Name of Policy:	**Sleep lab quality assurance program**
Policy Number:	3364-171-05-02
Department:	Sleep Disorders
Approving Officer:	Senior Hospital Administrator
Responsible Agent:	Director, Sleep Disorders Center
Scope:	The University of Toledo Medical Center Pulmonary Services Department

THE UNIVERSITY OF TOLEDO MEDICAL CENTER

Effective Date: 03/17/2023

Initial Effective Date 03/17/2023

X New policy proposal	_____ Minor/technical revision of existing policy
_____ Major revision of existing policy	_____ Reaffirmation of existing policy

(A) Policy Statement

The Sleep Lab will perform quality review to maintain the standards set forth by the American Academy of Sleep Medicine (AASM).

(B) Purpose of Policy

To improve patient care, process and clinical outcomes the facility will be committed to continuous quality improvement.

All qualified and trained Polysomnographic Technologists and sleep staff, are responsible for collecting and participating in the quality review of the department to ensure appropriate patient evaluation and management.

(C) Procedure

Quality improvement measures will be evaluated every quarter and reported to staff and institution on a quarterly basis by the Medical Director. The Lab Manager will be included in the development and reporting of activities as appropriate, and will serve as a resource to the department. Other appropriate individuals may be included in the data gathering and reporting of the quality improvement activities depending on the organizational structure of the facility.

The Medical Director shall evaluate the effectiveness of the quality improvement program at least on an annual basis to identify other indicators as needed, which may require monitoring as defined by performance review.

The QA program will identify outcome and process measures to monitor and evaluate to determine methods of improving patient care and outcomes.

Monitored indicators will minimally include but not be limited to:

1. A process measure for OSA;
2. An outcome measure for OSA;
3. An outcome measure for another sleep disorder (e.g., RLS, insomnia or narcolepsy); and
4. Inter-scorer reliability.

The Medical Director along with the Lab Manager will be responsible for establishing and implementing the sleep facility QA program. Quarterly, the facility director will attest to the effectiveness of all quality improvement efforts and implement remediation for measures for those indicators that do not meet the established thresholds.

1. The QA plan will monitor indicators that measure sleep facility processes and patient outcomes. Indicators will be identified and chosen through clinical and administrative collaboration and may be selected from the AASM Published Quality Measures.
2. ***INDICATOR SELECTION—SLEEP FACILITY:*** *Detailed indicator descriptions are attached*
    a. Process Measure for OSA—Adult—Assessment of Sleepiness
    b. Outcome Measure for OSA—Adult—Improve Quality of Life
    c. Outcome Measure for another sleep disorder (e.g. Insomnia)—Improving Daytime Functioning
    d. Inter-Scorer Reliability
3. **Collection and review of the data**
    a. Monitoring and collection of data will be performed monthly to identify variances from the established criteria:
        i. The data will be collected for the individual indicators using a chart audit tool
        ii. The results will be measured and analyzed.
        iii. Indicators that have failed, met or exceeded their established threshold will be identified.
        iv. Further measurement of indicators will be discussed.
4. **Evaluation and reporting**
    a. The Medical Director will review and report all measures to determine if minimum expected thresholds are met. Evaluation shall focus on identifying opportunities to improve process and outcomes of patient care and actual identified problem areas that effectuate a negative outcome. Conclusions shall be drawn regarding the evaluation of data presented with recommendations for remediation determined by the Medical Director.
    b. Results of the indicators must be tracked at least quarterly, aggregated, and reported to the Medical Director for review and determination of areas for improvement plans, for remediation of measures that do not meet the established threshold, and decisions regarding recommendations for improvement.
        i. Written summary reports of all indicators must be signed and dated by the Medical Director.
        ii. Results of the indicators appropriate to the technical staff will be reported at their monthly staff meeting.
        iii. Written summary reports will be kept on file for a period of at least five years.
        iv. Medical Director will review and determine the areas requiring improvement.
        v. A remediation plan will be created.
        vi. Actions will be taken as appropriate to implement the resolve.
        vii. Other indicators may be chosen as warranted.

