct and teach, mentor and coach, provide advice and guidance to students during their training; and to facilitate or

- make formal presentations to groups.
- Communications occur with a variety of people such as employees within the department for work related activities (i.e. secretaries for scheduling appointments, chart retrieval), respirologist and/or neurologists (i.e. to discuss patient test results), students (i.e. for teaching purposes), and patients (i.e. to explain procedures); between other groups outside the department, supervisor for departmental operations, suppliers/contractors, and sales representatives, internal executives, and professional associations and advisors.
- The most significant contacts include patients, Neurologists/Respirologists, other health professionals and supervisor/manager.

## EFFORT

### Physical Effort

- Work demands occasionally result in considerable fatigue requiring periods of rest, but do not require strength and endurance.
- Occasionally lifts and moves objects less than 10 lbs. (i.e. files, supplies, equipment, etc.); uses physical balance and handling to assist patients in and out of bed during sleep studies; to push and pull portable equipment over 50 lbs. and to work in awkward and cramped positions and confining spaces (i.e. ICU/emergency rooms) when performing some procedures.
- Regularly, stands and walks when greeting patients or setting up equipment for procedures. Constantly, when performing procedures, sits in confining work positions where there is limited ability to move about, as they operate equipment and monitor and analyze video displays on a screen.
- Occasionally, uses gross motor skills to operate heavy equipment and equipment that requires rapid physical movement and reflexes. Constantly uses fine motor skills, fine finger movement requiring accurate control and steadiness to operate equipment, machinery and the computer mouse to view images on monitors or to write reports on the computer.

### Concentration

- **Visual concentration** is required for proper data acquisition on a computer screen in dark rooms, to stare at a computer screen for extended periods to detect sleep patterns, disorders, and disturbances, and to observe patients for their safety.
- **Auditory concentration** is required to listen to what a patient is saying; to hear specific and unique auditory sounds associated with sleep disorders/abnormalities, and to listen for alarms/monitors on equipment. Occasionally, these procedures are performed on portable machines outside the department where the environment is noisy requiring attentiveness in hearing concentration.
- **Other sensory demands such as touch** is required to hook up equipment to patients in order to monitor symptoms, conditions, or any unusual behaviours (i.e. tremors, eye blinks).
- **Repetition requiring alertness** is evident when performing similar procedures for extended periods where there is a requirement to remain vigilant and alert to detect abnormal changes in sleep patterns and behaviours and to monitor patients, some of whom may have sleep apnea, to ensure their health and safety.

- **Higher than normal levels of attentiveness** are required during testing to detect changes in sleep patterns which may forecast imminent problems, and to ensure patient safety during testing.
- Does not have **control over the pace of work** due to the unpredictable number of patients that require sleep studies. Time pressures exist to complete regularly scheduled appointments and to fit urgent patients in as required. **Interruptions** can occur from external noise due to the environment, or because of physicians/residents/students entering rooms when procedures are ongoing in order to speak with the technologist, the patient, to observe recordings, or to train on how to record events and monitor studies.
- **Eye/hand coordination** is required when applying electrodes, setting up and calibrating equipment, and using the computer mouse to note changes in sleep patterns, etc.
- **Exact results and precision** are required when recording abnormal sleep patterns and disturbances, in order to provide the physician with accurate information to diagnose the patient's disorder.

### Complexity

- Work involves a series of tasks that are different/unrelated and require the use of similar skills and knowledge.
- Work tasks vary from being repetitive/well-defined and related to sometimes different tasks with unrelated aspects; however work is performed within established methods and procedures. Work involves technical, diagnostic and therapeutic work in the performance of clinical polysomnography and diagnostic neurophysiology involving sleep disorder monitoring, patient management, sleep scoring analysis and interpretation of data.
- The most typical challenging problems are related to uncooperative/difficult/or upset patients who are unable to fall asleep. The technologist must be creative and understanding with the patient in order to obtain accurate results. Another challenge is often working alone and being responsible for clinical management of a patient often over a 12-hour period requiring extra vigilance in their assessment and scoring analysis at all times.
- When addressing typical challenges, problems or issues, references available include departmental policies and procedures, American Polysomnograph Technologists standards, International Standardized Sleep Scoring System, equipment manuals, infection control guidelines, Canadian Association of Electroneurophysiology Technologists (CAET) technical standards and guidelines, code of ethics, Canadian Safety Association (CSA) standards, quality initiative guidelines, and consulting with the manager.

