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An umbrella review of pharmacist prescribing: stakeholders' views and impact on patient outcomes

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Introduction: There is great geographical diversity in the degree of prescribing rights pharmacists have. In some countries such as the United Kingdom (UK), pharmacists have unrestricted prescribing rights following appropriate training; in other countries, pharmacists cannot legally prescribe. The impact of pharmacist prescribing (PP) has been studied in various qualitative and quantitative research studies, but this evidence has not been synthesised to support the development of PP internationally.

Aim: The aim of this umbrella review was to describe the international PP models, establish the impact of PP on patient outcomes and describe key stakeholders' views of PP, by synthesising all the available systematic reviews (SRs). **Methods:** Six databases (Embase, CINAHL, MEDLINE, Web of Science, Cochrane Library and PsycINFO) were searched, from January 2003 to June 2023, for key terms such as 'pharmacist', 'prescribing', 'prescription' and 'systematic review', 'meta-analysis', 'meta-synthesis'. Systematic reviews that examined PP for any clinical condition, for patients of any age and in any healthcare setting were eligible for inclusion. SRs examining pharmacists'

interventions other than PP were excluded as were articles not published in English. Two researchers independently screened titles, abstracts and full texts for eligibility; discrepancies were resolved by discussion with a third reviewer. A data extraction tool was developed, piloted and refined prior to data extraction based on guidance from PRIOR^[1] and the Joanna Briggs Institute (JBI).^[2] Extracted information included: SR characteristics; inclusion and exclusion criteria; description of prescribing models, setting, clinical conditions, clinical and health service utilisation outcomes and key stakeholders' views of PP. Data have been synthesised narratively due to the heterogeneity of included studies.

Results: A total of 6439 titles were retrieved from searches, with 917 duplicates removed. Following abstracts and full text screening (5522 and 129 respectively), 39 systematic reviews (8 qualitative; 19 quantitative and 12 mixed-methods) were included.

The description of PP models varied within and between the SRs and demonstrated implementation of different PP models globally. Collaborative practice agreement with a physician, dependant prescribing by protocol and/or formularies were common in Canada and the United States, while supplementary prescribing and independent prescribing models were described in the UK. Prescribing activity was evident in all care settings and for a wide range of clinical conditions.

SRs reporting on targeted clinical conditions, noted that patients of pharmacist prescribers had similar blood pressure control and depressive symptoms, better cholesterol and blood glucose control and reduced pain intensity when compared with patients of medical prescribers. SRs also suggests that pharmacist prescribers make fewer errors than non-pharmacists.

Key stakeholders noted largely positive views towards PP, with a reduction in physician workload, an improvement in pharmacist job satisfaction, better utilisation of pharmacist knowledge and skills noted. Concerns over pharmacists' diagnostic abilities, legal accountability for errors and appropriate implementation of PP models were noted.

Conclusion: A variety of PP models exist internationally. Careful examination of each model should be undertaken prior to adoption and implementation in countries where PP is currently not permitted.

References

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