

Evidence Discussion (SL 2.6.1)

Sleep apnea worsens over time, when associated with major risk factors such as BMI, age, and gender. [1] Repeated routine sleep testing without positive impact on management of care, is not indicated. Aging as a sole indication for repeat diagnostic testing is not supported. A subset of a large cohort of 427 randomly selected community-dwelling elderly subjects were found to have no statistically significant effect of age on RDI over an 18 year follow-up. RDI increase was associated with BMI increase and presence of self-reported high blood pressure. [2] Supporting this association of RDI increase with BMI increase, and not age alone, was data from the Sleep Heart Health Study which showed a strong correlation between AHI and weight change. [3]

In addition, ongoing treatment with PAP requires a qualifying sleep study on file. Therefore, a repeat diagnostic sleep study in the home or laboratory may be needed if the details of the prior study cannot be obtained.[5,6] Many common sources of the available information include the member, the previous sleep physician's office, the sleep laboratory, and/or the previous or current DME company.

When unnecessary repeat sleep testing is performed, a false negative result showing absence of sleep apnea may occur due to factors related to night to night variability. [7-11]

This may result in loss of qualification for PAP therapy. Discontinuation of treatment would be harmful in this scenario, given the relationship between sleep apnea and neurocardiac morbidity and mortality.[12,13] Significant time is saved in avoiding unnecessary testing and delay in re-initiation or continuation of treatment.

For some indications, a titration study is the best test, rather than a repeat diagnostic or split-night study.[14] When a split night study is inappropriately performed instead of a titration study, the patient may be harmed during the study when a PAP machine is not being used and increases their risk of possible neurologic/cardiovascular adverse events. If a split night study is inappropriately performed, the patient would need to return to the laboratory for a full night titration, leading to a delay in care. Repeating a diagnostic study or diagnostic portion of a sleep study in lieu of a titration study creates a missed opportunity to obtain data about the titration of PAP therapy to make a decision on changes to therapy.

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