

## Improving CPAP Adherence Through Digital Health Technology

Continuous Positive Airway Pressure (CPAP) is considered the Gold Standard and most effective treatment for obstructive sleep apnea (OSA), however, the effectiveness of the treatment is limited due to frequency of usage by patients. To fully reap the health benefits of the PAP therapy regular usage is essential. Kribbs et al defined adherence as use of the CPAP machine for 4 hours or more per night for at least 70% of the days monitored.<sup>1</sup>

### Traditional Approach

Techniques that have been used to improve the rate of CPAP adherence (According to Lynch et. al., 2015)

- Patient Education
- Supportive Behavioral Interventions
- Clinical Support
- Peer Support

Over time, despite the above strategies, techniques and innovations, adherence rates are often still below 60% and the related costs are high for all involved. Another approach that is gaining increased recognition as having the potential to improve adherence or patient success with CPAP Therapy is the use of telemedicine. Recent studies have suggested that telemonitoring (guided online support for PAP patients) can reduce the number of patients terminating therapy, improve overall PAP usage, reduce the workload associated with follow-up for care providers, and improve the economic model of treating sleep apnea patients (Woehrle et.al., 2018).

Even with these encouraging results, there is still room to further improve the telemedicine-based strategies for better adherence and satisfaction with CPAP therapy. With the technological advances now available, new ways are being pursued to better engage patients in the regular use of their CPAP Machines (Malhotra et. al., 2018).

## Why choose CPAP Pros?

- Professional CPAP Coaching Program™
- Contactless Covid Policy (safe for patients and staff)
- Drop shipping of HSAT devices as well as CPAP equipment\*
- Virtual Telesleepcare
- Professional CPAP Coaches are Registered Sleep Technologists
- We are currently working with the CPSBC to be one of the first accredited sleep care providers in British Columbia
- Level 3 home sleep tests are manually scored by an RPSGT (no auto scoring of studies)
- Great Prices



## Digital Health Technology Enhanced Approach

ResMed (a top manufacturer of sleep and respiratory technology) works hard to improve education and the use of technology for both health care providers as well as patients. They recently released a research and cloud-based, mobile application for PAP users called myAir which is available for ResMed CPAP and Bi-Level devices. This application is (HIPAA) compliant which is in line with the PIPA or Personal Information and Protection Act of British Columbia specifically.

The myAir app is an interactive self-management app which helps patients monitoring their therapy and provides information regarding their sleep and therapy usage from previous nights while on therapy. The app also provides valuable coaching tips and education (Woehrle et.al., 2018).

Utilizing a tool like myAir adds another level to telemonitoring which can directly help patients become more engaged with their own care in turn improving long term adherence and success with treatment.



### Direct benefits of utilizing a tool like the myAir application:

**1. Patients have shown significantly higher usage of their PAP therapy:** In a recent study by Malhotra and colleagues, a high proportion of CPAP users (87.3%) who used myAir digital health solution achieved an average therapy usage of 5.9 hours or more per night. This suggests that myAir does have a positive effect on adherence to CPAP therapy.

**2. It can reduce potential struggles with CPAP:** "Strugglers" defined as an average PAP user of <2 h per night in the first 14 days, had better adherence with the use of myAir technology in the first 90 days of therapy (Malhotra et. al., 2018).

**3. There can be a significant reduction in mask leaks:** One of the factors why some patients abandon CPAP therapy is because of poor mask fit and high leakage. Given this, the reduction in air leak seen with the use of the myAir app can help improve long term use of CPAP therapy.

**4. Lastly, having a patient engagement tool can contribute to overall health literacy:** The myAir app provides patients with detailed information about their sleep therapy usage. It also provides coaching tips to increase skills and education, improving comfort with therapy (Woehrle et.al., 2018). The use of real-time feedback can help patients easily notice the benefits of treatment empowering them to feel more motivated.

### References:

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