

## Supplementary material

### original protocol for the study

#### General practitioners' attitude towards opioids in non cancer pain management, a qualitative systematic review and thematic analysis

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To enable PROSPERO to focus on COVID-19 registrations during the 2020 pandemic, this registration record was automatically published exactly as submitted. The PROSPERO team has not checked eligibility.

#### Citation

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#### Review question

What is the attitude of general practitioners towards opioid treatment for non cancer pain?

#### Searches

The following databases will be searched from their inception date up to the 23th of June 2020; Embase, MEDLINE, Web of Science Core Collection, Cochrane, PsycINFO, CINAHL and Google Scholar. Only publications in English or Dutch are considered eligible. The searches in the various databases will be re-run prior to the manuscript submission if more than one year passed by from the date of initial search. Backward citation tracking of eligible articles will be performed.

#### Types of study to be included

Studies will be included when they use qualitative methods for data collection and analysis. Studies will be excluded if qualitative methods were not applied. Studies that collect data from quantitative surveys will also be excluded. Mixed-methods studies will be included if the qualitative data is reported separately. Only published studies and studies for which full text article is available will be included. All studies are written in English or in Dutch.

To summarize the following in- and exclusion criteria will be asserted:

#### Inclusion criteria

1. The study uses a qualitative methods for data collection
2. The study uses mixed-method and qualitative data are reported separately
3. The study is published and available as a full-text article.
4. The study is written in English or Dutch.

#### Exclusion criteria:

1. The study uses quantitative methods only
2. The study uses mixed method data where the qualitative data cannot be separated
3. The study uses data from quantitative surveys

### **Condition or domain being studied**

Attitude/perspective, opioids prescription, general practitioners

In this study the attitude, notions, beliefs and perspectives of general practitioners on opioid treatment for non cancer pain will be examined. The aim of this systematic research of qualitative studies is to shed light on general practitioners' perceptions of when or why they incorporate opioids in their non cancer pain management, but also for whom they prescribe opioids and to explain potential barriers or facilitators for prescribing it.

### **Participants/population**

This study will include all available studies that meet the inclusion criteria that are mentioned in sections 19 to 23. Studies are excluded if they meet the exclusion criteria.

All included studies are studies performed on general practitioners (synonym: family doctors, primary care medical doctors). Studies are included if they are performed in a primary care or outpatient clinical setting and excluded if the study population consist of medical doctors working in a clinical setting. Studies examining general practitioners as well as other medical doctors or other health professionals will only be included if results regarding general practitioners are reported separately.

To summarize the following in- and exclusion criteria will be asserted:

#### Inclusion criteria:

1. The study includes general practitioners (synonym: family doctors, primary care medical doctors)
2. The study includes the attitude or perspective towards opioids
3. The study includes non cancer pain
4. The study is performed in primary care or outpatient clinical setting

#### Exclusion criteria:

1. The study population consists of a mixed group of health professionals without separation of results.
2. The study is performed in a clinical setting

### **Intervention(s), exposure(s)**

Studies will be included if they examine general practitioners' view, perspective, notion and/or belief of opioid treatment in non cancer pain. Studies will be excluded if they examine views on opioid abuse, opioid withdrawal or opioid tapering. Studies reporting on opioid treatment for cancer pain treatment and/or palliative care pain treatment will be included if data on non cancer pain is reported separately.

Inclusion criteria:

1. The study examines general practitioners' views regarding opioid treatment for non cancer pain.

Exclusion criteria:

1. The study includes general practitioners' attitude towards opioid addiction, opioid dependence, opioid abuse or opioid tapering.
2. The study includes opioid treatment for cancer or palliative care pain management only or does not separate data regarding opioid treatment for non cancer pain

### **Comparator(s)/control**

Not applicable

### **Context**

No further information, all in- and exclusion criteria are mentioned in paragraphs above.

### **Main outcome(s)**

General practitioners' views on opioid treatment for non cancer pain. Views can be derived through transcripts of focus group discussions, transcripts of interviews, answered question lists or through primary citations in study results e.t.c..

