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BACKGROUND

Hypertension (HTN) is the leading risk factor for cardiovascular disease and all-cause mortality in general and in people living with HIV (PLWH). This study investigates HTN care provided across nine primary public healthcare (PHC) facilities in Johannesburg in PLWH and people not living HIV (PNLWH) by use of an HTN cascade of care (HTN CoC).

METHODOLOGY

This study reports on data of the integrating HIV and hEART health in South Africa (iHEART-SA) project. Data of 27,314 participants was collected during routine visits to the PHC facilities from 1st August 2022 to 31st May 2023, with measured blood pressure (BP) as the primary outcome. HTN was defined as a measured systolic BP over 140, or diastolic BP over 90 mmHg, or a previous record of HTN diagnosis. Only 10,606 participants who consented for file review and had their complete file reviewed are included in the HTN CoC study. Only participants meeting HTN criteria will be represented in the cascade. A binary multivariable regression model was created to explore if independent variables were significant predictors for any individual step of the HTN CoC.

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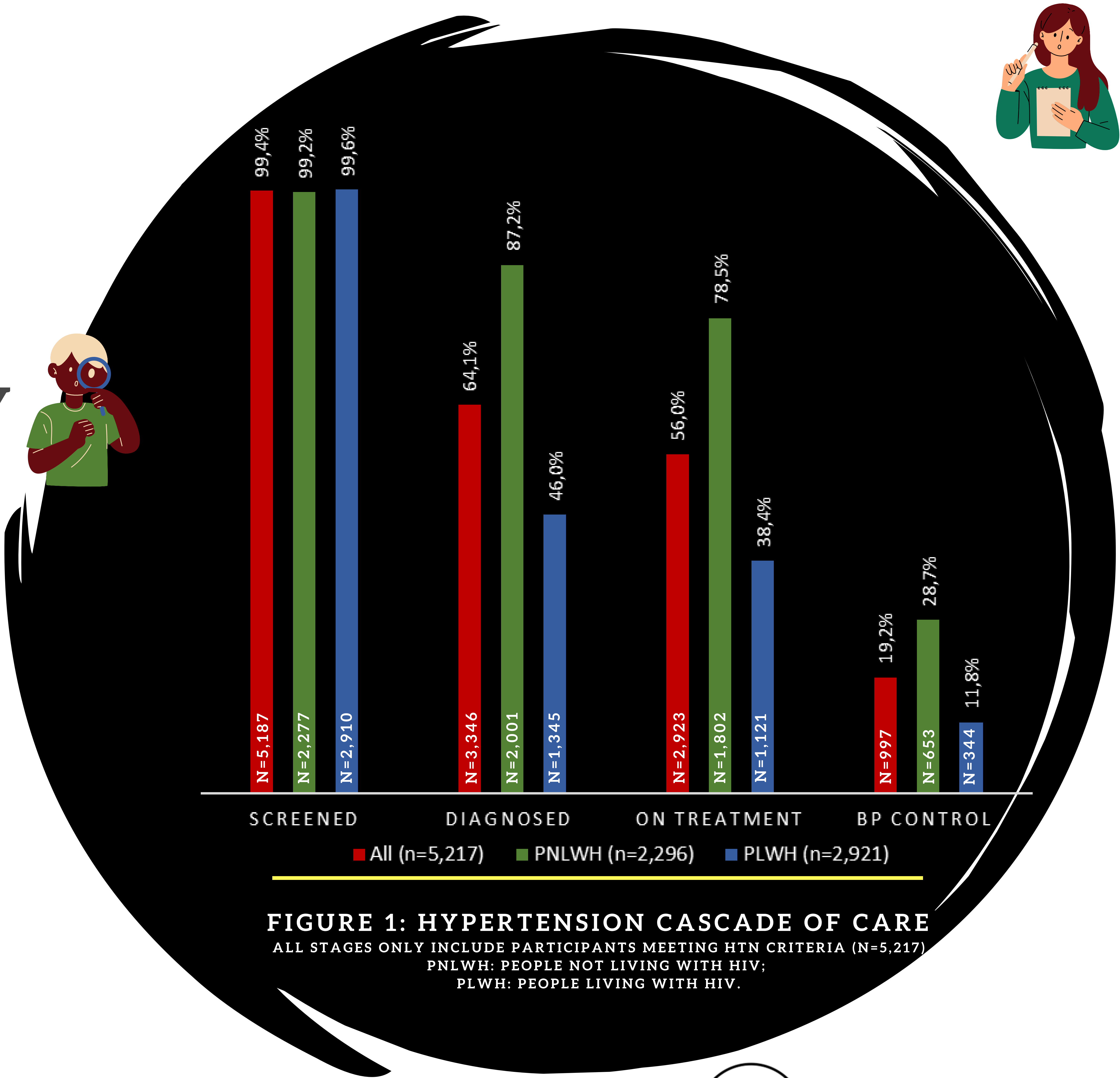


