Online monitoring system for patients with sleep apnoea

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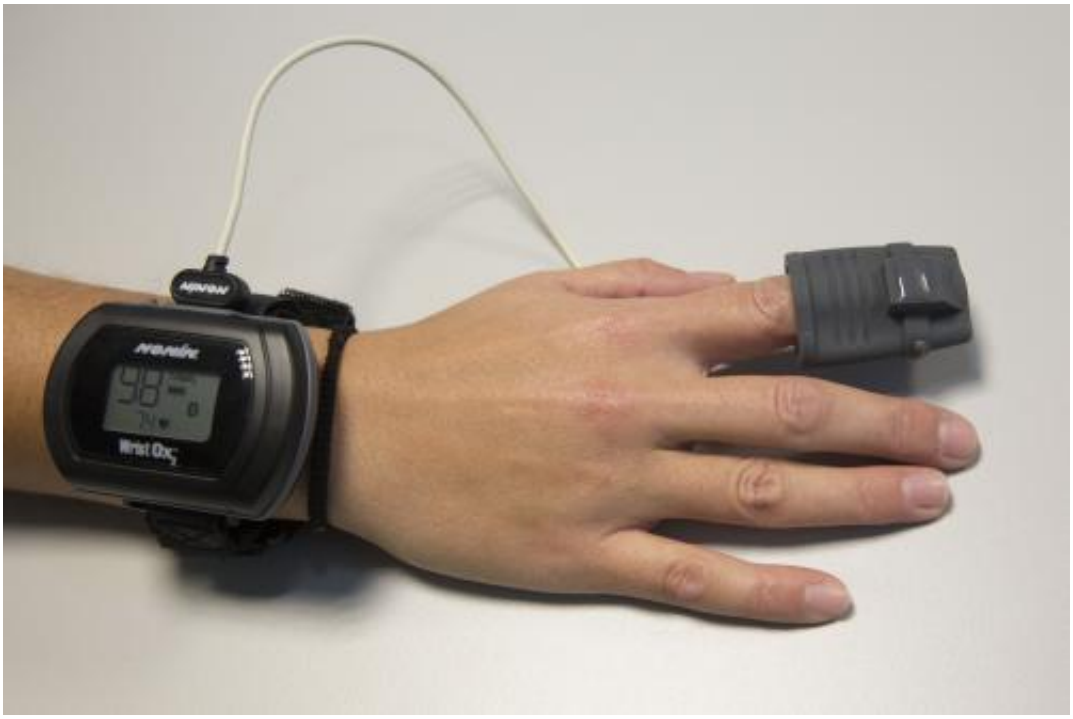

Credit: Medco Health

The company Medco Health at the Business, Scientific and Technological Park, Espaitec, of the Universitat Jaume I of Castellón, has developed a telemedicine assistance system that allows online daily monitoring of people with sleep apnoea-hypopnoea syndrome. The method proposed by the company is particularly focused on patient adherence to treatment as only 30% of patients successfully adapt to it.

The telemedicine system includes a protocol for monitoring patients with scheduled visits and the online daily monitoring of the CPAP devices, which inform the members of the Sleep-disordered Breathing Unit of Medco on the use of the device by the patient, as well as on leaks, airflow and other parameters taken into account for illness control, which ensures a proper adaptation to treatment. Moreover, they emphasize, "patients will be aware of their treatment control parameters monthly, helping them to make reference in their improvement process with treatment, beyond pure comfort and relaxation that the use of CPAP provides to the quality of life of the person."

There are an estimated 1.2 million apnoea sufferers in Spain, explain the researchers of the company Medco Health. They state, "of those, only 10% follow Continuous Positive Airway Pressure (CPAP), which is the treatment that has proven most effective. This means that there are many patients who are not following any treatment despite the fact that apnoea-hypopnoea, among other illnesses of the respiratory system, is a cardiovascular and high blood pressure risk factor and it would be advisable them to be treated from early stages. Studies in Spain have clearly demonstrated the relationship between untreated sleep apnoea-hypopnoea syndrome (OSAS) and an increase in cardiovascular morbidity and mortality and road accidents. What is striking, and what justifies our research need is that only between 5 and 10% of people with OSAS have been diagnosed and treated."

From the company of the UJI, they consider that "we are at an early stage in terms of social awareness of this illness and its treatment, a stage at which medical science needs to accumulate accurate data and evidence". "OSAS is the most common disorder at Sleep Units, which constitutes 85% of their activity. There is an estimated prevalence of apnoea/hypopnoea in 4 to 6% of men, 2 to 4% of women and 1 to 3% of children," according to the researchers. Therefore, among the objectives of Medco Health, are the education of people on sleep hygiene measures

and publicizing the disorders, so that patients and families can recognize the associated symptoms and engage in primary prevention or an early treatment of the disease.

Data to support the research

On the need for moving forward in data collection and research in this area, Medco Health highlights the usefulness of the daily monitoring system, which allows researchers to "create a larger database on which to investigate and make progress in the holes that exist in sleep medicine."

Generally, devices for home studies only show the signal of snoring through graphics. With the audio playback function of NOX-T3 device used by the company, sounds are also recorded, thus facilitating the diagnosis and making clear the individual rates of apnoea-hypopnoea for each patient in the study. The NOX-T3 device uses wireless technology and is designed to prevent discomfort and minimize the complexity in its setup.

"The treatment for sleep apnoea CPAP has used for years is efficient, cost effective and minimally invasive," say researchers from Medco Health, as they note that the novelty of the system focuses on monitoring and controlling through new technologies.

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