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Awareness, Treatment and Control of Hypertension in Kenya

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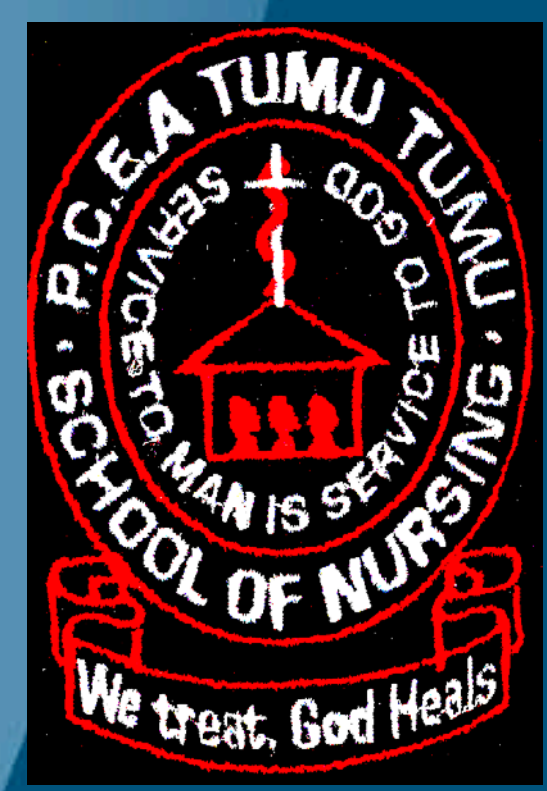
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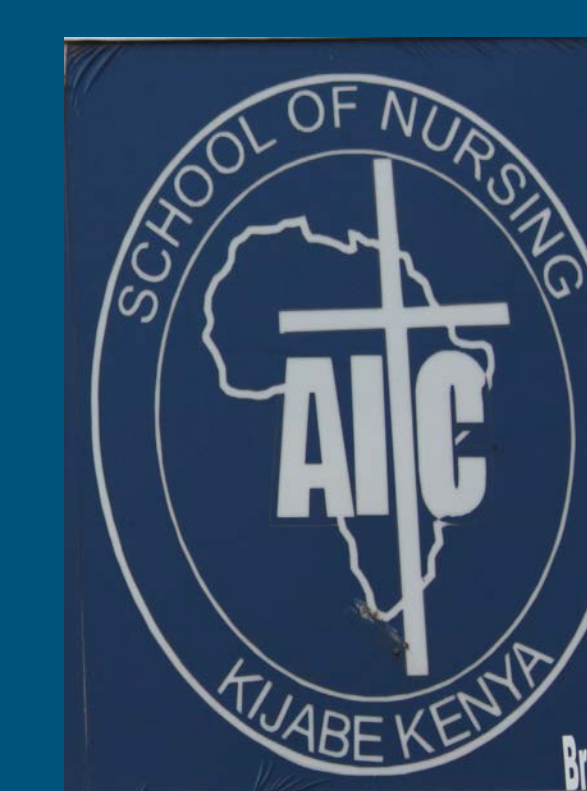
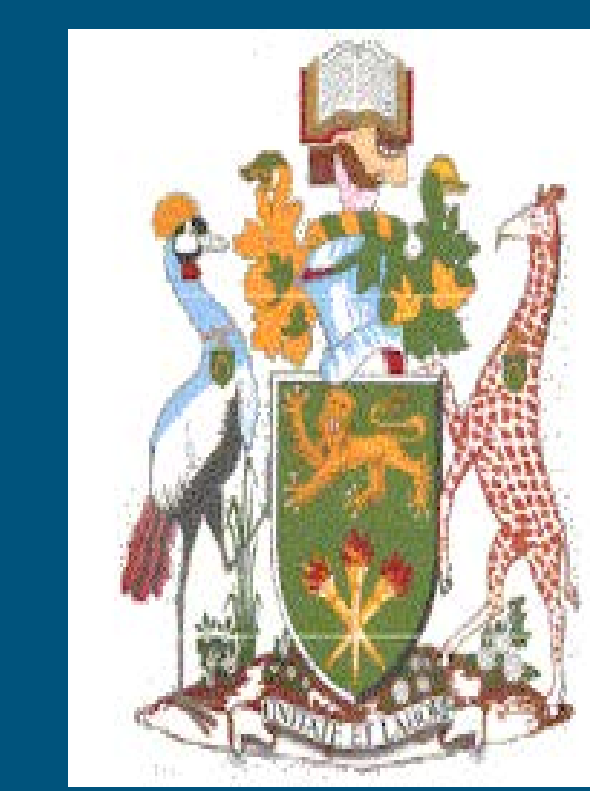
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Awareness, Treatment and Control of Hypertension in Kenya