FIGURE 1: HYPERTENSION CASCADE OF CARE
ALL STAGES ONLY INCLUDE PARTICIPANTS MEETING HTN CRITERIA (N=5,217)
PNLWH: PEOPLE NOT LIVING WITH HIV;
PLWH: PEOPLE LIVING WITH HIV.

RESULTS

A total of 10,606 participants with complete medical files were reviewed and included in the HTN CoC. See Table 1 for the participant characteristics. The median BP was 131/80 (PLWH: 129/79; PNLWH: 139/82) mmHg. Of all file reviewed participants, 5,217 (49.2%) participants met the HTN definition. For PLWH: n=2,921 (38.0%); PNLWH: n=2,296 (78.5%). The group which was prior diagnosed with HTN consisted of 3,321 participants, and 1,896 participants had hypertensive readings but were not yet diagnosed with HTN. Relatively less hypertensive PLWH were diagnosed, treated, or achieved BP control compared to PNLWH, see figure 1. 'Living with HIV', 'male sex' and 'younger age' were significant independent predictors for participants falling out of the HTN CoC.

CONCLUSION

The burden of HTN in those attending the PHC facilities was very high, irrespective of HIV-status. Hypertensive PNLWH were more frequently on treatment and more often achieving BP control compared to hypertensive PLWH. Whilst looking at the HTN CoC stratified per HIV-status, a considerable number of hypertensive PLWH did not get diagnosed with HTN compared to hypertensive PNLWH.

TABLE 1: PARTICIPANT CHARACTERISTICS

Variable	All participants	PNLWH	PLWH
Total included participants (N)	10,606	2,926	7,680
Mean measured blood pressure (SD) in mmHg	133.2 (20.7) / 80.6 (13.9)	140.2 (21.4) / 83.3 (14.4)	130.5 (19.7) / 79.5 (13.5)
Categorization of BP (N, %)			
Not recorded	178	37	141
Optimal	2,458 (23.6)	386 (13.4)	2,072 (27.5)
Normal	1,948 (18.7)	425 (14.7)	1,523 (20.2)
Normal-High	1,991 (19.1)	537 (18.6)	1,454 (19.3)
Grade I HTN	2,644 (25.4)	940 (32.5)	1,704 (22.6)
Grade II HTN	948 (9.1)	410 (14.2)	538 (7.1)
Grade III HTN	439 (4.2)	191 (6.6)	248 (3.3)
Mean age (SD) in years	43.9 (11.1)	49.1 (13.3)	41.9 (9.4)
Female sex (N, %)	7,263 (68.5)	1,933 (66.1)	5,330 (69.4)
Nationality (N, %)			
South African	7,349 (69.3)	2,155 (73.7)	5,194 (67.6)
Positive pregnant status (N, % women)	226 (3.1)	97 (5.0)	129 (2.4)

ABBREVIATIONS:
PNLWH, PEOPLE NOT LIVING WITH HIV; PLWH, PEOPLE LIVING WITH HIV;
N, NUMBER; SD, STANDARD DEVIATION; HTN, HYPERTENSION.

Diagnosing and treating PLWH with hypertension seems to be a significant problem in PHC facilities.

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