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Using Sociotechnical Context to Understand the Challenges to Assess Risks and Address Harms for Chronic Opioid Therapy in the Primary Care Setting: A literature review

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Abstract

Introduction

Approximately 2 million Americans live with opioid use disorder (OUD), the majority of whom also have chronic pain. The disorder is associated with considerable morbidity and mortality, with mortality rate ten times higher than that of the average population. Prescription opioids are involved in approximately 30% of the death from drug overdose, contributing significantly to the nation's opioid crisis. The economic burden of chronic pain and prescription opioid misuse runs into billions of dollars. Primary care providers (PCPs) manage the majority of chronic pain patients and prescribe about half of all prescription opioids. By employing appropriate risk assessment and harm reduction strategies as laid out by the Center for Disease Control and Prevention (CDC) PCPs have the potential to improve patient outcomes. Adoption of these risk assessment and harm reduction guidelines, however, has been challenging. Physicians underutilize urine drug screens (UDS), and Prescription Drug Monitoring Programs (PDMP), when managing opioid therapy in patients with chronic pain. There is a need to understand the complexity of risk assessment and harm reduction tasks and the interplays between data, information systems, and people to improve the design and development of interventions that enhance guideline adoption and patient outcomes.

Method

A literature review was conducted to understand the challenges to implementing risk assessment and harm reduction guidelines in primary care within the sociotechnical context.

Result

Numerous provider, patient, practice-specific, and system-level factors affect the adoption of risk assessment guidelines. Many of these factors may be mediated by informatics infrastructure, but gaps in knowledge and unmet needs exist. For example, there is insufficient adoption of standard terminologies for describing non-standard problem opioid use and chronic pain, making it difficult to locate and use relevant information in patient records. There is also insufficient interoperability between various information systems, which limits PCPs' ability to conduct risk assessment. The resulting systems view of opioid prescription in the primary care setting provides a map to identify people, processes, tools, and information systems that need intervention within the sociotechnical context.

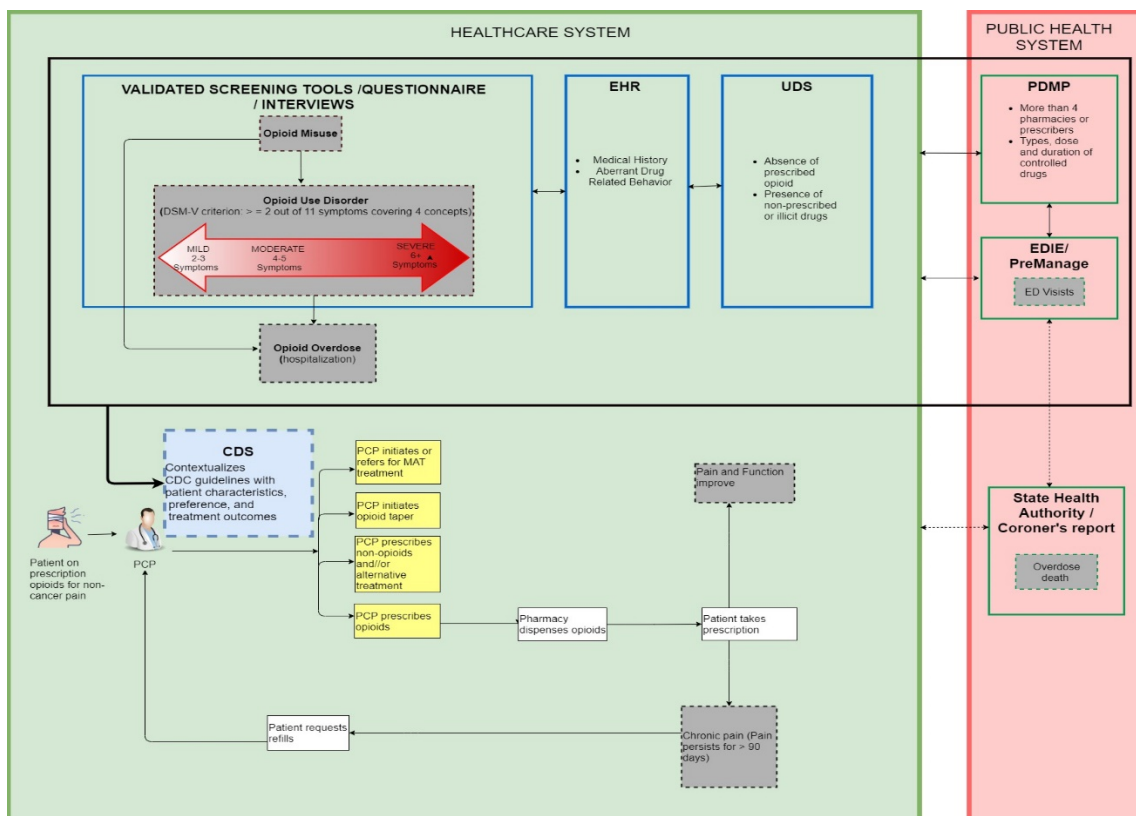


Figure-1. Systems view - Interplays between clinical tools, processes, and information systems in the primary care setting. (PDMP—Prescription Drug Monitoring Program, a state-run program to collect information of dispensing of controlled substances; PreManage—a collective ambulatory platform that can receive data from Emergency Department Information Exchange (EDIE); CDS—Clinical Decision Support; ED—Emergency Department; EHR—Electronic Health Record). Greyed boxes represent outcomes; yellow boxes represent clinical decisions;

Conclusion

This comprehensive understanding of the opioid prescription for non-cancer chronic pain in the primary care setting is important for developing future policies, workflows and informatics interventions.