

# ENHANCING GUIDELINE ADHERENCE AMONG PRIMARY CARE DOCTORS IN HYPERTENSION: EFFECTIVENESS OF A HYPERTENSION MANAGEMENT TOOLKIT (IMPROV-BP)



PEJABAT KESIHATAN DAERAH KLANG

Anusha M<sup>1</sup>, Beatrice JNL<sup>2</sup>, Hazwan MD<sup>3</sup>, Salbiah MI<sup>1</sup>, Norasnita N<sup>1</sup>, Tan SF<sup>3</sup>, Ho BK<sup>1</sup>

<sup>1</sup> Klinik Kesihatan Bandar Botanic, Klang, Selangor

<sup>2</sup> Klinik Kesihatan Kampung Bandar, Kuala Langat, Selangor

<sup>3</sup> Institut Penyelidikan Penuaan Malaysia, Universiti Putra Malaysia, Serdang, Selangor

<sup>4</sup> Klinik Kesihatan Pelabuhan Klang, Klang, Selangor

## Selection of Opportunities for Improvement

Most hypertensive patients are treated in busy primary care clinics, making guideline adherence challenging. Evidence shows that following guidelines enhances patient management and aids in blood pressure control.

## Key Measures of Improvements

The improvement involves using a hypertension clerking sheet and management algorithm to enhance adherence to the Malaysian Clinical Practice Guidelines (CPG) for hypertension. The effectiveness of the HMTK will be evaluated through pre- and post-intervention audit scores based on the Model of Good Care (MOGC).

## Process of Gathering information

The research team developed a hypertension clerking sheet, a quick guide algorithm, and an audit sheet. Medical records of 392 patients from two primary care clinics in Klang, all on three or more antihypertensive medications, were audited pre- and post-intervention, 6 months apart.

## Analysis and Interpretation

Nonadherence to guidelines occur due limited awareness, perceived irrelevance, poor formatting, and time constraints in busy clinics.<sup>1</sup> Absence of standardized clerking sheets further hinders adherence. Evidence shows that structured clerking sheets and treatment algorithms can effectively improve guideline compliance.<sup>2,3</sup>

## Strategies of Change

Our objective is to improve doctors' adherence to guidelines using the Hypertension Management Tool Kit (HMTK) using a structured hypertension clerking sheet with the electronic medical record and the availability of a quick reference management algorithm at each doctor's computer for easy reference during consultation.

## Effect of Change

After the usage of the HMTK among statistically significant improvement in the MOGC score was seen among doctors with < 5 years of service; 69.25 (14.91) to 87.15 (6.48) while >5 years of service; 73.49 (14.28) to 89.61 (5.15). (Table 1) Results show that the HMTK can improve adherence to the guideline of doctors

Table 1. Comparison of MOGC scores of medical officers pre- and post-intervention (Time effect with and without group comparison).

Comparison	Without group comparison		With group comparison			
	Adjusted Mean (95 % CI)	p-value	<5 years of service		>5 years of service	
Pre-intervention	72.426 (71.045, 73.808)	<0.001	Mean (SD) (14.915)	p-value <0.001	Mean (SD) (14.281)	p-value <0.001
Post-intervention	88.576 (87.922, 89.230)		87.149 (6.484)		89.613 (5.149)	

## The Next Step

The HMTK should be implemented in other primary care to ensure adherence to guideline among doctors.

This study was approved by the Medical Review And Ethics Committee (MREC), Ministry of Health Malaysia (NMRR ID-24-000380-A). We would like to thank the Director-General of Health Malaysia for permission for a poster presentation

## Reference

- Lee PY, Liew SM, Abdullah A, Abdullah N, Ng CJ, Hanafi NS, Chia YC, Lai PS, Wong SS, Khoo EM. Healthcare professionals' and policy makers' views on implementing a clinical practice guideline of hypertension management: a qualitative study. *PLoS one*. 2015 May 5;10(5):e0126191.
- Heizhafi M, Li N, Shi Q, Yao X, Zhang D, Zhou K, Wang M, Hu J, Duiyimuhan G, Jiang W, Hong J. Effects of Simplified Antihypertensive Treatment Algorithm on Hypertension Management and Hypertension-Related Death in Resource-Constricted Primary Care Setting between 1997 and 2017. *International Journal of hypertension*. 2021;2021(1):9920031.
- Cohn J, Bygrave H, Roberts T, Khan T, Ojji D, Ordunez P. Addressing failures in achieving hypertension control in low-and middle-income settings through simplified treatment algorithms. *Global Heart*. 2022;17(1).