Testing your Patients Sleep Apnea at Home

Cardiologists have always been early adopters of home-based and telemedicine applications and telehealth tools. For example, the Holter monitor that gathered data on the heart rhythms of cardiac patients over an extended period of time from their homes was one of the earliest instances of telehealth. Consequently, cardiologists are already accustomed to remotely monitoring their patients through implantable cardiac devices such as pacemakers and defibrillators that continuously collect and transmit data back to clinicians together with their main tasks of keeping the heart beating.

Alongside the popularity of telemedicine for cardiac patients lies the rising awareness of the link between Sleep apnea and heart disease. With concern growing for the effects of sleep apnea on patients’ cardiovascular risk and cardiac disease progression, home sleep testing is the latest ambulatory tool in the cardiologist’s arsenal.

The drawbacks of in-lab sleep testing
In-lab comprehensive sleep tests, also called polysomnography or PSG, was the first breakthrough in the diagnosis of sleep disorders. The first sleep clinic was set up at Stanford University in 1970; today, over 2,500 sleep centers are accredited by the American Academy of Sleep Medicine (AASM) to carry out sleep testing.

However PSG tests have their drawbacks:
- Discomfort: Many intrusive tubes and wires make the experience off-putting for patients.
- Expense: Even if the patient’s insurance covers part of the cost, an in-lab sleep test runs to thousands of dollars. With the trend for high deductibles on the rise, patient may delay being tested for months.
- Delay: The wait time for a sleep study ranges from a couple of weeks to several months and it takes another 2 weeks on average for the results to be prepared. This is a long time for cardiac patients scheduled for ablation or on accelerated deterioration of their disease.
- Patients with symptomatic cardiac disease are worried and pre-occupied with the uncertainty and discomfort they are experiencing. Asking them to add another cumbersome and efforts heavy in-lab test drive many of them to ignore the referral and skip or delay it into the future.
The rise of home sleep tests

In December 2007, an American Academy of Sleep Medicine (AASM) task force published guidelines on the use of unattended potable monitors (PMs) for the diagnosis of Obstructive Sleep Apnea (OSA) in adults. The shift to Home sleep began in full force in March 2008, when the Centers for Medicare & Medicaid Services (CMS) released its proposed decision for modification of National Coverage Determination (NCD) policy 240.4 pertaining to coverage of continuous positive airway pressure therapy (CPAP) for adult with obstructive sleep apnea (OSA). The proposed modification allowed for an initial 12 week period of CPAP coverage when OSA was diagnosed based on unattended home sleep testing (HST). CPAP would be subsequently covered for those diagnosed with OSA who benefit from CPAP during the 12-week trial.

In March 2017 in the wake of recent technological advances, the AASM’s revised guidelines and accepted home sleep tests (HST) which measure peripheral arterial tonometry (PAT) as well as oximetry and actigraphy as “technically adequate” for the diagnosis of Obstructive Sleep Apnea in patients. Currently WatchPat is the leading sleep apnea diagnosis device in market place that uses this unique PAT technology.
Advantages of taking sleep tests at home

Besides overcoming the drawbacks of PSG, Home Sleep Apnea Tests advantages as follows:

- More and more insurance carriers only approve a Home Sleep Apnea Test (HSAT) as a first line diagnosis for those that have a high pre-test probability of having obstructive sleep apnea (OSA).
- Significantly lower out-of-pocket cost / deductible
- Less stress in taking the test in a familiar environment.
- A simpler HST is less uncomfortable and intrusive than an in-lab test.
- Less time involved in traveling to a sleep clinic and undergoing various preparations.

Advantages for the clinicians

For the physician, an HSAT can be administered quickly and at times even right at the point care in the cardiology office and delivers results within a day or two. In this way a cardiac patient can be diagnosed with OSA and begin treatment immediately, rather than watching their heart disease get worse while they wait for an in-lab sleep test. The PSG can still be conducted and used for more detailed information when it is needed as a secondary comprehensive investigation.

Why is WatchPAT ideal for cardiologists?

WatchPAT™ home sleep test is an ideal solution for cardiologists who focus on improving outcomes and their patients’ health-related quality of life, to expand their service portfolio to include the speedy diagnosis and treatment of sleep apnea. WatchPAT™ combines the simplicity of pulse oximetry together with the accuracy of PSG and the cost-effectiveness of a HSAT.

As Prof. Andrea Natale from Austin mentioned in the 2016 HRS symposium “In the past I used to convince the patient to do a sleep study. Many of them did not do it. Now they come to our office, they see the flyer about sleep apnea, they ask me to take the test because the test is so easy. Clearly, there’s benefit in the ease of the device to reach diagnosis”.

Dr. Randy Lieberman from Detroit was quoted saying that “Once we explain to the patients that identification of the sleep apnea can lead to better quality of life or potentially better management of their cardiovascular disease component, then the question is; What kind of a sleep study? Patients are very reluctant to accept the information from an overnight sleep study outside their house. They tell us, they do not believe the data because they were uncomfortable in their bed and they couldn’t sleep. When they have a home sleep study done their own bed where it is minimally invasive, minimum amount of equipment, then they much more open to accept the diagnosis and the treatment”.

As more medical tests are offered in the ambulatory settings, it's easy for your patients to be tested more easily and keep on top of their health. Home sleep tests empower patients and improve quality of care, while on a macroeconomic level telemedicine and home testing makes care more accessible while cutting operational costs and waiting times.