Pharmacist interventions to improve hypertension management: from trials to implementation

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Introduction

Hypertension management is a major public health challenge.

Recent hypertension guidelines (e.g. American ACC/AHA, CPSTF, European ESC/ESH) recommend the involvement of pharmacists for team-based care.

Choosing most effective interventions in a given healthcare setting and their implementation remains a challenge.

Aims

To systematically review the evidence of the impact of pharmacist care alone or in collaboration with other healthcare professionals on blood pressure.

To assess the heterogeneity in the effects of pharmacist interventions to identify which ones work best in a given healthcare setting.

Methods

Eligibility criteria:
- Study design: RCTs, cluster RCTs, cross-over RCTs
- Setting: community/ambulatory
- Participants: adult outpatients with a diagnosis of hypertension, treated or not treated

Interventions:
- Pharmacist-directed care
- Pharmacist-collaborative care

Comparators: Usual Care (UC)

Outcome: change in BP, or BP at follow-up, or BP control

Databases: MEDLINE, Embase, CENTRAL, CINAHL, Web of Science, Joanna Briggs Institute, Tripdatabase, Grey Literature Report

Prospectively submitted to the International Prospective Register of Systematic Reviews (PROSPERO): registration number CRD42021279751.

Results

- We included 93 studies (Figure 1) with a total of **31 968 participants** (15 270 intervention, 16 698 control).
- **Pharmacist interventions improved hypertension management** (SBP, DBP). Compared to UC, pharmacist care was associated with a significant reduction in **systolic** (**-5.4 mmHg** [95% CI: -6.3 to -4.4]) and **diastolic** BP (**-2.5 mmHg** [95% CI: -3.0 to -1.9]) .
- Most interventions were pharmacist-directed (72%) and performed in outpatient clinics (67%). 51% of the studies were conducted in the Pan-American and 18% in the European region (Figure 2). Patient education (74%) and healthcare provider feedback (44%) were the most frequent types of intervention provided.

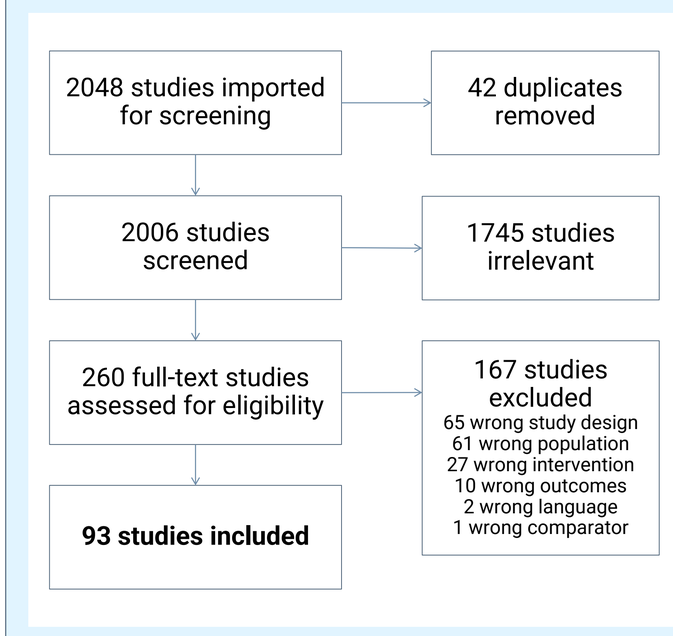

Figure 1. Summary of study selection process with a PRISMA flow diagram.

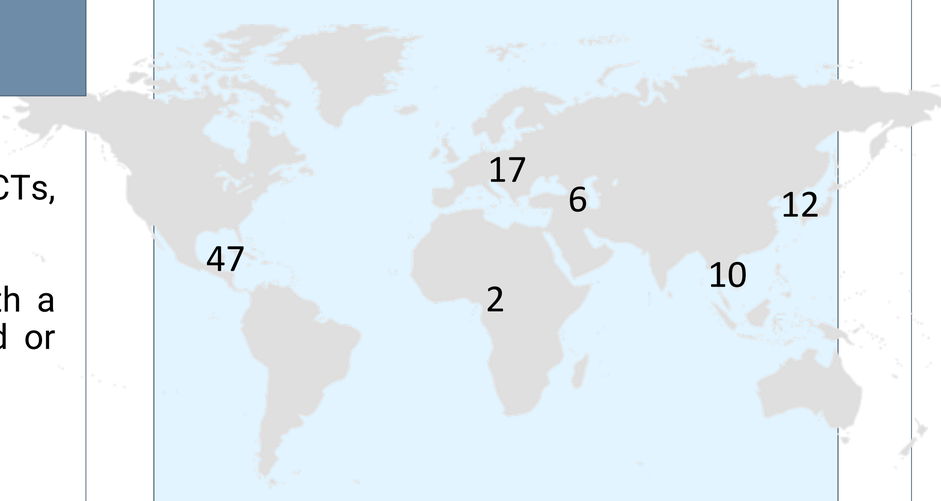

Figure 2. Study location by WHO region.

Table. Summary of pharmacist intervention characteristics of the included studies (N=93).

Characteristic	N
Pharmacist care	
- Pharmacist-directed	67 (72%)
- Pharmacist-collaborative	26 (28%)
Type of EPOC intervention	
Patient level	
- Education	67 (74%)
- Reminder	17 (19%)
Healthcare provider level	
- Education	11 (12%)
- Feedback	40 (44%)
- Reminder	1 (1%)
Total number of interventions Mean (min, max)	3 (1, 6)
Overall time period of interventions (months) Mean (min, max)	6 (1, 12)
Duration of each intervention session (minutes) Mean (min, max)	24 (5, 37.5)

Conclusions

Pharmacist interventions help hypertension management. Most interventions tested in the included trials were directed by pharmacists, targeted at the patient level, and had an educational component.

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References

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Presented at the
81st FIP World Congress of Pharmacy
Brisbane, Australia - 09/2023