

Strategies for increasing effective coverage of hypertension services in health care facilities: a scoping review

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Abstract

Purpose: To identify supporting and inhibiting factors for effective coverage of hypertension services, as well as recommendations for improvement efforts that can be made. **Methods:** A scoping review consists of five steps: Identification of research questions, identification of relevant research articles, study selection, data collection, and data synthesis. **Results:** 19 articles met the research objectives. Supporting factors include information systems, electronic-based pharmaceutical services, self-management, health insurance, quality improvement cycles, support for professionals, patients' interventions, and digital technology. Inhibiting factors include low health insurance coverage, inaccurate equipment, inappropriate diagnosis and treatment, lack of screening coverage, difficulty in access, and differences in policies and procedures between regions. Recommendations for improvement include changes to service systems, the use of defined hypertension thresholds, ensuring blood pressure measurement devices are functioning properly, and the implementation of consistent policies, systems, and processes throughout the healthcare system, including between regions. **Conclusion:** There are various opportunities for improvement, both in utilizing existing supportive factors and reducing inhibiting factors, as well as in implementing various improvement recommendations, especially those that proved effective in published research.

Keywords: effective coverage; health insurance; hypertension; scoping review; service quality

INTRODUCTION

Non-communicable diseases (NCDs) currently rank as the leading cause of death and disability both globally and in Indonesia [1-2]. NCDs mainly consist of cardiovascular disease, cancer, diabetes, and chronic respiratory disease [3], in which hypertension, commonly known as "the silent killer," is a serious health issue in Indonesia with a fairly high prevalence, approximately 25.8%, and many of its symptoms often

going unnoticed and not taken seriously by patients until they worsen and lead to complications such as stroke, coronary heart disease, and kidney failure [4].

In Sleman Regency, DIY, based on Health and Demographic Surveillance System (HDSS) data, it shows that during the 4th cycle of HDSS from February to May 2018, out of 20,553 respondents, 1,980 (9.63%) were found to have hypertension [5]. Further research in 2019 showed that the national health insurance (JKN) membership coverage for hypertension sufferers in Sleman Regency, specifically those with the BPJS Health

card, reached 88%. The service coverage of hypertension patients receiving treatment in primary healthcare facilities, or hospitals reached 84%. However, effective coverage refers to hypertension patients whose blood pressure was effectively controlled at only 24% [6].

There are some differences between how hypertension is managed every day and what is agreed upon by clinical service guidelines. These include the diagnostic process, especially how to properly measure blood pressure; the education process, especially the full lifestyle education process that includes diet education, physical activity education, and stress management education; and the monitoring process. Effective coverage is also affected by how managers keep services going, make sure that all processes and results are carefully recorded in medical records, and make sure that there is constant quality improvement focusing on clinical services [6].

Effective coverage is defined as people who need health services obtaining them in a timely manner and at a level of quality necessary to obtain the desired effect and potential health gains [7]. In more detail, effective coverage is defined as part of the potential health benefits the community receives through the health system, consisting of three components: need, use, and quality. Need refers to the individual or population who requires specific services; utilization refers to the use of the service; and quality refers to the actual health benefits obtained from the service [8].

Because of this, Gadjah Mada University's Department of Health Policy and Management, the Faculty of Medicine, Public Health, and Nursing, and Gadjah Mada University Hospital, worked together on an intervention study to improve the effective coverage of hypertension services. The study used an exploratory sequential mixed method design [9]. A qualitative study to increase effective coverage came first in the research, and a quantitative study to evaluate the efficacy of the interventions came next.

Qualitative studies consist of literature reviews, identification of barriers and facilitators, and selecting and adapting methods for improvement interventions. Quantitative studies consist of implementing and evaluating the effectiveness of remedial interventions. The study concludes with an interpretation based on qualitative and quantitative analysis results. This article presents the process and results of a literature review aimed at identifying factors supporting and inhibiting the quality of hypertension services, as well

as recommendations for improvement efforts that can be undertaken.

There are various studies on efforts to increase effective coverage, and various studies on improving the quality of hypertension services, but to date there have been no results of scoping reviews to identify inhibiting and supporting factors as well as efforts that can be made to improve the quality and effective coverage of hypertension services.

METHODS

The literature review was carried out using a scoping review method, which was chosen for its ability to provide a broad overview of various issues and interventions related to the effective coverage of hypertension services. It also explains the conceptual framework used and the findings in various related studies. In contrast to systematic reviews, which have more specific questions, scoping reviews use a broader scope of questions, thus having looser inclusion criteria and broader main objectives [10].

