

## CPAP TITRATION PROTOCOL

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### PURPOSE

In order to provide the highest quality care for our patients, our sleep disorders facility adheres to the *AASM Standards for Accreditation*. The accompanying policy and procedure on CPAP titrations follows the spirit of the *Clinical Guidelines for the Manual Titration of Positive Airway Pressure in Patients with Obstructive Sleep Apnea*. We recognize that the guidelines from this 2008 consensus paper are non-binding, and that there may be some minor deviations found in our policy.

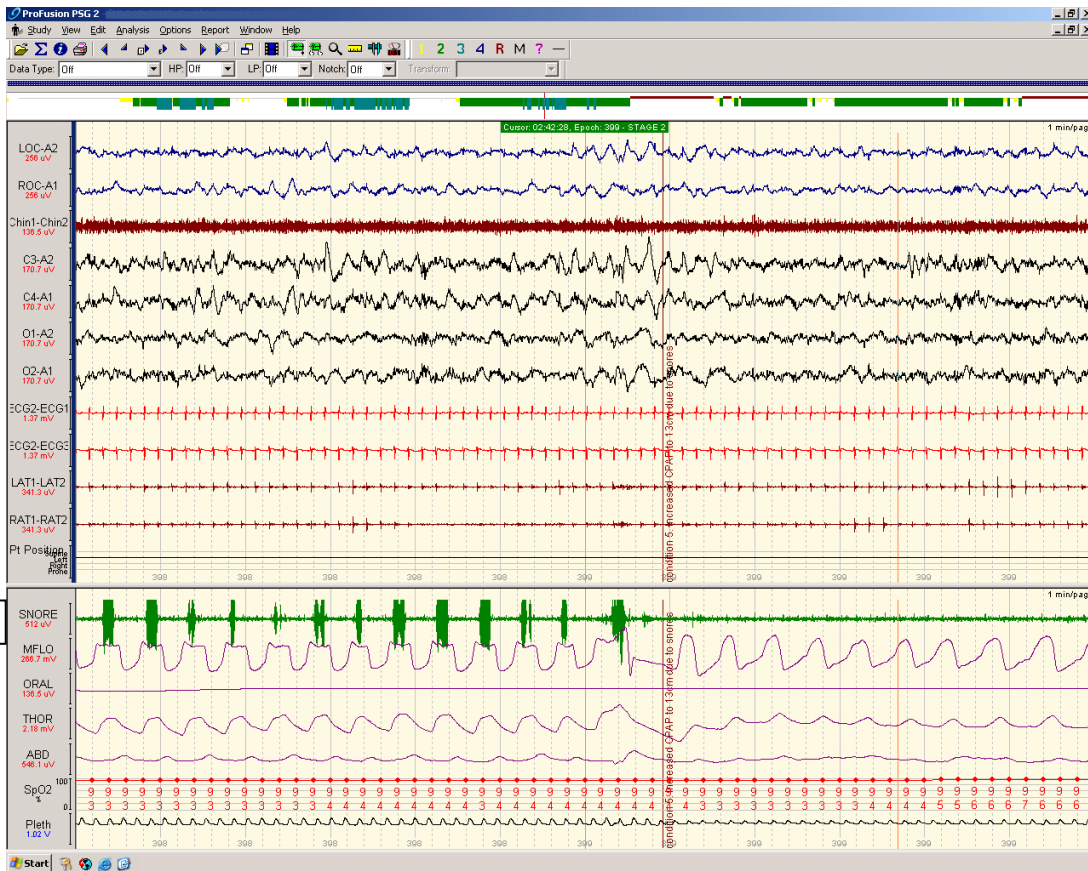
### POLICY

All individuals who record sleep studies must follow best practices for CPAP titrations in order to attain the ideal pressure setting for their patients. Too low of pressures may cause patients to either be sub-optimally treated or to wake up in a panic. Too much pressure may cause the patient to experience bloating or mask leakage. Determining the appropriate pressure setting for each patient will lead to improved adherence and outcome. CPAP titrations are not an exact science, and it is understood that technologists may need to make minor changes for individual patients. The procedure below is meant as a guideline.

### PROCEDURE

- 1.0 Review the patient's clinical notes for pertinent history.
- 2.0 Review the patient's previous sleep study or studies to assess the severity of sleep-disordered breathing, the type of respiratory events, and the position and stage at which the events were most severe. This will help to attain a better titration.
  - 2.1 Example: If the patient's sleep-disordered breathing was worse in the supine position, be sure the patient stays in the supine position as much as possible; or, if it is worse during REM sleep, minimize sleep disruption so that the patient can achieve and maintain REM sleep.
- 3.0 Application of electrodes, montages, filters, sensitivities, and scoring will be performed according to the current version of *The AASM Scoring Manual*.
- 4.0 Begin the patient on a setting of five cm of water. If the patient is morbidly obese or unable to fall asleep on the setting of five cm of water, higher starting pressures may be needed.
- 5.0 If apneas or frequent hypopneas are present, pressure settings should be increased by two cm of water. If occasional hypopneas, snoring, or mask flow limitation (see below) are present, pressure settings should be increased by one cm of water and maintained for at least five minutes to determine if events improve or resolve. Pressure settings may need to be increased more quickly during REM sleep given the limited amount of REM during sleep and the need to treat events during this stage.

