Low Hypertension Knowledge Among Clinicians Prescribing Antihypertensive Medications in Malawi

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BACKGROUND

- Hypertension is the most common non-communicable disease comorbidity among people living with HIV (PLHIV) in Malawi[1].
- Approximately 80% of PLHIV with hypertension have uncontrolled hypertension (BP consistently ≥140/90 mmHg)[2,3].
- Study objective: To understand clinician barriers to the management of hypertension

METHODS

- Self-administered, online survey deployed across 14 health facilities in Malawi
- Eligible participants: Clinicians with ≥1 year of experience prescribing antihypertensive medications for clients (both with and without HIV)
- Study sites included government (n=10) and Christian Health Association of Malawi sites (n=4) (all supported by PEPFAR implementing partners); 6 provided fully integrated HIV and hypertension care
- Study framework: Capability, Opportunity, Motivation, Behavior (COM-B) model
- Measured:
  - Knowledge (9 questions, including clinical vignettes)
  - Barriers to hypertension care
  - Self-efficacy for hypertension management (based on a previously validated set of questions[4])

Table 1: Participant Characteristics (n=140)

Clinician Cadre	
Clinical officer	104 (74.3)
Medical assistant	14 (10.0)
Medical doctor	4 (2.8)
Medical officer	1 (0.7)
Nurse	12 (8.6)
Other*	5 (3.6)
Gender	
Female	47 (33.6)
Male	93 (66.4)
Years of experience providing hypertension care	
At least 1 year but less than 2	17 (12.1)
At least 2 years but less than 5	31 (22.1)
At least 5 years but less than 10	37 (26.4)
At least 10 years	55 (39.3)
Received hypertension training in the last two years	
No	103 (73.6)
Yes	37 (26.4)

**Included 3 Clinical associates, 2 Clinical technicians, and 1 Nurse midwife*

Low knowledge around hypertension management among Malawian clinicians, despite high self-efficacy for providing this care, suggests an important role for training interventions to improve hypertension outcomes.

RESULTS

- We surveyed 140 clinicians from July-September 2024: approximately three-quarters were clinical officers and two-thirds had at least 5 years of experience with prescribing antihypertensive medications (Table 1).

Knowledge (Figure 1):

- Average correct answers: 4.1/9 (SD 1.6)
- Only 50% correctly identified blood pressure thresholds for hypertension stages
- Only 3% answered all 3 guideline-based vignettes correctly

Barriers to Hypertension Care:

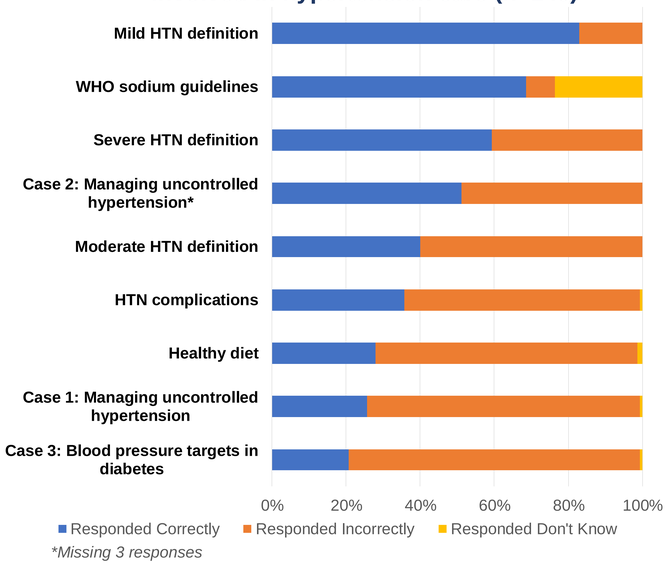
- Antihypertensive medication stock-outs (highest-ranked challenge)
- Lack of refresher trainings on hypertension
- Non-functional blood pressure machines

Self-Efficacy (Figure 2):

Self-efficacy scores were high among clinicians:

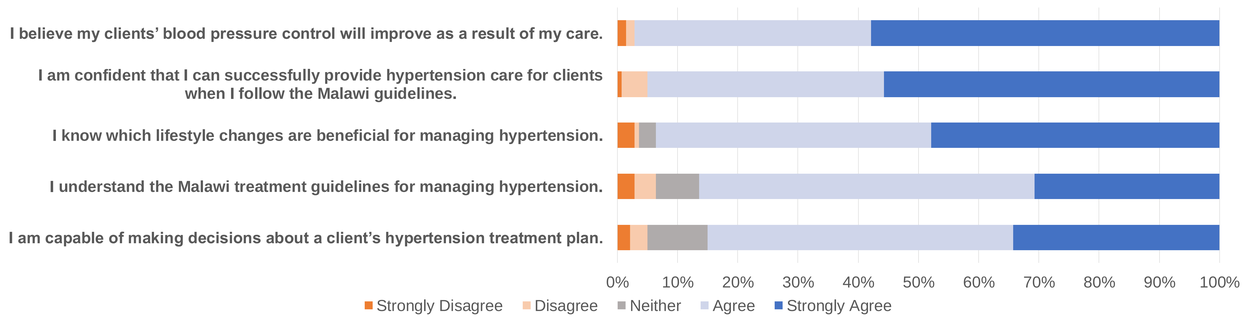
- 85% felt capable managing antihypertensive medications
- 86% reported understanding Malawi hypertension guidelines
- 97% believed their clients' blood pressure control would improve as a result of their care

Figure 1: Hypertension knowledge among clinicians involved in hypertension care (n=140)



**Missing 3 responses*

Figure 2: Self-Efficacy among clinicians involved in hypertension care (n=140)



CONCLUSIONS

- Clinicians had high self-efficacy for the management of hypertension, but low knowledge based on a 9-question assessment.
- Our data suggest a range of interventions might be beneficial, including:
  - Clinician training on guideline-based hypertension treatment including lifestyle and medication management
  - Audit and feedback to evaluate how training might improve antihypertensive medication management (and blood pressure control)
  - Improved supply chain for antihypertensive medications and equipment

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