Prescription opioid overdose and misuse in developed nations: Systematic review of ongoing research

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Opioid-related overdose is one of the leading causes of preventable deaths among young and middle-aged adults (Centers for Disease Control and Prevention (CDC) (2018)).

Opioids are one of the most effective classes of drug used in pain medicine, however, short courses of medication are associated with risks of dependence (Degenhardt et al., 2019).

In 2017, the CDC reported more than 191 million prescriptions were dispensed to American patients with wide variation across states (CDC, 2018).
However, studies suggest that regional differences in the use of prescription opioids cannot be explained by the underlying health status of the population.

Research provides evidence that chronic low back pain, cancer and non-cancer pain, dental pain, and post-surgery pain are the main reasons for opioid prescriptions in the developed nations.

(Rosner, Neicun, Yang, & Roman-Urrestarazu, 2019)
Objectives

The objectives of the review were to identify

- The top 3-5 research priorities for opioid-related disorders
- The 3-5 funding sources for opioid research
- How research priorities for opioid-related disorders should change in the future
Methodology

Ø Basic search interface in the Health Services Research Projects in Progress (HSRProj) database.

Ø Search keyword was “opioid.”

Ø Inclusion criteria: Funded research projects (both ongoing and completed)

Ø Exclusion criteria: Conferences, trainings, archived, infrastructures and projects completed before 2015
Methodology (cont.)

- 624 research projects were initially identified.
- Review for relevance and assign code variables
- MAXQDA software was used to run statistical analysis of code frequencies.
- Reporting protocol followed the PRISMA guidelines.
- 250 projects met the selection criteria and were then categorized by area of focus.
Methodology: Data Extraction

- Identification
  - Opioid Research Abstracts in Health Services Research Projects in Progress (HSRProj) database (Keyword relevant) N=624
- Screening
  - Initial Review For Exclusion N=448
- Eligibility
- Included
  - Abstract Review N=250

- Conference or Training N=30
  - Infrastructure N=4
  - Achieved N=142
- Abstracts predating 2015 N=198

- Intervention N=95
- Prevention N=40
- Inform Policy N=35
- Prescription access N=28
- Non-pharm treatment options N=13
- Treatment delivery N=15
- S/P N=10
- Demographic Use N=9
- Treatment cost N=4
- Opioid use prevention N=3
Results

Abstract Review N=250

Intervention N=93
Prevention N=40
Inform Policy N=35

Prescription/access N=28
Non-pharmtrmt options N=13
Treatment delivery N=15
SDM N=10

OD prevention N=3
Treatment cost N=4
Demographic Use N=9
Discussion

✓ Who’s leading the charge?

✓ What’s the overarching theme of ongoing research?

✓ Where should it go from here?
Discussion (cont.)

**Identified Top 3-5 funding sources**

- National Institutes of Health (NIH)
- National Institute on Drug Abuse (NIDA)
- Canadian Institutes of Health Research (CIHR)
- Patient-Centered Outcomes Research Institute
- Department of Veterans Affairs
Top 3-5 Funding Sources

Note. Funding amounts are not provided to HSRProj by all participating sponsoring agencies (funders).
Note. Adopted from “Search results for opioid - health services research projects 2020”
Funding Priorities

- Intervention
- Primary prevention targeting causes of pain
- Policy evaluation and recommendation
- Opioid overdose treatment and limiting access to prescription overdose
- Analysis of treatment cost and delivery
Funding Priorities

Note. Adopted from “Search results for opioid - health services research projects 2020"
NIH and NIDA

- had the highest collaborative funding projects for opioid-related disorders.
- has led primary and secondary research through collaborative efforts to minimize the impacts of opioid use and reduce opioid related adverse health outcomes.
This review suggests that future research should target primary prevention to address the causes of pain.

Other intervention recommendations should be geared towards

- Improving clinicians prescribing behavior
- Education to reduce stigmatization related to opioid addiction
- Involvement of people battling with opioid addiction, their families and communities in decision making.
This review confirmed that sufficient research has been conducted to identify the adverse health effects of opioid overuse.

It also highlights that alternative therapy which includes non-pharmacological/non-opioid pain management shows promising efforts.
References


Questions? Need More Information?

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