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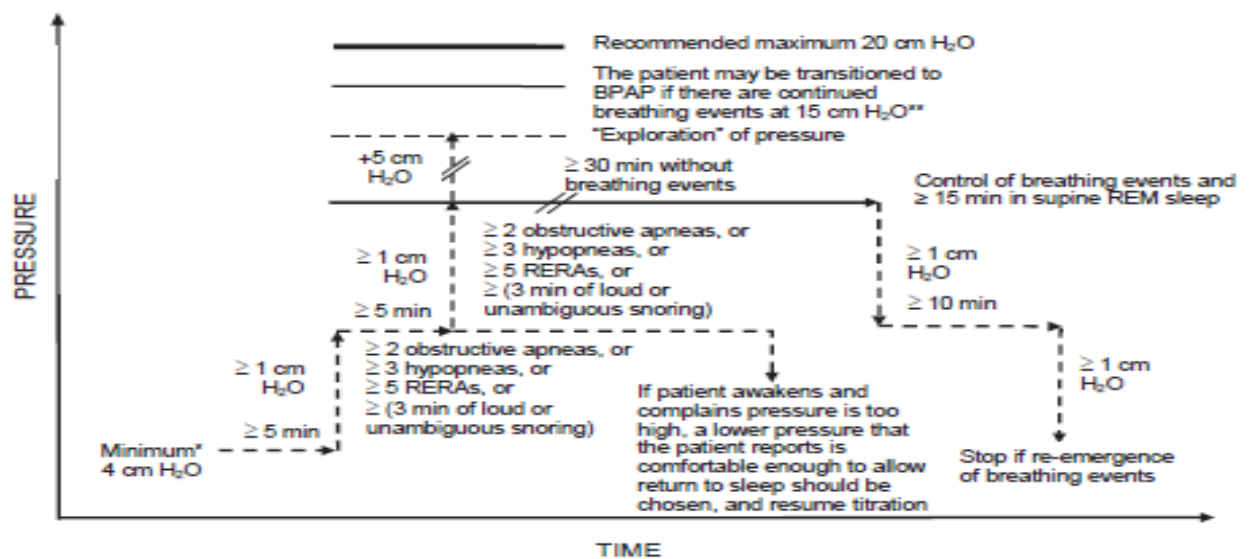


- 6.0** If a mask leak occurs, the tech should first fix the leakage before raising the pressure. Otherwise, the final pressure setting chosen for the patient may be too high. Once the mask leak has been fixed, decrease the pressure to the last setting where mouth breathing and/or mask leakage was not present, and then re-titrate as indicated. Make sure to document directly on the study the steps taken to resolve the leak and the type of masks used. Pressure settings usually do not need to be set as high with a nasal-mask than with a full-face mask.
- 7.0** The recoding technologist should document directly on the study at least every 30 minutes.
- 8.0** If the patient takes a break from wearing the mask, do not decrease the CPAP pressure on attempted return to sleep unless the patient remains awake for 15 minutes or the patient specifically requests that the pressure be lowered.
- 9.0** Do not raise pressure settings for central apneas. If the patient develops central apneas, pressure setting may need to be lowered.
- 10.0** If the patient is unable to tolerate CPAP secondary due to: 1) Persistent mouth breathing despite use of a full-face mask/chin strap; 2) Inability to exhale against higher expiratory pressures (typically beginning anywhere from 15 to 20 cm of water); or 3) Has frequent central apneas; the use of bilevel positive airway pressure may be indicated. Document directly on the study why the patient is being switched from CPAP to bilevel.

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**11.0** Ensure that supine sleep has been seen on the chosen setting. Going above the chosen setting by one or two cm of water to show range may be helpful to ensure that the correct pressure has been established.

### Positive Airway Pressure Titration Protocol/Algorithm for CPAP Administration:



**CPAP Titration Algorithm for Patients ≥12 years During Full- or Split-Night Titration Studies.** Note: Upward titration at ≥ 1-cm increments over ≥ 5-min periods is continued according to the breathing events observed until ≥ 30 min without breathing events is achieved.

\* A higher starting CPAP may be selected for patients with an elevated BMI and for retitration studies

\*\* The patient should also be tried on BPAP if the patient is uncomfortable or intolerant of high CPAP