Virtual sleep clinic provides comprehensive consult, diagnosis and treatment solution



THE PROBLEM | An estimated 1 billion people suffer from sleep apnea globally, and exponentially more have insomnia. People with both conditions face barriers to diagnosis, treatment, and adherence partially because their primary care practitioners - the typical entry point for sleep care - are unaware of sleep conditions and treatments. If sleep apnea is suspected, patients are referred to a cumbersome sleep study for diagnosis, and then, in the case of Obstructive Sleep Apnea (OSA), are left alone to navigate Continuous Positive Airway Pressure (CPAP) therapy - a treatment that dominates the sleep care market, but that has poor compliance (~50%), which leads to increased risk of stroke and cardiovascular diseases. Sometimes, CPAP is prescribed without a comprehensive evaluation, leading to high costs without certainty.

Meanwhile, insomnia lacks awareness, coverage, and proper treatment that can be delivered at scale. Insomnia patients experience depression and loss of productivity and often have trouble finding a psychologist trained to provide adequate therapy. Treatment is often not covered by insurance. Overall, sleep care has no personalization or responsiveness, and with so many players involved, costs balloon. All the while, sleep practitioners are still complaining about their patients' poor compliance and outcomes.

THE INTERVENTION | Dreem is the first virtual sleep clinic, integrating all steps of the patient journey. Dreem provides consults and diagnosis, as well as insomnia and OSA virtual first care (V1C), that integrates data and technology to improve health outcomes. Here's how the V1C approach works: patients initiate telehealth consults with sleep medicine experts from anywhere, and diagnosis occurs through patient interrogation for insomnia or by delivering certified home sleep testing devices for sleep apnea. Treatment is also delivered virtually. For OSA, remote coaching by trained healthcare professionals supports patients through their adoption of CPAP. An insomnia diagnosis is treated with digital therapy sessions, which replicate the principles of in-person therapy but can be delivered at scale. A unique finding from CPAP adherence in OSA patients is that 38% of them also suffer from comorbid insomnia and sleep apnea (COMISA). Dreem has developed a specific behavioral coaching program for patients who suffer from both conditions.

Components:



Synchronous and/or asynchronous virtual interactions between a clinical team and an individual



An interdisciplinary approach that includes consults with specialists and other disciplines to provide comprehensive and longitudinal care



Personalized digital content supporting individual education and self-management in their health journey



Technical support to accommodate literacy, language, access, and technological barriers to adoption



Prescription and/or provision of traditional medications or digital therapeutics



Caregiver support (e.g., app with resources)



Care navigation support



Patient self-report (e.g., symptom survey)



Dynamic patient monitoring capability

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THE RESULTS | Using a V1C approach enables Dreem to focus coaching on patients who need it most. As a result, adherence to CPAP increases, especially for COMISA patients, who report 15% higher adherence. This increase in compliance with CPAP translates into fewer downstream risks, better quality of life, and increased productivity, especially for the COMISA population. The program also demonstrates reduced symptoms of insomnia, supported by greater access to evidence-based virtual therapy. With -8 points on the Insomnia Severity Index scale on average and more than 70% retention, Dreem's digital insomnia therapy is equivalent to in-person therapy.

"Dreem has helped me tremendously with my insomnia. The 6-week coaching has created rituals before going to bed and a set sleeping schedule. Nothing like having your own personal sleep coach!!

Great job, Dreem." - Daniel

THE BENEFITS | 5 Affordability + $\overset{\circ}{\cancel{\sim}}$ Interconnectedness 6 Experience + $\overset{\circ}{\cancel{\sim}}$ Increased Reach

Reconstructing the whole sleep care pathway enables Dreem to optimize many of the unique benefits of V1C: Dreem offers a cheaper, bundled V1C experience to insurance companies that matches insomnia outcomes and exceeds OSA outcomes. Access to care is enhanced: appointments are available immediately (versus waiting up to 6 months for a diagnosis through a sleep center) in OSA, and everyone diagnosed with insomnia is offered tailored treatment. Connected CPAP machines integrate continuous patient adherence data into the Dreem platform, providing coaches with compliance data to support personalized check-ins with patients. Finally, the virtual nature of the solution enables access far beyond areas around sleep centers, enabling more certainty in diagnosis and access to care for rural populations.

"I was tired of the medical system not being able to help me. Endless prescriptions and lack of funding for behavioral/cognitive help is a real problem. Dreem helps by being there for you for the long haul. The support is receptive, and the tech has made a huge impact. It assists every day to make the behavioral changes needed to help with sleep and more." - Crystal

LEARN MORE about <u>Dreem</u>