UNIVERSITY OF EXETER

ESMI Evidence Synthesis & Modelling for Health Improvement

BRIEFING PAPER

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Medications to treat cardiovascular disease and drugs that may cause dependency: Are prescriptions optimized?

Optimal prescribing encompasses both the prescribing behaviour of the clinician and the taking of medications by the patient.[1] Evidence suggests the prescribing and adherence, or concordance, to certain types of medication still needs improvements.[2-4] This review focuses on two areas of challenge; the under-prescribing and poor concordance to medications to prevent cardiovascular disease (CVD), specifically statins and antihypertensives and the over-prescribing of drugs that may cause dependency (DCD). To achieve optimal prescribing of these medications, it is essential to understand factors influencing their prescription and patient adherence from the perspective of both the prescriber and patient, as well as the interventions which can be effective in improving these behaviours.

This is a systematic mapping review which encompasses evidence relevant to improving prescribing practices for, or patient adherence to, two groups of medications: 1) medications to prevent and treat CVD and 2) drugs which may cause dependency and antidepressants.

The review was commissioned by the National Institute of Health Research Policy Research Programme.

The findings highlight:

- ***There are plenty of systematic reviews*** which synthesise qualitative evidence focusing on patient and/or family and carer experiences of adhering to or taking antihypertensives or statins;
- ***Little to no systematic review of qualitative evidence*** examined experiences or views of specific interventions to promote adherence or aid deprescribing of the two groups of medications;
- ***Ten predominantly 'High' and 'Moderate' quality*** systematic reviews examined the effectiveness of interventions aimed to improve adherence to statins & antihypertensives;
- ***All DCD and antidepressant medications*** (aside from gabapentinoids) were included in at least one review focusing on evaluating interventions to optimise prescribing. However the quality of this evidence was variable.
- ***There are systematic reviews*** with variable quality that synthesized evaluations of interventions to promote the deprescribing of medications which included DCD and

Between 1998 and 2018, opioid prescription within the UK has more than doubled ,[5] with 1.5 million people with musculoskeletal pain being prescribed opioids, 45% of which are overprescribed – at a cost of £100 million per year. [6]

QR code; map of review evidence

Funded by NHS National Institute for Health Research

Why did we do this review?

Whilst there is an array of primary and secondary research across these types of medication, there is a need to clarify the quantity, quality and type of systematic review evidence already available in this area, and to identify research gaps where further systematic reviews could be usefully undertaken.

We sought to identify, critically appraise, and map systematic review evidence regarding:

1. The effectiveness or experiences of interventions intended to improve prescribing practices or patient adherence;
2. The effectiveness or experiences of interventions intended to improve implementation of interventions intended to improve prescribing practices or patient adherence;
3. Practitioner views or perceptions of making prescribing decisions;
4. Guidelines intended to inform prescribing practice.

How did we do this review?

Finding the literature:

We searched eight bibliographic databases to identify systematic review evidence for medications related to CVD and DCD or antidepressants. We also searched topically relevant websites and conducted backwards citation chasing for all reviews that met our inclusion criteria.

Eligibility criteria:

Quantitative and qualitative systematic review evidence relating to adults ≥ 16 years, considered for or have received medication of interest, and which is aimed at improving optimal prescribing or patient adherence.

Study selection, data extraction and quality appraisal:

Study selection was completed independently by two reviewers. Data extraction and quality appraisal were carried out by one reviewer and checked by a second, with consultation with a third reviewer to resolve disagreements.

To inform the structure of our evidence and gap map, we constructed an overall patient care pathway, encompassing from the decision to access care through to the decision to maintain or discontinue the medications, detailed in Figure 1.

