

A Systematic Review of Interventions and Programs Targeting Appropriate Prescribing of Opioids

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BACKGROUND

- Canada and the US have the highest levels of opioid prescription in the world and are currently experiencing an 'opioid consumption epidemic'.
- Major opioid-related harms include abuse, addiction, misuse, diversion, overdose and death.
- Programs and policies have been implemented in different provinces and states: although shown to be somewhat effective in reducing the use of prescription opioids, their impact on opioid-related harms remains insufficiently examined.

OBJECTIVES

- To identify and assess the effectiveness of interventions/policies supporting appropriate prescribing of opioids
- To review the methods and outcome measures used to evaluate the effect of interventions/policies
- To compare the effectiveness of interventions/policies on the various outcome measures.

METHODS

- Systematic review (literature review & search of the gray literature)
- Screening of abstracts and in-depth review conducted independently by 2 assessors

P	I	C	O	S
Patients, population /problems	Intervention /exposure	Comparison	Outcomes	Study design
- Healthcare providers - Opioid users - General population	Interventions/ programs to support appropriate prescribing of opioids in inpatient/ outpatient setting	No comparator specified a priori (may include absence of program or usual care)	- Process/ Implementation - Outcome/ Effectiveness - Impact	- Interventional - Quasi-experimental - Observational - Qualitative

1

Literature Search

- Medline, Embase & Bireme/LILACS databases
- Search period: 1st January 2005 - 23rd September 2016
- Language restriction: English & French

2

Pragmatic Search

- Google & Google Scholar search engines
- Review of conference proceedings and relevant websites (i.e., INESSSS, FDA, Health Canada, EMA, NIH, CADTH, ClinicalTrial.gov)

Inclusion Criteria

- Studies published in English or French
- Topic: Intervention to reduce/avoid opioid abuse, misuse, diversion or overdose (e.g., PMPs, MMPs, CME, guidelines, policies)
- Patient population: Any opioid user (i.e. adolescents, adults, chronic pain, etc.)
- Target of interventions: Primary care physicians, medical/surgical specialists, pharmacists, dentists, other HCPs, patients
- Descriptive studies/evaluative studies (interventional or non-interventional)

Exclusion Criteria

- Opinions or editorials
- Guidelines without program/intervention designed to enhance the use of guidelines
- Literature reviews (except for scanning lists of references – snowballing)