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BACKGROUND

- The emerging epidemic of hypertension (HTN) in sub-Saharan Africa is predicted to worsen.
- Uncontrolled HTN is associated with CVD, high morbidity and premature mortality; hence early detection, treatment and control of HTN is critical to reduction of the associated sequelae.
- The study was guided by the Social Ecological Model and principles of Community Based Participatory Research.

PURPOSE

The purpose of this study was to examine the pattern of awareness, treatment and control of hypertension among community dwelling Kenyans.

METHODS

- Sample:** Consecutive individuals screened at 5 community health centers by trained US/Kenyan clinicians using validated biobehavioral protocols.
- HTN was defined as self-reported history (Hx) of HTN (told by a health care provider that they had HTN) or SBP ≥ 140 mmHg (mean of 3 readings measured per index visit); Awareness was defined as SBP ≥ 140 mmHg and self-reported Hx of HTN; Treatment was defined as Hx of HTN and on antihypertensive medication; Control was defined as SBP < 140 mmHg for those on antihypertensive treatment.
- Data were entered onto excel through double investigator entry and imported into Stata© for analysis.
- US and Kenyan IRB approvals were obtained. US/Kenyan IRB approval was obtained.

ANALYSIS

- Descriptive statistics and unadjusted bivariate analysis using chi² for categorical variables to test between group differences stratified by age and gender.

