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Patient Initiated Controlled Analgesic Remote Dispenser (PICARD)

Tech ID: 27469 / UC Case 2016-338-0

BRIEF DESCRIPTION

Misuse, abuse, and diversion of prescription drugs are a major health problem in the United States, where opioid overdose caused more deaths than suicide and car accidents combined in 2013. The inventors at UCI have developed the Patient Initiated Controlled Analgesic Remote Dispenser (PICARD) system that increases patient adherence to prescribed drug protocols by requiring authentication (such as a fingerprint), dispensing single pills, and recording each event.

FULL DESCRIPTION

Misuse, abuse, and diversion of prescription drugs are a major health problem in the United States, where opioid overdose caused more deaths than suicide and car accidents combined in 2013. Opioid misuse continues for several reasons, including their perceived benefits for chronic pain, decreased social stigma around opioids, and fear of undertreating pain. The American Society of Interventional Pain Physician's opioid guideline recommends repeated pill counting by physicians to reduce misuse and drug diversion by ensuring patients adhere to the dosing and timing protocol. This process is very resource and time intensive, resulting in pill counts being performed only rarely, if at all.

Medication Event Monitor Systems (MEMS) are capable of improving health-related outcomes of patients with hypertension, heart failure, HIV, and epilepsy by improving medication adherence with audible and visual reminders as well as the date and time the medication container is opened. Currently, the state of the art devices rely on the goodwill of the patient and are not capable of preventing abuse or theft.

The inventors at UCI have developed the Patient Initiated Controlled Analgesic Remote Dispenser (PICARD) system that increases patient adherence to prescribed drug protocols. The PICARD system features a security system to prevent dispensing drugs outside of prescription protocols. The device performs biometric identification with sensors located on the bottle that verifies the patient and allows for dispensing only within prescription guidelines. Then, the system records all dispensing activities, which can be relayed to the prescriber, to assess treatment efficacy analysis and improvement. The PICARD system provides benefit to patients, doctors, researchers, family members, insurance companies, and the entire health care system.

ADVANTAGES

§ Reduced time to optimal dosage, reducing drug waste and doctor visits

§ Prevention of drug abuse and diversion

§ Overall reduction in cost for all parties

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,675,221	06/09/2020	2016-338

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OTHER INFORMATION

CATEGORIZED AS

- » **Medical**
- » Delivery Systems
- » Devices
- » Diagnostics
- » Therapeutics

RELATED CASES

2016-338-0

STATE OF DEVELOPMENT

Partially working prototype, with other parts in the computer model simulation stage

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