OSA

For the purpose of quality assurance (QA), the Sleep Lab will consistently utilize certain standards set for by the AASM for both in lab sleep studies and home sleep apnea testing (HSAT). The manager of the Sleep Lab will be responsible for compiling the data into a quarterly report. The quality assurance measures shall be discontinued once the minimum expected thresholds are met for four continuous quarters and a replacement measure will be implemented. The Medical Director will review, date and sign the quality report quarterly and make the necessary modifications to the QA program then follow-up with the staff as needed.

Examples of the items tracked for HSAT are:

- Study failure rate
- Number of retests required and reasons for the retest
- Adequacy of data for the clinical decision making
- Patient satisfaction
- Turnaround times from receiving the order to scheduling, scoring the study to interpretation
- Positive Airway Pressure (PAP) compliance and patient reported outcomes after treatment with PAP are maintained at the physician's office where the follow ups are being performed.

1. All technologists will participate in the quality program.
    a. Each HSAT will be tracked on the department log for:
        i. Study failure
        ii. Study needing repeated and reason
        iii. Information gathered from study was sufficient
        iv. Turnaround times as stated in policy statement above
2. Patient satisfaction will be tracked electronically on a separate department log
3. The data will be collected for the individual indicators using a chart audit tool
4. Monitored indicators for HSAT will minimally include:
    a. The process measure for the obstructive Sleep Apnea (OSA) shall be assessment of sleepiness
    b. The process measure for OSA shall be the prescription of evidence-based therapy
    c. The outcome measure for OSA shall be improvement of quality of life
5. Indicators for in lab testing will minimally include but not limited to:
    a. The process measure for OSA the be assessment of sleepiness
    b. The outcome measure for OSA shall be improvement of quality of life
    c. An outcome measure for narcolepsy shall be assessment of excessive daytime sleepiness post treatment

Inter-Scorer Reliability (ISR)

1. All scoring technologists will participate in the Inter-Scorer Reliability (ISR) program for in lab testing only.
    a. ISR will be reported on a quarterly basis as part of the quality assurance program
    b. Each scorer will log-in to the AASM ISR online program and score the assigned monthly 200 epochs using the criteria given at the beginning of the test. The AASM serves as the gold standard for comparison.
    c. Reports are printed and maintained in a binder
    d. Performance outcome of each scorer against the gold standard will be reported as a percent concordance defined as the quotient of the total number of epochs of agreement for a given parameter and the total number of epochs in the analysis sample multiplied by 100
    e. Scorer reliability standard will be 85% agreement with the gold standard
    f. The Medical Director will review, sign and date
    g. The Medical Director will indicate if corrections or follow-up with staff is necessary

h. The manager will develop an action plan for each technologist when scoring falls below the acceptable level of agreement. Such plans may include but are not limited to:
   i. Review of the current version of the AASM Scoring Manual
   ii. Review of the AASM ISR Record Review Video
   iii. Additional inter-scorer assessment review
   iv. Focused review/retraining with the manager
   v. Educational assistance with the manager
   vi. Disciplinary action plan will be implemented if 10 ISR assessments are not completed in a calendar year

See Procedure Sleep Lab Quality Assurance Program

Approved by:		**Review/Revision Date:** 03/23
/s/ Michael Taylor Director, Pulmonary Services	03/20/2023 Date	
/s/ Andre Aguillon, M.D. Medical Director	03/19/2023 Date	
/s/ Russell Smith Senior Hospital Administrator	03/20/2023 Date	
Review/Revision Completed By: *Director, Sleep Disorders Center*		**Next Review Date: 03/26**
Policies Superseded by This Policy:		

It is the responsibility of the reader to verify with the responsible agent that this is the most current version of the policy.