## RESPONSIBILITY

### Accountability and Decision-Making

- Work tasks and activities are moderately prescribed and controlled.
- Technical, clinical, and therapeutic decision-making is performed independently and records are reviewed by the neurologist or occasionally by the respirologist. Administrative management is provided by the manager.
- Has the decision making ability to record, monitor, assess, initiate treatment and evaluate patients independently as well as order limited supplies and make changes to patients' scheduling to accommodate urgent patients.
- Requires formal approval to purchase non-stock items, and to implement changes in

<p>policies and procedures.</p> <ul style="list-style-type: none"> <li>— Has discretion to exercise within predetermined limits regarding the clinical management of patients.</li> <li>— Uses discretion and judgement to interpret directions and apply guidelines during testing. Discretion and judgment is also used during testing when making decisions related to the standards and guidelines set out by the Canadian/American Board of Registered Polysomnograph Technologists.</li> <li>— Exercises a high degree of independent discretion and judgement when working alone with patients for extended periods of time and when teaching students and getting them to record symptoms, disorders, etc.</li> </ul>
<p><b>Impact</b></p> <ul style="list-style-type: none"> <li>— Work activities have an impact within the immediate work area, the department, organization, and on patients.</li> <li>— Work activities can have a positive or negative impact on patients' sleep pattern and conditions; can impair work performance and put patients at risk for accidents, injuries, and health problems. However, aiding in the diagnosis of sleep disorders can help improve patients' diagnosis and affect their treatments.</li> <li>— The work activities impact the following resources: equipment, processes and systems (i.e. tests and procedures), information (i.e. sleep disorder conditions), finances, facilities, material resources (i.e. supplies and linens), human resources (i.e. housekeeping), health and safety, and corporate image.</li> <li>— Examples of errors that could occur are errors in recording of events, incorrect set-up of tests which can result in incorrect interpretations of behaviour, and machines not calibrated properly.</li> <li>— The most significant impact of errors or mistakes are with the recording of patients' tests; subsequently impacting a patient's diagnosis and/or treatment.</li> <li>— Errors are mitigated as results of tests are reviewed and signed off by a neurologist prior to being released to the attending physician and occasionally polysomnograph reviews are completed by a respirologist. The technologist and/or the neurologist typically detect errors, normally within hours of occurrence.</li> </ul>
<p><b>Development and Leadership of Others</b></p> <ul style="list-style-type: none"> <li>— Not responsible for the supervision of staff.</li> <li>— Provides development and leadership activities such as on the job advice/guidance, job direction, feedback, orientation, and job training to new employees. Acts as a technical mentor or advisor for the department; provides formal clinic and classroom training; and organizes, delegates, and coordinates the work of students.</li> </ul>

## WORKING CONDITIONS

<p><b>Environmental Working Conditions</b></p> <ul style="list-style-type: none"> <li>— Required to practice safety precautions such as adhering to safety guidelines when working around electrical equipment and are required to wear safety shoes to protect from heavy portable machines. Practices universal safety precautions by wearing gloves regularly, and for patients in isolation or who are infectious, wears protective equipment such as gowns</li> </ul>
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and masks.

- There is a limited likelihood of minor cuts, bruises, abrasions, minor illnesses, fractures, injuries or illnesses resulting in partial or total disability. There is a moderate likelihood of developing eyestrain.
- When performing tests/procedures, there is constant exposure to limited lighting (i.e. sleep studies are performed in dark rooms), isolation when doing sleep studies (i.e. typically the only technologist working alone at night for extensive periods). Occasionally, exposed to electrical shocks from the use of equipment, glare from monitors, bodily fluids, infectious diseases, awkward or confining workspaces, unusual/distracting noise, fumes, hazardous chemicals, toxic or poisonous substances (i.e. colloidal and acetone), odours, physical dangers to one self when trying to ensure patients safety during sleep studies, and sharp objects.