#### ***Measures of effect***

Not applicable

### **Additional outcome(s)**

Not applicable

#### ***Measures of effect***

Not applicable

### **Data extraction (selection and coding)**

Data selection

The electronic databases Cochrane, Embase, MEDLINE, Web of Science Core Collection, PsycINFO, CINAHL and Google Scholar were searched for eligible articles. All articles yielded were exported into Endnote, and duplicates were removed. All remaining articles were reviewed on title and abstract by two reviewers (RP and LK) independently. In case the title and abstract proved to be insufficient to evaluate eligibility, they were judged on full text.

All remaining articles will be read in full text and assessed on inclusion and exclusion criteria by both reviewers (RP and LK) independently. The included articles of both reviewers will be compared and discussed. To assure maximum retrieval manual searching of the reference lists and citation tracking of papers identified as potentially relevant at this stage will also be performed. If disagreement between reviewers occurs, a consensus method will be implemented. Nonetheless if discussion between reviewers remains, a third independent reviewer (AC) will be consulted

#### Data extraction and coding

Two reviewers (RP and LK) will independently extract the available data of included studies through a standardized extraction form into spreadsheets in Microsoft Excel. The following characteristics of studies and their finding will be extracted: author/year, title, study location and setting, study population, research aim and/or question, data collection and analysis method, key themes and author conclusions. Studies that included a mix of participants only data that can be attributed to general practitioners will be extracted. In studies that used both a qualitative and quantitative approach, only qualitative components will be extracted. The extraction forms of both reviewers will be compared and merged by consensus. Nonetheless, if disagreement regarding data extraction prevails a third reviewer (AC) will be consulted.

#### **Risk of bias (quality) assessment**

A quality assessment is done to test the trustworthiness of included studies by assessing the thoroughness of the study, appropriateness of conduct and credibility of data. Although quality assessment in quantitative research is a well-known tool for further in and excluding studies on the basis of their quality and/or bias, such tools are argued to be inappropriate for assessing qualitative studies. (1) Nonetheless, plenty of such tools for qualitative research are developed, not to include or exclude but to differentiate and filter the varying strengths of studies which can further be used to determine each studies impact on results. For this reason the methodological quality of included studies in this review will be assessed independently by two reviewers (RP and LK) using The Critical Appraisal Skills Programme (CASP) checklist. The 10-item CASP tool was considered to be the most suitable tool to consider the quality parameters and is a well-validated and accepted tool. (2) A consensus meeting will be held to discuss all completed checklist resulting in a merged and summarized CASP form per included study. In case of disagreement, a third independent reviewer (AC) will be consulted. For each included study a summarized CASP report will be provided in the review. Since the CASP checklist does not provide for a score and is merely used to filter all included studies, studies will not be excluded on the basis of this assessment. However the CASP checklists will provide for a thorough view on studies' weaknesses of which the impact on data synthesis will be evaluated in the result and discussion.

1. Noyes J, Hannes K, Booth A, et al. Chapter 20: qualitative research and Cochrane reviews. In: Higgins J, Green S, eds. *Cochrane handbook for systematic reviews of interventions* version 530 (updated October 2015). The Cochrane Collaboration, 2015:1–26
2. <http://cfkr.dk/images/file/CASP%20instrumentet.pdf>

### Strategy for data synthesis

A thematic approach as described by Thomas et al, (3) will be used to synthesise findings from the primary studies. Firstly, line by line text (including participants quotation and findings of the original authors) will be extracted and coded within an Excel sheet. This step will be done by at least two reviewers (RP and LK) independently. In the second stage, descriptive themes will be developed by reviewer (RP) by looking for similarities and differences between the codes. These descriptive themes will be recorded and stored within an Excel spreadsheet and cross checked by a second reviewer (LK). Afterwards, at least two reviewers will re-examine these descriptive themes through in depth discussions based on consensus in order to generate in-depth conceptual analytical theme. In case of disagreement between the reviewers, another reviewer will be consulted.

3. Thomas J, Harden A. Methods for thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol* 2008;8:45-59.

### Analysis of subgroups or subsets

Not applicable

### Contact details for further information

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**Type and method of review**

Systematic review, Other

**Anticipated or actual start date**

28 June 2020

**Anticipated completion date**

31 October 2020

**Funding sources/sponsors**

No funding received for this review.

