Results from World's Largest Study on Sleep Apnea and Digital Connected Care

ResMed's 128,000-patient study shows that digital self-monitoring and clinical management tools improve patients' adherence to treatment - one of the biggest issues in healthcare today.

Poor adherence or non-adherence to medical treatment costs an estimated $290 billion annually in the U.S.1 It limits effective management and control of chronic illnesses, increases the likelihood of preventable disease progression, and increases hospitalizations, avoidable doctor and emergency room visits, and other problems arising from poor health.


LOS ANGELES, Oct. 25, 2016 /PRNewswire/ -- In a new research study being presented tomorrow at the CHEST 2016 annual meeting, ResMed (NYSE: RMD) will share evidence that people who use a self-management app when treating their sleep apnea with positive airway pressure (PAP) are significantly more likely to stick with their therapy.

The observational study included more than 128,000 people with sleep apnea whose devices allow for their therapy to be remotely monitored by their clinician or by the patients themselves via myAir™, ResMed's cognitive behavior–based patient engagement app for the web and iPhone®.

More than 87 percent of PAP users were compliant on therapy when using ResMed's myAir and monitored by AirView™, compared to 70 percent compliance for those monitored by AirView alone (a 24% relative increase). While continuous positive airway pressure (CPAP) therapy, the gold standard in treating sleep apnea, has vastly improved due to innovations in device comfort and ease of use, in general, CPAP adherence may still be as low as 50 percent without the use of wireless monitoring.

"This new study shows that online self-monitoring tools engage patients and significantly improve their compliance and adherence to treatment," said ResMed Medical Director Adam Benjafield, PhD. "While our study focused on PAP users, we believe these results may be generalized more broadly in terms of the role online tools can have in improving medical treatment compliance overall."

"Half of all patients don't take their medications as prescribed,2 and we know that same statistic holds true for compliance with PAP therapy for sleep apnea," said Benjafield. "The effects of poor treatment adherence are profound, not only for the number of people suffering due to poor medication adherence, but also in terms of emergency room visits, hospitalizations and their financial burden to the healthcare system."

"Our patients engage with their therapy so much more after joining myAir, since it's easy to use and understand the data," said John Quinlan, owner of Quinlan's Pharmacy and Medical Equipment in Upstate

About myAir
myAir is available on the web and via an iPhone app to patients using ResMed's Air10™ devices. myAir allows people to track the progress of their therapy between visits to their clinician, including a simple daily sleep score, details on four key treatment metrics and personalized coaching tips.

As a companion to AirView, ResMed's cloud-based tool for healthcare professionals, myAir reinforces the efforts of clinicians and helps patients keep themselves informed and motivated, factors long considered to play a role in effective treatment of sleep apnea and other medical conditions.

Clinicians view myAir as a powerful tool for reducing the risks and costs associated with these health problems for their sleep apnea patients. Every day, 1,000 new patients sign up for myAir.

"Our patients engage with their therapy so much more after joining myAir, since it's easy to use and understand the data," said John Quinlan, owner of Quinlan's Pharmacy and Medical Equipment in Upstate
New York. "When more engagement leads to better compliance, I think equipment providers everywhere should encourage their patients to use tools like myAir."

**Study details**
This retrospective, observational study was designed to minimize risks of potential bias due to differences between the myAir and AirView-only groups that affect outcome variables by matching patients on propensity score. There were 128,037 patients in the study cohort. Patients in both groups were effectively treated with PAP therapy over the 90 days.

There was a significant improvement in the percent of patients that reached Medicare adherence within 90 days (87.3% for myAir patients vs. 70.4% for AirView-only patients, with a p value less than 0.0001), showing an absolute 16.9% improvement (a relative 24% improvement) in adherence. Additionally mean daily PAP usage was also significantly higher in myAir patients compared to AirView-only (5.9 hours vs. 4.9 hours, respectively).

The study will be presented on October 26, 2016, at the CHEST Annual Meeting in Los Angeles. Visit ResMed Booth #2411.

**About ResMed**
ResMed (NYSE:RMD) changes lives with award-winning medical devices and cutting-edge cloud-based software applications that better diagnose, treat and manage sleep apnea, chronic obstructive pulmonary disease (COPD) and other chronic diseases. ResMed is a global leader in connected care, with more than 2 million patients remotely monitored every day. Our 5,000-strong team is committed to creating the world's best tech-driven medical device company – improving quality of life, reducing the impact of chronic disease, and saving healthcare costs in more than 100 countries.

1 NEHI. "Thinking Outside the Pillbox." 2009
2 Osterberg L and Blaschke T. *N Engl J Med* 2005
* myAir's iPhone app is available in the U.S. The web application is available in 21 countries.
** CPAP compliance, as defined by the U.S. Center for Medicare & Medicaid Services, requires using CPAP 4 hours a night for 70% of nights in a 30-day span within the first 90 days of therapy.

For Media:  
Jayme Rubenstein  
Public Relations Manager  
O: 858-836-6798  
news@resmed.com

For Investors:  
Agnes Lee  
Senior Director, Investor Relations  
O: 858-836-5971  
investorrelations@resmed.com


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