Text messages reminders impact on PAP adherence

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# Introduction

Obstructive sleep apnea (OSA) is a chronic disorder characterized by recurrent incidents of upper airway collapse during sleep. Its outcome is decreased nocturnal sleep. This ensures daytime exhaustion and tiredness in patients. Gradually, obstructive sleep apnea is also accepted as an independent risk element for numerous other clinical concerns, together with hypertension and cardiovascular disease8. Various patients are also observed with stroke and abnormal glucose metabolism. Disease prevalence ranges from 3% to 7%, in patients8. Age, family history, male sex, and obesity increases the susceptibility for the disorder in patients. Other factors that increase the risk of the disorder are craniofacial abnormalities, cigarette smoking and use of alcohol. Sleep apnea is a common health disorder with noteworthy adverse consequences, and it remains undiagnosed in numerous people. The Berlin survey is an authenticated tool that is used to detect individuals who are at risk. It has been observed that one in four adults in America could be benefited from the assessment by the Berlin questionnaire. The supreme and gold standard form of management of patients with OSA is the practice of a Positive Airways Pressure (PAP) apparatus5. The PAP apparatus grips the airway and keep it exposed using air force that is introduced via a nose with a nasal mask. The volume of air force set on the pap instrument is measured during the sleep. Although there is valuable adherence with the prescribed therapy despite the great effectiveness of continuous positive airway pressure (CPAP)6. More than 4 hours of nightly sleep would be called as adherence4. It has been observed that 46 to 83% of patients have been informed to be nonadherent to usage. Data proposes that the practice of CPAP for an extensive period of 6 hours reduces sleepiness, recovers daily working, and improved memory4. The introduction of an internet-based telehealth package for CPAP adherence training considerably reduced the labor. Telehealth (TH) is the facility of health service remotely via telecommunications, including cellular phones, smartphones, and other wireless devices3. Some devices with video service and some without video service are also used to communicate with patients. Yet, at present the idea itself is wider. Operators providing this service clarified the four concepts before using this methodology for follow-up or to develop progress in treatment. Firstly, it must increase access and decrease costs. Secondly, it should be appropriate for patients with prolonged symptoms. Thirdly, it should preserve interaction with the hospital. Fourthly, it should deliver education.

## Review of literature

A study was conducted in 2008 which evaluated the high efficiency of continuous positive airway pressure (CPAP) to converse superior airway hindrance. This study indicated that the treatment efficiency is restricted by adjustable adherence to suggested therapy. Approximately 46 to 83% of individuals have been reported to be nonadherent to the usage. This study highlighted that the choice to embrace CPAP happens during the early days of therapy. Though, many approaches for the usage of CPAP are advertised to spread awareness. Patient sensitivity and record of hours of sleepiness and daily functioning may be more imperative in defining patterns of its use. Daatalso proposes that numerous behavioral interventions may help to improve CPAP adherence.

Another study was conducted which implicates the effectiveness and labor necessities of a web-designed automatic telehealth (TH) messaging package2. This study suggested that there is a significant reduction in labor and the yields remain analogous to adherence and efficacy3. The study conducted in the year 2016 proved that the web-designed telehealth package for CPAP adherence is effective. Another research was conducted in which continuing effects on cardiovascular disease was observed in patients with OSA. This data shows a protective and the positive association of Nasal Continuous Positive Airway Pressure Therapy in patients.

Telehealth and telecommunication can improve healthcare system

The development of telemedicine facilities and apparatuses has amplified the results. In a current report from 2014 to 2016, companies are projecting a 68% rise (22% to 37% usage previously) in the usage of telemedicine1. Many organizations and expert societies have encouraged or adopted, the usage of telemedicine apparatuses and procedures to help encounter the requirements of patients with OSA. Remote Interpretation using Sleep Telemedicine has resulted in improved treatment towards OSA2. This raises the technique of providing sessions to referring patients rather than straight, interactive care. A sleep treatment history with definite therapeutic information is collected at the site of care and communicated to the sleep treatment provider for evaluation. In return, the sleep treatment professionals deliver clinical guidance via a written report to the provider. This is done in a suitable time frame to create clinical conclusions. E-messaging is another technique which provides the facility for health providers to answer and interact with the patients. By using this technique, service providers deliver facilities to patients asynchronously through an electronic network. E-messages are linked with the family member or the patient1. This service can address non-urgent continuing symptoms and also the emerging symptoms. There is a need for further research to develop this process to work more effectively. Self-directed precautions are also helpful, in which patients can direct contact with interactive response, training, or new sleep-related care appliances. Examples include online videos interrelated with cognitive interactive therapies. There are telehealth programs that improve adherence to PAP treatment. Other smartphone presentations having sleep-wake information. Researchers believe that, in the future, these e programming and videos may probably have extra significant roles in the management of the health of patients with sleep syndromes.

Reference List/Endnotes

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