The scoping review was done in five steps [11]: identification of research questions, related research articles, study selection, data collection, and data synthesis. The research questions addressed were: what factors hinder or support the quality of hypertension in health facilities? What are the recommendations for quality improvement efforts that can be made? Identify research articles that utilized the keywords "Hypertension" [MeSH] and "Quality Improvement" [MeSH] along with their synonyms. Electronic databases searched included MEDLINE, Cochrane, Scopus, and Web of Science, limited to English and Indonesian literature published in the last 10 years. Two reviewers, performed data collection and data synthesis was concluded qualitatively using thematic analysis.

RESULTS

The results of the literature search found 244 articles, 19 articles were excluded due to duplication, 165 articles with complete manuscripts were assessed, 19 articles met the criteria to answer the research questions (**Figure 1**). These consist of 13 articles related to supporting factors, 4 articles related to inhibiting factors, and 2 articles related to both supporting and inhibiting factors.

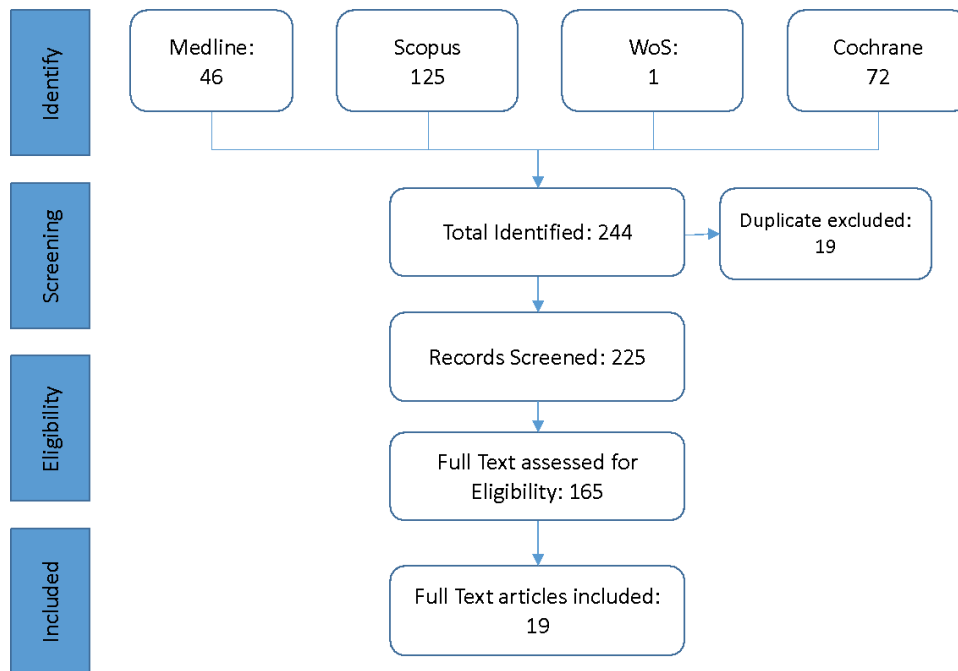


Figure 1. Prisma flowchart

Table 1. Supporting and inhibiting factors for the quality of hypertension management services

Supporting factors	Obstacle factor
1. The use of a real-time online regional health information exchange system that provides hypertension information [12]	1. Low coverage of health insurance membership [13, 26-27]
2. The use of a web-based pharmacy platform to assist pharmacists in identifying patients with uncontrolled blood pressure, calculating and monitoring patient medication adherence [12]	2. Inaccurate blood pressure monitoring devices are widely available for sale and use by physicians and the general public [28]
3. The approach of providing self-management and monitoring options for patients in rural areas [12]	3. Incorrect diagnosis and treatment decisions [28]
4. Improved access and quality of healthcare through health insurance programs (both national and community-based) [13-16]	4. The screening coverage gaps indicate that the service still does not reach all those in need, resulting in missed opportunities for disease prevention and control [26-29]
5. The Plan-Do-Study-Act (PDSA) method for health services improvement, including provider education, nursing education on accurate blood pressure measurement; consistent medication reconciliation, and the use of electronic health records (EHR) to develop care guidelines for patient education [17]	5. Barriers to service access can originate from one of three dimensions: physical accessibility barriers, financial barriers, and acceptability [29]
6. Support for healthcare professionals to excel technically and clinically, thus providing comprehensive healthcare services [18-20]	6. Large differences in health statistics between provinces/regions indicate differences in policies, procedures, and other factors, including human resources (both quantity and quality), budget, technology, and local environment [27, 29]
7. Patient interventions [21-24]	
8. Digital interventions (such as telemedicine) that enable self-management of hypertension, including titration based on self-monitored blood pressure, lifestyle, and behavioral support for patients from healthcare professionals, result in a significant reduction in systolic blood pressure achieved at a more cost-effective rate [25]	

The scoping review shows that supporting factors include [12–25] information systems, electronic-based pharmaceutical services, self-management, health insurance, quality improvement cycles, support for professionals, patient interventions, and digital technology. Meanwhile, inhibiting factors include [16, 26–29] low health insurance participation, inaccurate equipment, inappropriate diagnosis and treatment, a lack of screening coverage, difficulty in access, and differences in policies and procedures between regions (Table 1).

