Clinical Case Reports and Studies
2024 Volume 5, Issue 1
DOI: 10.59657/2837-2565.brs.24.096

BioRes Scientia
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Editorial Letter

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Opioid Use Disorder Industry: Role of Recent Trends in Transformation of the Sector

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Abstract

Opioid use disorder (OUD) is characterized as a chronic and manageable mental health condition that encompasses a problematic pattern of misusing opioids. Individuals experiencing this disorder encounter challenges in moderating or stopping their opioid usage, even when faced with problems resulting from the drug.

This disorder may involve both physical and psychological dependencies. Psychological dependence occurs when a drug becomes so integral to an individual's thoughts, emotions, and behaviors that the urge to continue using it becomes a strong craving or compulsion, persisting despite adverse consequences.

Keywords: opioid use disorder; post-traumatic stress disorder; food and drug administration

Treatment of OUD

Buprenorphine patches are gaining popularity as an effective treatment for opioid use disorder. These patches, containing buprenorphine, are considered an innovative approach to treating opioid use disorder. Transdermal patches present several advantages over other treatment forms, such as injections. They offer a more comfortable drug delivery system, provide excellent pain relief, and allow for self-administration of the medication. Usually, treatment consists of employing cognitive behavioral strategies that focus on fostering motivation for change, educating individuals about treatment options, and teaching methods to prevent relapse.

Trending Technologies in the opioid use disorder industry

Interoperability and care coordination:

Care coordination technology has the potential to enhance referrals between physical and behavioral health entities. For instance, in the scenario where a patient arrives at the emergency department due to an overdose, their requirements may extend beyond physical care. Technological advancements can facilitate immediate connections between providers and behavioral healthcare teams, helping in the prevention of relapse, while also linking patients to social services resources.

Telemedicine

Telemedicine encompasses virtual counselling, be it in group settings or on a one-to-one basis, as well as consultations with specialized professionals such as doctors, physician assistants (PAs), or nurse practitioners (NPs) focusing on addiction medicine. Telemedicine offers greater accessibility compared to in-person care, granting individuals access to treatment irrespective of their proximity to a qualified doctor.

Drug monitoring programs

A state-operated electronic database designed to monitor controlled substance prescriptions, PDMPs (Prescription Drug Monitoring Programs) enables healthcare providers and pharmacies to gain a deeper understanding of a patient's recent medication usage. This comprehensive view assists in making well-informed decisions when prescribing medication, aiming to prevent misuse and enabling prompt intervention through supplementary assessments, patient discussions, and potential treatment if issues arise. In addition to addressing opioid use disorder, PDMPs can minimize hazardous drug interactions and provide patient education regarding their prescribed medications.

AI-based arm band to detect OUD

UMass Chan Medical School has discovered a wearable band in partnership with the Wearable Biosensing Lab at the University of Rhode Island for the detection of opioid use disorder. The device's objective is to enhance medication adherence and contribute to preventing overdose deaths. The upper-arm device, known as the MINDER-band, will employ an artificial intelligence-assisted sensor system. This

system will continuously monitor physiological changes and data, aiming to precisely identify buprenorphine use and withdrawal. In upcoming advancements, the MINDER device is expected to utilize notifications designed to notify clinicians when a patient might require additional support or positive reinforcement. These notifications could involve recommending supportive interventions, aiming to ensure patients maintain adherence to their prescribed buprenorphine regimen.

Recent developments in the opioid use disorder industry

UAMS researchers aim to create and test treatments for PTSD specifically designed for individuals with opioid use disorder

The UAMS research team is set to discover and assess innovative methods for screening and treating post-traumatic stress disorder (PTSD) within incarcerated populations eligible for opioid use disorder (OUD) services. The research study will mark the inaugural trial examining an integrated framework for screening and treating both PTSD and opioid use disorder. This trial is scheduled to occur at the Pulaski County Regional Detention Facility, Arkansas's largest jail. In the initial phase of the research, community partners, including detention facility staff, will collaborate to design a suitable integrated treatment model. This model will then undergo testing in the subsequent phase of the research.

US FDA has approved the first test designed to diagnose the risk of opioid use disorders

The U.S. Food and Drug Administration (FDA) has announced the approval of the inaugural test designed to evaluate the possibility of opioid use disorder in particular individuals. AvertD, the test, has been developed by SOLVD Health, a privately held company. The FDA approved Auto Genomics, a unit acquired by SOLVD in 2019, for this specific test. AvertD is designed for administration before the initial usage of oral opioid painkillers in individuals being assessed for a 4 to 30-day prescription to address acute pain, notably in patients slated for planned surgical procedures. This genetic laboratory test is exclusively available through prescription and is designed for patients aged 18 years and older who haven't previously used oral opioid painkillers.

Howard University plans to utilize community centers as facilities for addressing and treating opioid use disorder

A recent clinical trial conducted by Howard University, the University of Illinois Chicago, and the University of Miami aims to collaborate with community organizations and various sites to provide crucial care to a particularly vulnerable group. The clinical trial expands upon the Better Together pilot program created by Howard University's Department of Psychiatry and Behavioral Sciences, which was established in collaboration with its community advisory board. The Better Together trial aims to utilize non-medical close locations like churches, community centers, and homeless shelters to initiate and sustain patients on buprenorphine, a highly effective medical treatment for opioid dependence. This study will evaluate the community-centered approach at various sites located in Miami, Washington D.C., and Chicago. In the Better Together trial, participants will be compared with a control group receiving buprenorphine and related support within a conventional medical clinic setting. Researchers will assess not only the medical results of the treatment but also factors such as retention rates and patient satisfaction.

Summing up

Opioid use disorder cases are rising due to a surge in the prevalence of chronic diseases. Technological advancements and R&D activities are contributing to the development of novel treatment options for OUD. However, novel strategies by frontrunners will open new avenues for treatment options in the future.

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Cite this article: Lee R. (2023). Opioid Use Disorder Industry: Role of Recent Trends in Transformation of the Sector. *Clinical Case Reports and Studies*, BioRes Scientia Publishers. 5(1):1-2. DOI: 10.59657/2837-2565.brs.24.099

Article History: **Received:** January 03, 2024 | **Accepted:** January 15, 2024| **Published:** January 22, 2024