Types of Evaluation

Process/Implementation

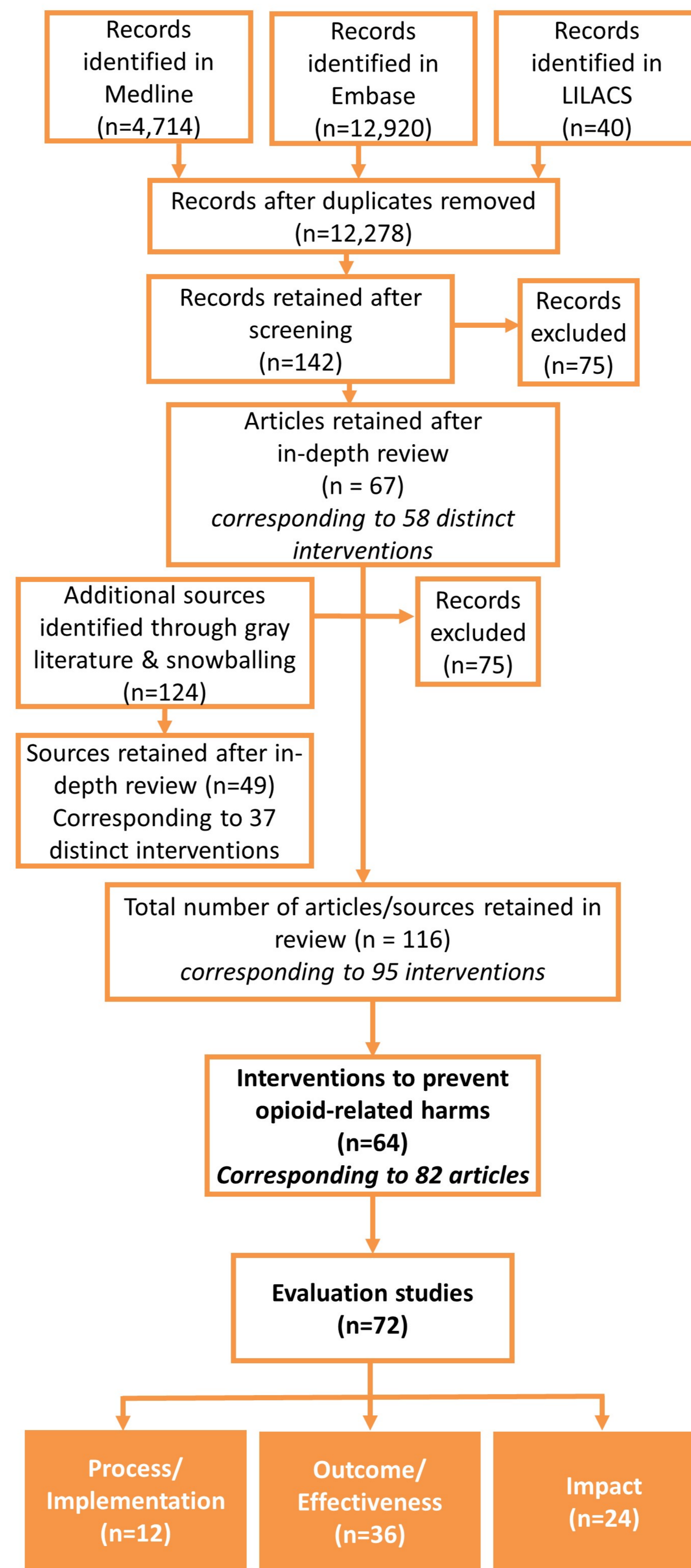
Outcome/Effectiveness

Impact

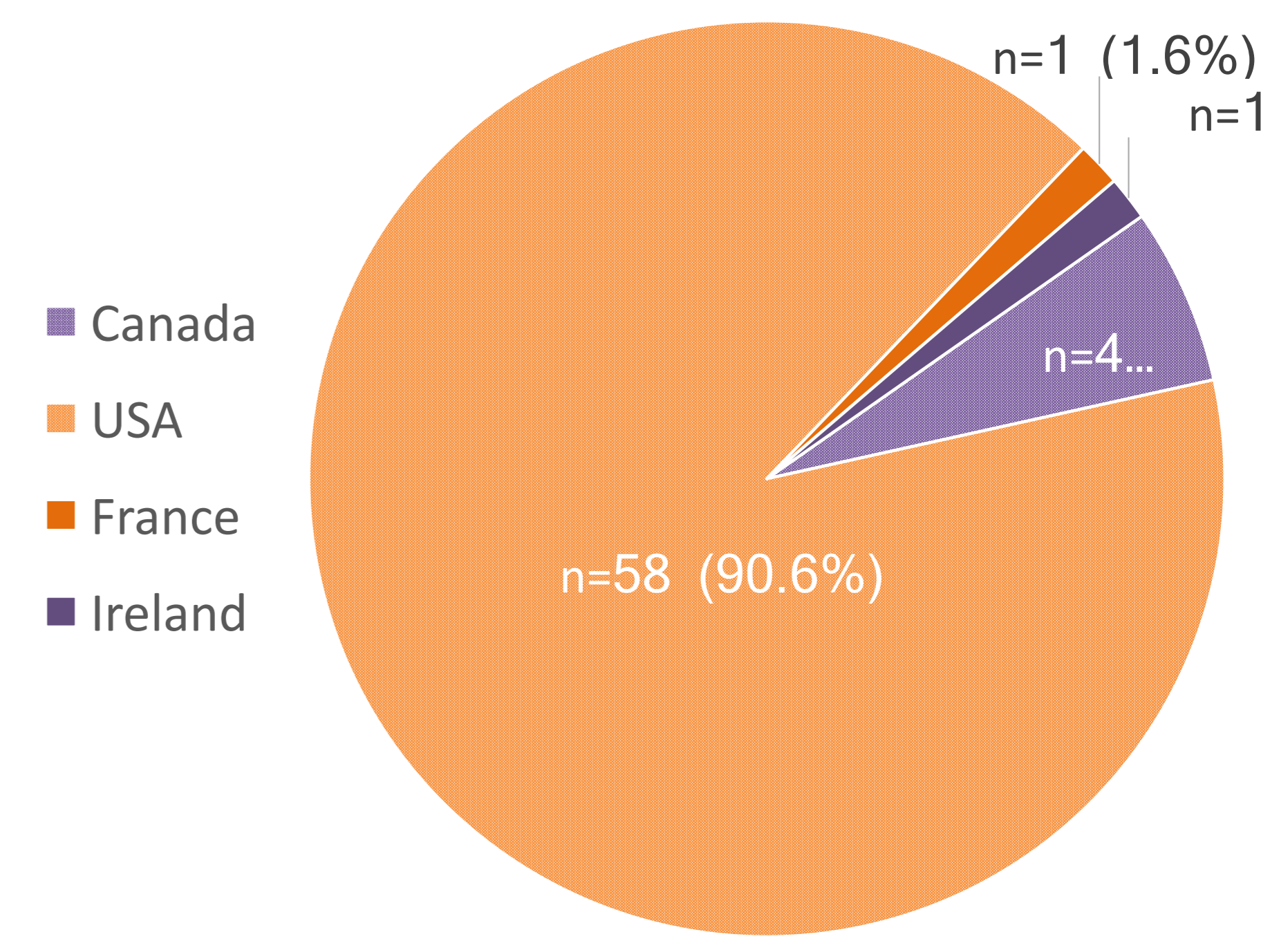


RESULTS

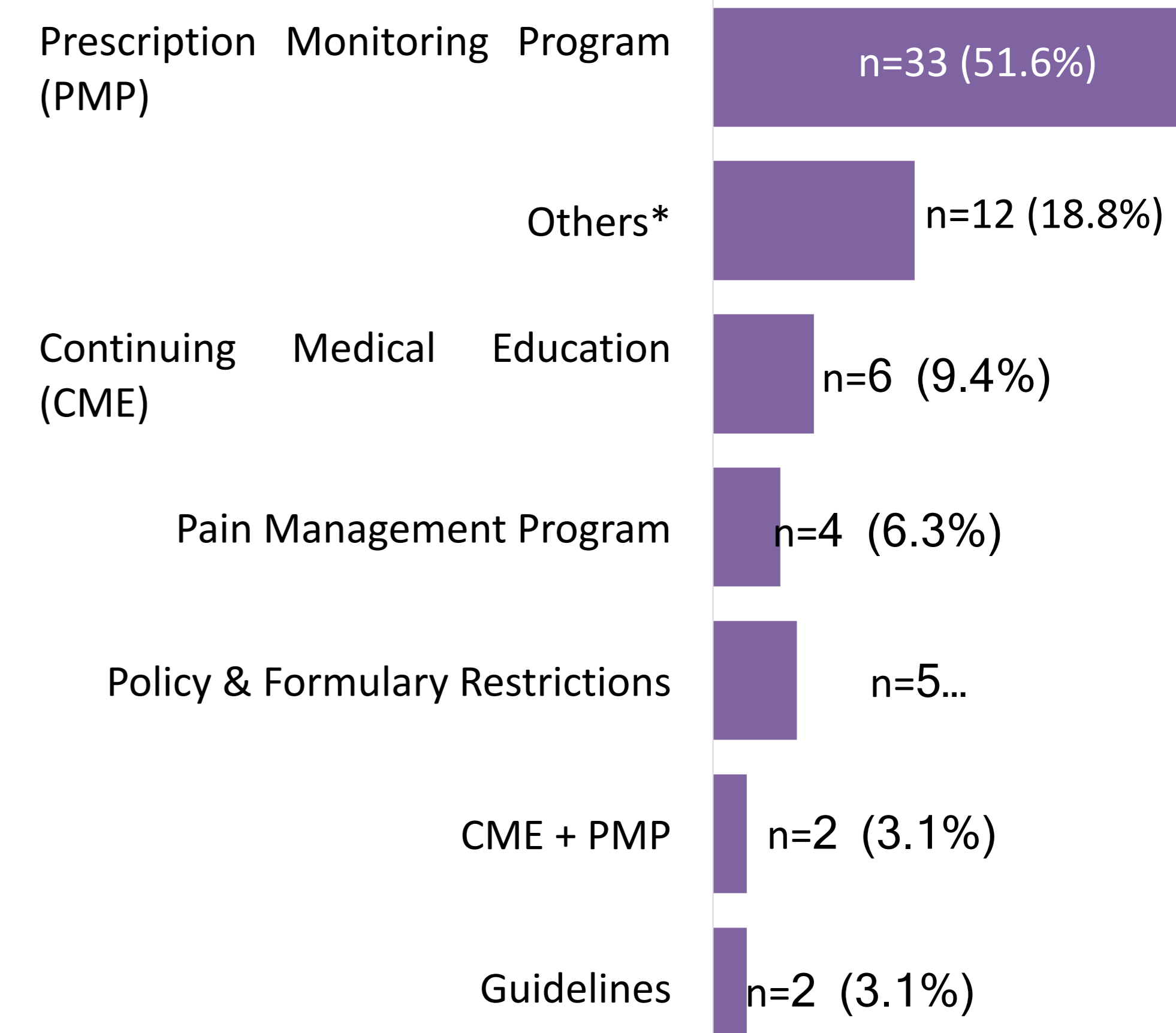
Flow Diagram of Study Selection



Geographic Distribution



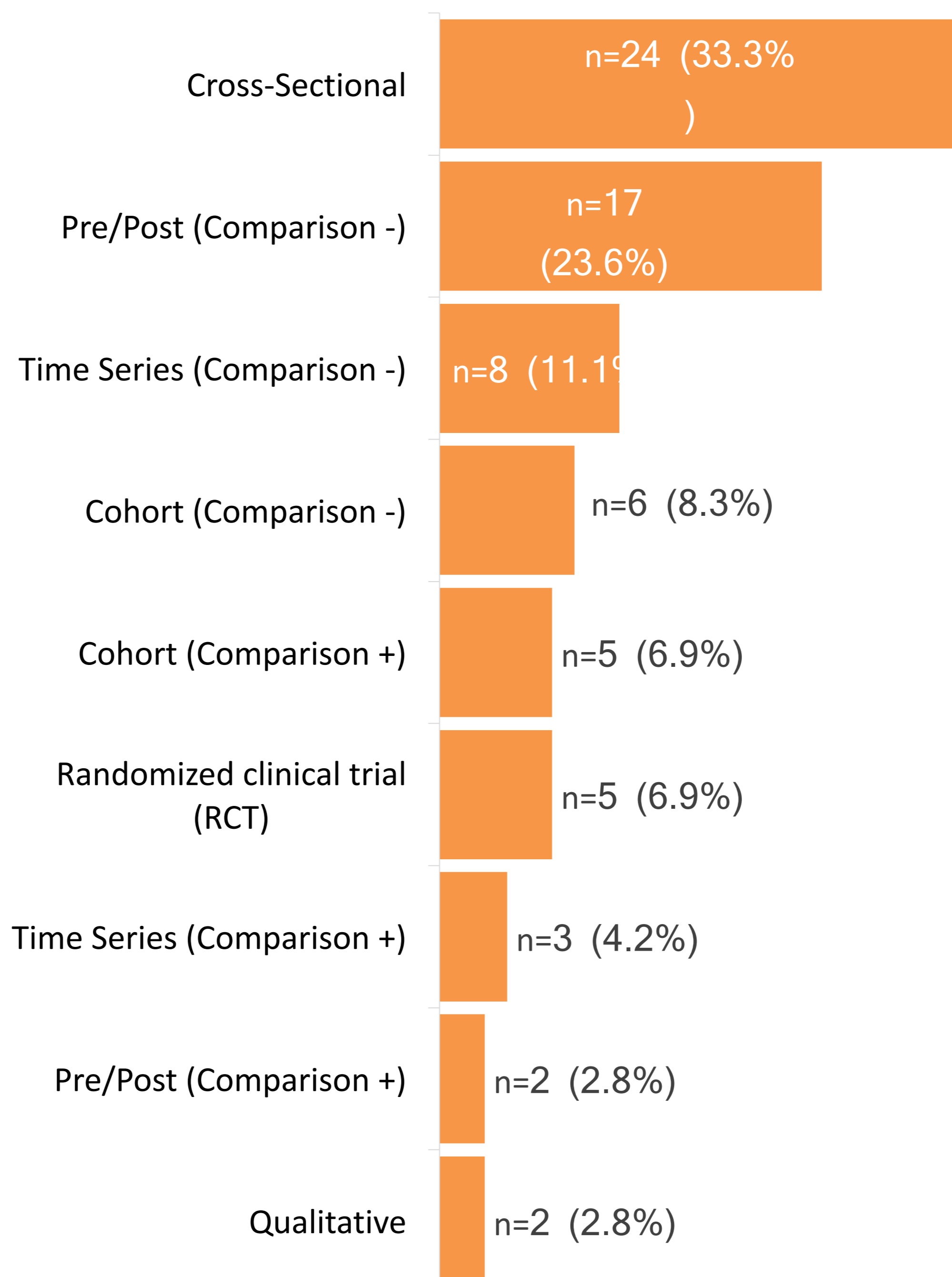
Types of Interventions



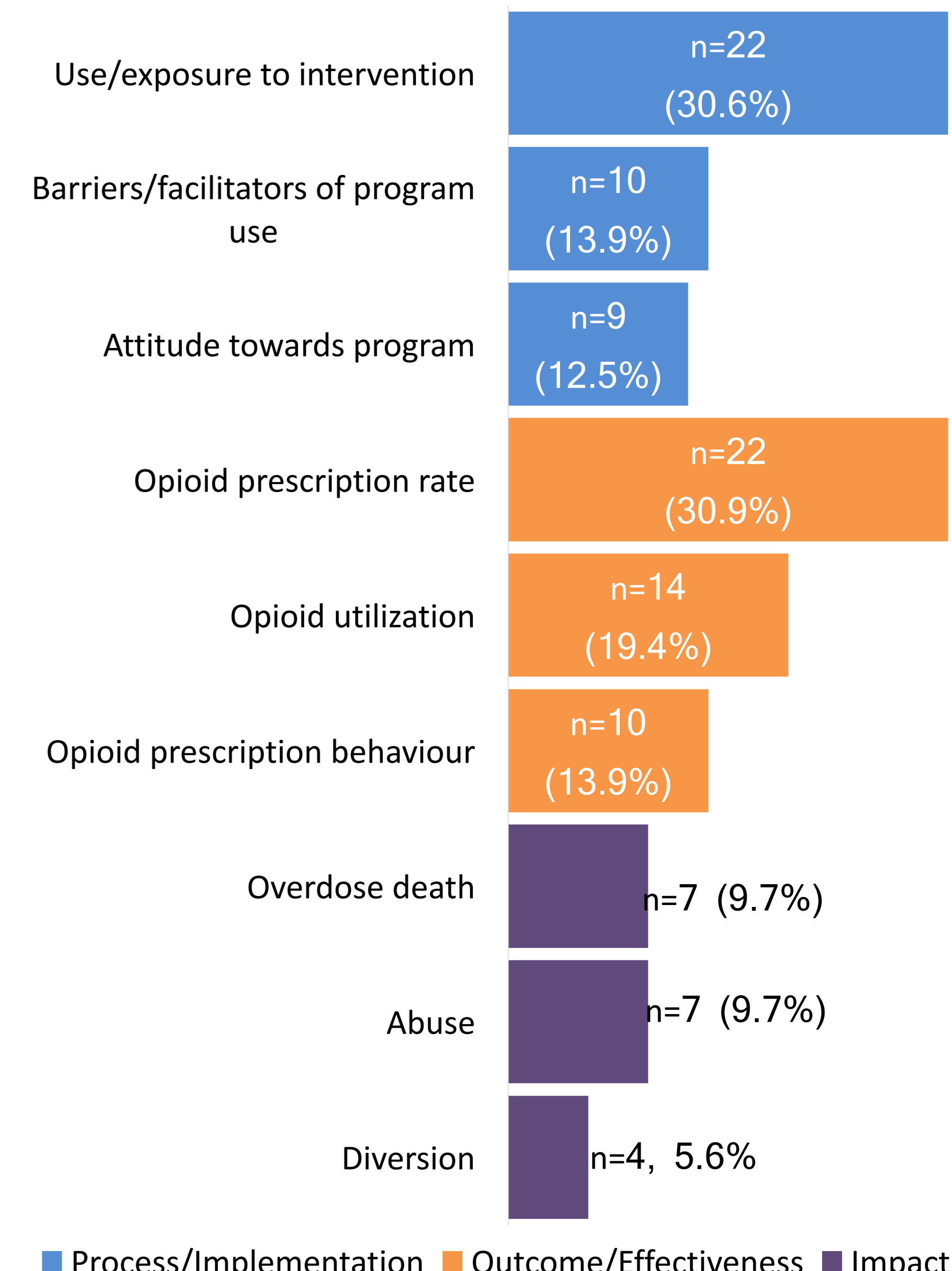
*Others = adherence monitoring, physician-driven review, notification of excessive prescribing, nursing education, point of care tools, REMS, screening for misuse, interventions for opioid addictions.

Evaluation of Effectiveness of Interventions

Designs



Outcomes



CONCLUSION

- Barriers to implementation of interventions are related to logistical issues and practicability
- Prescription opioids have decreased following implementation of PMPs. However, they appear to have no impact on rates of opioid-related harms (as patients may still acquire drugs through illicit channels).
- Certain programs also cause 'channelling' (e.g., TPP) where there is a reduction of restricted opioid prescriptions leading to an increase in prescriptions of other types of non-restricted opioids.
- Interventions that also include community involvement have shown, through robust study designs, a decrease in opioid-overdose and death. So far they were implemented in a small scale but appear promising for a broad implementation.
- Methodological quality of studies varies, as most used a pre-post-intervention design, without a parallel comparison group. This design is prone to confounding by external factors unrelated to the intervention(s) under study.