**Conflicts of interest****Language**

English

**Country**

Netherlands

**Stage of review**

Review Ongoing

**Details of final report/publication(s) or preprints if available**

Not applicable.

**Subject index terms status**

Subject indexing assigned by CRD

**Subject index terms**

MeSH headings have not been applied to this record

**Date of registration in PROSPERO**

27 July 2020

**Date of first submission**

26 June 2020

## Details of any existing review of the same topic by the same authors

There are no existing reviews on this topic by the same authors.

## Stage of review at time of this submission

Stage	Started
Preliminary searches	Yes
Piloting of the study selection process	No
Formal screening of search results against eligibility criteria	No
Data extraction	No
Risk of bias (quality) assessment	No
Data analysis	No

*The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.*

*The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.*

## Versions

[27 July 2020](#)

Supplementary Table S1

Supplementary Table S1 Overview of search terms used for each database	
Database	Search term
EMBASE	<p>('opiate agonist'/de OR opiate/de OR 'analgesia'/de OR 'analgesic agent'/de OR 'narcotic analgesic agent'/de OR pain/dm_dt OR 'chronic pain'/dm_dt OR 'backache'/exp/dm_dt OR 'musculoskeletal pain'/dm_dt OR 'osteoarthritis'/exp/dm_dt OR (opiate* OR opioid* OR analgesi* OR ((pain OR osteoarthritis*) NEAR/3 (relief* OR prescri* OR drug* OR agent* OR medication*))) :Ab,ti) AND ('primary health care'/exp OR 'general practitioner'/exp OR 'general practice'/exp OR 'family medicine'/de OR (((primary) NEAR/3 (care OR healthcare)) OR (general NEAR/3 (practitioner* OR practice*)) OR (family NEAR/3 (doctor* OR physician* OR practice* OR medicine*)) OR gp OR gps):ab,ti) AND ('health personnel attitude'/de OR 'physician attitude'/de OR 'prescription'/de OR perception/de OR attitude/de OR (attitude* OR perspective* OR perception* OR belief* OR ((behavior* OR behaviour* OR decision*) NEAR/3 (prescription* OR prescrib*))) :ab,ti) NOT ([animals]/lim NOT [humans]/lim) NOT ([conference abstract]/lim AND [1800-2017]/py)</p>