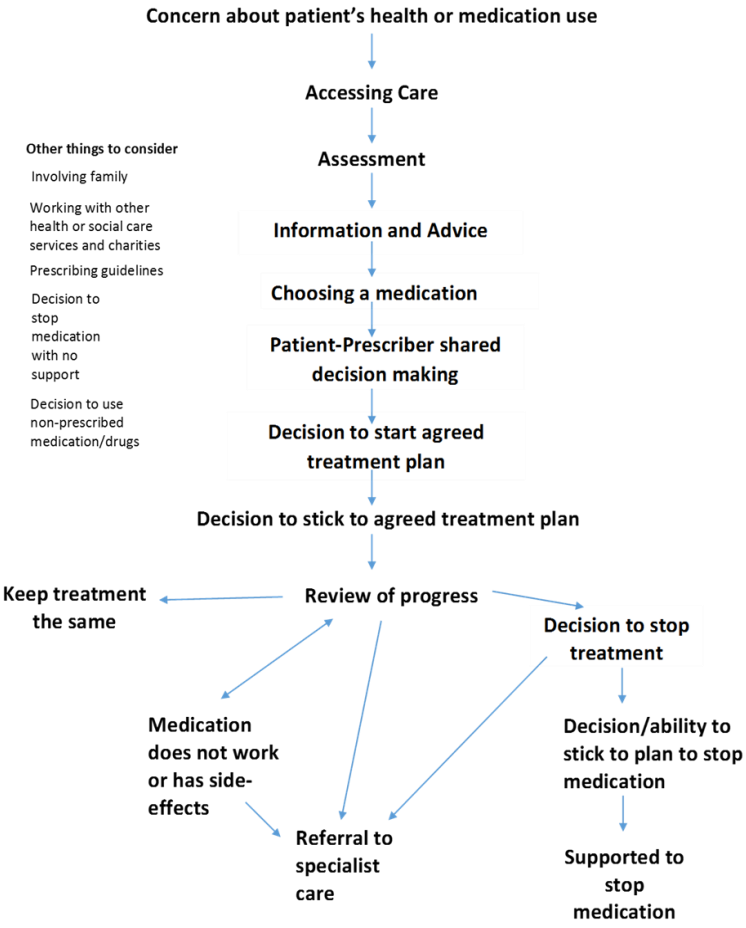

Figure 1: Overall care pathway

Overview of the evidence

130 systematic reviews met our inclusion criteria. Of these, 77 were identified through search terms for antidepressants and/or DCD and 53 found through searches using terms for antihypertensives and/or statins. Only the 36 highest quality reviews were fully prioritized for inclusion in the evidence and gap map, The overall quality scores of these studies were: High (n=15), Moderate(n=12), Low(n=6) and Critically Low (n=3).

What did we find?

Evidence and Gap map

The evidence and gap map is structured according to the medication of interest and the relevance to the patient care pathway. Systematic reviews are grouped within different coloured bubbles according to their overall quality. The evidence and gap map can be found by clicking: **here**

Systematic reviews conducting qualitative synthesis (n=18)	None of the reviews focus on the views and experiences of patients and practitioners using specific interventions to aid deprescribing of hypnotics, opiates, antidepressants and benzodiazepines. We found little to no systematic review evidence which explores practitioner experiences of prescribing hypnotic medication or statins.
Interventions to optimise prescribing (n=33)	A substantial body of 'Low' or 'Critically Low' systematic reviews, focused on opiate and antidepressant medication. Three reviews with variable quality focused on optimising prescribing of statins and/or antihypertensives. Six reviews included a mix of medications across DCD, antidepressants and/or medications to treat or prevent CVD. Only three of these were fully quality and were of variable overall quality.
Interventions to promote deprescribing (n=22)	Nine reviews evaluated interventions to promote deprescribing of medications within the DCD and antidepressant category. Of these, six studies were of 'High' to 'Moderate' quality. Three reviews of 'Low' or 'Critically Low' quality evaluated interventions where the medications of interest included a mix of DCD and antihypertensives and/or antidepressants.
Interventions to promote adherence (n=58)	Ten reviews with predominantly 'High' to 'Moderate' quality included evidence where medications of interest were antihypertensives and/or statins. A further thirty reviews with this aim were of 'Low' or 'Critically Low' quality. With regard to reviews where only DCD and/or antidepressants were the medications of interest, only two reviews were appraised using the AMSTAR-2 tool; (High—(n = 1), Low (n = 1). The rest were of 'Critically Low' quality.
Systematic reviews of guidelines (n=6)	Systematic review evidence of Clinical Practice Guidelines/clinical recommendations predominantly focused on the management of pain, where the medication of interest is prescription of opiates, excluding a range of important DCD and other drugs of focus in this review.

What are the implications of this review?

This evidence and gap map highlights the available quantitative and qualitative systematic review evidence to inform the optimal prescribing of DCD, antidepressants, statins and antihypertensive medication.

The map summarizes key characteristics of these systematic reviews and identifies areas where no, or low-quality, systematic reviews have been conducted.

Implications for different stakeholder groups are as follows:

- **Policy makers and commissioners:**

  This evidence gap may help to determine which interventions could be useful in improving prescribing practices and/or patient adherence to support different population groups within different contexts;

- **Clinicians:**

  Health practitioners may find the content of the evidence and gap map useful in the optimum prescription of these medications in their practice;

- **Researchers:**

  The evidence-and-gap could be used as a starting point to inform priority areas for primary research and systematic reviews.

  Decisions regarding potential future work should be made following consultation with key policy stakeholders, to ensure that any systematic review or primary research work undertaken reflects a clearly defined policy need.

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We are one of two research groups in the UK commissioned by the National Institute of Health Research Policy Research Programme to conduct syntheses of evidence to inform policy development and evaluation across the full policy remit of the Department of Health and Social Care. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR, the Department of Health and Social Care or the Department of Work and Pensions.

References

1. General Medical Council. *Good practice in prescribing and managing medicines and devices*: General Medical Council; 2013.

2. National Institute for Health and Care Excellence. *Cardiovascular disease: risk assessment and reduction, including lipid modification [CG181]. Last updated: 27 September 2016*: NICE; 2014.

3. NCD Risk Factor Collaboration. Long-term and recent trends in hypertension awareness, treatment, and control in 12 high-income countries: an analysis of 123 nationally representative surveys. *Lancet* 2019;394:639-51. https://doi.org/10.1016/s0140-6736(19)31145-6

4. Suissa S, Brophy J, Azoulay L, Schuster T. *Trends in Prescription of Antihypertensive Medications in UK Primary Care Practices, 1988-2018*. Clinical Practice Research Datalink; 2019. URL: https://cprd.com/protocol/trends-prescription-antihypertensive-medications-uk-primary-care-practices-1988-2018 (accessed 1 March, 2021).

5. NHS England and NHS Improvement South West. *Opioid prescribing for chronic pain*. n.d. URL: https://www.england.nhs.uk/south/info-professional/safe-use-of-controlled-drugs/opioids/ (accessed 1 March, 2021).

6. Shanahan W. *Opioids: understanding the current state in the UK*. Priory Group; n.d. URL: https://www.priorygroup.com/blog/opioids-understanding-the-current-state-in-the-uk (accessed 1 March, 2021).