RESULTS

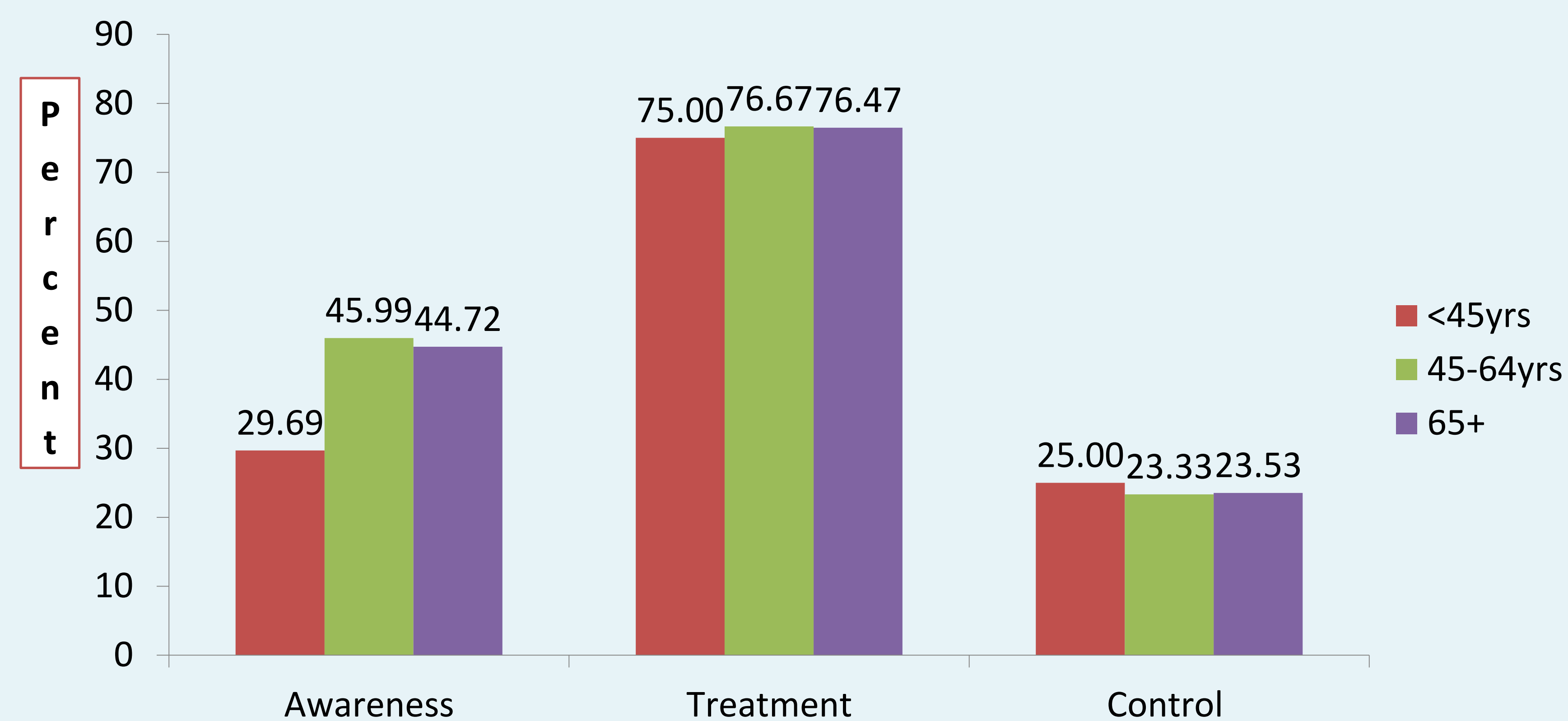
Sample Characteristics	All (N=941)		Lifestyle Characteristics	All	
	n	%		n	%
Age (mean/SD \pm)	48.6	18.7	ETOH	49	5.3
Women	734	78.76	Stress	430	43.22
Tribe (Kikuyu)	812	87.88	Depression sx (PHQ \geq 3)	136	16
Hx HTN	207	26.30	< 1 hr/day Physical Activity	158	16.79
Anti-HTN Rx	170	18.12	Add salt to cooking	800	85.02
Hx DM	64	6.89	Add salt at table	267	28.37
Hx Obesity	94	10.28	3+ serv veg/day; cat var	41	4.12
Hx High Chol	28	3.03	Eat beef/pork/chic daily	13	1.31
Hx CVD	58	6.24	Daily beans (protein)	119	11.96
Current Smoking	55	6.29	Never/rarely drink soda	245	24.62
			Cook with solid fat	561	56.38

Distribution of Clinical Cut Points

	All	Stratified by Gender				p	
		Men		Women			
		n	%	n	%		
Mean Blood Pressure [SBP 137.61, SD 23.61(N=941)]							
SBP ≥ 140 mmHg or HTN hx	385	48.92	76	46.91	306	49.35	0.58
SBP $\geq 120 < 140$ mmHg	371	39.81	78	39.39	293	39.92	0.32
SBP ≥ 140 mmHg	383	40.07	88	44.44	290	39.51	0.21
SBP ≥ 160 mmHg	147	15.77	38	19.19	109	14.85	0.14

SBP = Systolic blood pressure; prehypertension 120-139/90 mmHg; Stage 1= 140-159/90 mmHg; Stage 2 = $\geq 160/90$ mmHg.

HTN awareness, treatment and control stratified by age



CONCLUSIONS

- Among the individuals screened, HTN awareness was low (46%) and younger individuals were less likely than older individuals to be aware.
- Once identified with HTN, 72% had treatment initiated and there were no differences in treatment by age.
- Among those treated, control is low (27%) and there are no differences by age.



IMPLICATIONS FOR PRACTICE

Factors associated with HTN detection, treatment & control:

- Detection**
 - Access to guideline directed screening that is integrated with care.
- Treatment**
 - Access to preventive services (targeted on identified risk factors).
 - Medication (available, affordable, high-quality)
- Control**
 - Consistent access to monitoring & medication
- Capacity strengthening at the community and district/national hospital level
- Policy (Tobacco, unhealthy foods, urban planning)
- Research (Risk prediction models, Region specific diet/activity assessment, Differential etiology, Systematic surveillance)