MEDLINE	(Analgesics, Opioid/ OR Analgesia/ OR Analgesics/ OR Pain/dt OR exp Back Pain/dt OR Musculoskeletal Pain/dt OR exp Osteoarthritis/dt OR (opiate* OR opioid* OR analgesi* OR ((pain OR osteoarthritis*) ADJ3 (relief* OR prescri* OR drug* OR agent* OR medication*))).ab,ti.) AND (Primary Health Care/ OR General Practitioners/ OR General Practice/ OR Family Practice/ OR (((primary) ADJ3 (care OR healthcare)) OR (general ADJ3 (practitioner* OR practice*)) OR (family ADJ3 (doctor* OR physician* OR practice* OR medicine*)) OR gp OR gps).ab,ti.) AND (Attitude of Health Personnel/ OR Prescriptions/ OR Perception/ OR (attitude* OR perspective* OR perception* OR belief* OR ((behavior* OR behaviour* OR decision*) ADJ3 (prescription* OR prescrib*))).ab,ti.) NOT (exp animals/ NOT humans/)
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Web of Science Core Collection	TS=((opiate* OR opioid* OR analgesi* OR ((pain OR osteoarthritis*) NEAR/2 (relief* OR prescri* OR drug* OR agent* OR medication*)))) AND (((primary) NEAR/2 (care OR healthcare)) OR (general NEAR/2 (practitioner* OR practice*)) OR (family NEAR/2 (doctor* OR physician* OR practice* OR medicine*)) OR gp OR gps) AND ((attitude* OR perspective* OR perception* OR belief* OR ((behavior* OR behaviour* OR decision*) NEAR/2 (prescription* OR prescrib*)))) AND DT=(article)
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Cochrane	<p>((opiate* OR opioid* OR analgesi* OR ((pain OR osteoarthritis*) NEAR/3 (relief* OR prescri* OR drug* OR agent* OR medication*))) :Ab,ti) AND (((primary) NEAR/3 (care OR healthcare)) OR (general NEAR/3 (practitioner* OR practice*)) OR (family NEAR/3 (doctor* OR physician* OR practice* OR medicine*)) OR gp OR gps):ab,ti) AND ((attitude* OR perspective* OR perception* OR belief* OR ((behavior* OR behaviour* OR decision*) NEAR/3 (prescription* OR prescrib*))) :ab,ti)</p>
CINAHL	<p>(MH Analgesics, Opioid OR MH Analgesia OR MH Analgesics OR TI(opiate* OR opioid* OR analgesi* OR ((pain OR osteoarthritis*) N2 (relief* OR prescri* OR drug* OR agent* OR medication*))) OR AB(opiate* OR opioid* OR analgesi* OR ((pain OR osteoarthritis*) N2 (relief* OR prescri* OR drug* OR agent* OR medication*)))) AND (MH Primary Health Care OR MH Physicians, Family OR MH Family Practice OR TI(((primary) N2 (care OR healthcare)) OR (general N2 (practitioner* OR practice*)) OR (family N2 (doctor* OR physician* OR practice* OR medicine*)) OR gp OR gps) OR AB(((primary) N2 (care OR healthcare)) OR (general N2 (practitioner* OR practice*)) OR (family N2 (doctor* OR physician* OR practice* OR medicine*)) OR gp OR gps)) AND (MH Attitude of Health Personnel OR MH Prescriptions, Drug OR MH Perception OR TI(attitude*</p>

	OR perspective* OR perception* OR belief* OR ((behavior* OR behaviour* OR decision*) N2 (prescription* OR prescrib*)) OR AB(attitude* OR perspective* OR perception* OR belief* OR ((behavior* OR behaviour* OR decision*) N2 (prescription* OR prescrib*))) NOT (MH animals+ NOT MH humans+)
PsychInfo Ovid	(Opiates / OR Analgesia/ OR Analgesic Drugs / OR (opiate* OR opioid* OR analgesi* OR ((pain OR osteoarthritis*) ADJ3 (relief* OR prescri* OR drug* OR agent* OR medication*))).ab,ti.) AND (Primary Health Care/ OR General Practitioners/ OR Family Physicians / OR (((primary) ADJ3 (care OR healthcare)) OR (general ADJ3 (practitioner* OR practice*)) OR (family ADJ3 (doctor* OR physician* OR practice* OR medicine*)) OR gp OR gps).ab,ti.) AND (Health Personnel Attitudes / OR Prescription Drugs / OR Perception/ OR (attitude* OR perspective* OR perception* OR belief* OR ((behavior* OR behaviour* OR decision*) ADJ3 (prescription* OR prescrib*))).ab,ti.)
Google Scholar	opiate opioids analgesics "pain relief medication" "primary family general care health healthcare practitioner practice doctor physician practice medicine" attitude perception belief behavior behaviour decision prescription prescribing

Supplementary table S2	
Theme	Subthemes
<b>GPs caught in the middle of the opioid crisis</b>	<ul style="list-style-type: none"> <li>• GP's duty to treat pain</li> <li>• GP's duty towards society at large</li> </ul>
<b>Are opioids always bad?</b>	<ul style="list-style-type: none"> <li>• Effectivity and side effects</li> <li>• addiction</li> <li>• Nature of pain</li> </ul>
<b>GPs weighting scale to decide on opioids</b>	<ul style="list-style-type: none"> <li>• GP factors</li> <li>• Patient factors</li> <li>• GP-patient relationship factors</li> </ul>
<b>GP's sense of powerlessness</b>	<ul style="list-style-type: none"> <li>• Dumped on the GP</li> <li>• Lack of alternatives</li> <li>• Lack of knowledge and evidence /education</li> <li>• Lack of legislation and appropriate protocols and contracts</li> </ul>