In detail, support for healthcare professionals to excel technically and clinically as supporting factors consists of [17–20]: Interpretation of prevention and management of non-communicable diseases can be achieved through a primary care system with clear guidelines and trained public health workers. Implementation of clinical practice guidelines and management of hypertension; precise selection of procedures relevant to the doctor's specialty; Complete data entry in a user-friendly electronic medical record; Support for sustainable quality improvement, including clinical training, updates, and continuing education; Internet-based training (IT Training); Self-monitoring (monitoring & evaluation); Auditing and feedback in the quality assurance system; and Reporting the prevalence of hypertensive patients with adequate blood pressure (BP) control.

Meanwhile, detailed patient interventions as supporting factors consist of [21–24]: Formation of patient groups that meet weekly; Patient education (increasing health literacy); Counseling and monitoring via telephone by health workers; weight loss counseling, Dietary Approaches to Stop Hypertension; Exercise and other physical activities; Reduction of sodium intake; Unhealthy lifestyle modification.

Recommended interventions to improve the quality of hypertension services include:

1. Changing the hypertension threshold from JNC-8 to ACC/AHA-2017 will sharply increase the prevalence rate, but on the other hand, it will decrease the achievement rate of detection, treatment, and control [24].
2. Ensuring all blood measuring devices function properly through independent validation and calibration and providing information to the general public, clinicians, and healthcare facility managers on monitoring and evaluating blood pressure devices [28].
3. Focusing on a framework for system change that includes data-based action services, standardization of clinical practice, and relationships between clinicians and the

hypertension community, as well as financing and policy [12].

4. Developing policies, systems, and procedures throughout the healthcare system to improve the quality of hypertension services, including improvements in internal workflow, routine informal discussions, implementation of electronic medical records with tracking tools, and interaction between management representatives and service coordinators [30].

DISCUSSION

Supporting factors that influence the quality of hypertension services include the use of digital technology to change patient lifestyle and behavior; this is under the direction of the Indonesian Ministry of Health in managing hypertension most easily and effectively, namely through modifying lifestyles such as not smoking, drinking alcoholic beverages, exercising regularly, maintaining body weight, and changing dietary patterns [4]. Based on these results, there is a need for more creative efforts in developing learning media for hypertension patients.

While one of the obstacles to the quality of hypertension services is the low level of health insurance membership coverage, currently, in Indonesia, the National Health Insurance membership coverage is already high, reaching 95.75 percent of the total population as of December 31, 2023 [31]. However, the results of the scoping review also remind us that other obstacle factors cause this high membership coverage to be meaningless, namely the obstacles to service access that can arise from physical accessibility, finances, and acceptability. Therefore, healthcare facility managers and regional health regulators need to analyze these access barriers in their respective work areas to determine whether they exist, to what extent, and what efforts can be made to overcome them.

Inappropriate diagnosis and treatment decisions are also one of the obstacles to quality hypertension services, including the use of hypertension medication. Some basic rules that need to be followed in pharmacological therapy are: giving only one dose of a drug; using generic drugs whenever possible; keeping an eye on comorbidity factors in older people; not mixing Angiotensin Converting Enzyme Inhibitors (ACE-i) with Angiotensin II Receptor Blockers (ARBs); teaching patients; and keeping an eye on drug side effects [32]. Therefore, the recommendations obtained from the scoping review in the form of implementing clinical practice guidelines, hypertension management,

and support for sustainable quality improvement, including clinical training, updates, and further education, has become highly relevant.

Overall, the recommendations from the result of the scoping review cover broad areas of improvement, such as ensuring blood pressure measurement devices work correctly, using definitions of hypertension boundaries, changing service delivery systems, and using policies, systems, and processes throughout the healthcare system, including between regions. To improve the quality of hypertension services for more people, multiple types of help are needed, and all stakeholders must be involved. This is similar to how health services are being changed as part of the new Indonesian Ministry of Health's strategic plan for 2020–2024 [33].

CONCLUSION

The scoping review has revealed various supporting factors and obstacles, as well as efforts that can be undertaken to improve the quality of hypertension services, which can subsequently increase the effective coverage of hypertension services. From these conclusions, there is a need to make efforts to enhance the ability to utilize supporting factors, eliminate obstacles, and use various proven effective strategies as the key to success in improving the effective coverage of hypertension services.

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