

Quantifying met and unmet health needs for HIV, diabetes, and hypertension in rural KwaZulu-Natal, South Africa

Urisha Singh^{1,2}, Stephen Olivier¹, Diego Cuadros³, Alison Castle^{1,4,5}, Yumna Moosa¹, Jonathan Alex Edwards^{6,7,8}, Hae-Young Kim⁹, Mark J. Siedner^{1,2,4,10}, Frank Tanser^{1,6,11,12}, Emily B. Wong^{1,13}

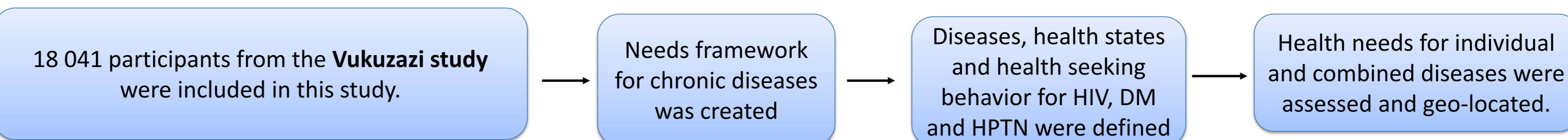
¹Africa Health Research Institute, KwaZulu-Natal, South Africa; ²Nelson R Mandela School of Medicine; University of KwaZulu-Natal, Durban, SA; ³Digital Epidemiology Laboratory, Digital Futures, University of Cincinnati, USA; ⁴Division of Infectious Diseases, Massachusetts General Hospital, Boston, MA, USA; ⁵Harvard Medical School, Boston, MA, USA; ⁶International Institute for Rural Health, University of Lincoln, Lincolnshire, UK; ⁷Department of Biostatistics and Bioinformatics, Rollins School of Public Health, Emory University, Atlanta, GA, USA; ⁸Department of Biomedical Informatics, Emory University School of Medicine, Emory University, Atlanta, GA, USA; ⁹Department of Population Health, New York University Grossman School of Medicine, NY, USA; ¹⁰School of Clinical Medicine, College of Health Sciences, University of KwaZulu-Natal, Durban, South Africa; ¹¹School of Nursing and Public Health, College of Health Sciences, University of KwaZulu-Natal, Durban, South Africa; ¹²Centre for the AIDS Programme of Research in South Africa (CAPRISA), University of KwaZulu-Natal, South Africa; ¹³Division of Infectious Diseases, University of Alabama Birmingham, Birmingham, AL, USA

1. Introduction

- Non-communicable diseases (NCDs) are increasing globally, whilst the burden of communicable diseases continues to be high in Africa relative to other regions.
- This convergence of infectious and non-communicable diseases in settings of resource limitation has been attributed to an ageing HIV population and has led to multiple calls for integration of siloed health systems to address multimorbidity.
- However, the complexity of multimorbidity and a lack of patient level data that defines the detailed health needs of individuals for both communicable and non-communicable diseases is an obstacle toward creating integrated health care systems.
- Here we aimed to create a health needs framework for HIV, Diabetes (DM) and hypertension (HPTN) and to establish the met and unmet health needs for people living with these illnesses individually or in combinations within a rural setting in Kwa-Zulu Natal, South Africa.

2. Study design

Figure 1. Summary of study approach



Health state	Health needs				Needs score	Needs group
	Chronic medication	Treatment optimisation	Engagement in care	Diagnosis		
Free of the condition					0	Healthy
Diagnosed, engaged in care and optimally treated	✓				1	Met needs
Diagnosed, engaged in care, and sub-optimally treated	✓	✓			2	Unmet needs
Diagnosed but not engaged in care	✓	✓	✓		3	
Undiagnosed, positive screening test in Vukuzazi	✓*	✓*	✓*	✓	4	

3. Results

Table 1. Demographic and clinical characteristics

	All N = 18,041	Needs Score 0 Healthy, N = 8,143	Needs Score 1 Diagnosed and well controlled, N = 4,956	Needs Score 2 Diagnosed suboptimally controlled, N = 1,802	Needs Score 3 Diagnosed and not engaged in care, N = 1,282	Needs Score 4 Undiagnosed and uncontrolled, N = 1,858	p-value ¹
Sex							<0.001
Female	12,229 (68%)	4,636 (57%)	3,983 (80%)	1,411 (78%)	937 (73%)	1,262 (68%)	
Age							<0.001
15-24	4,962 (28%)	4,152 (51%)	375 (8%)	82 (5%)	59 (5%)	294 (16%)	
25-44	6,008 (33%)	2,336 (29%)	2,328 (47%)	367 (20%)	284 (22%)	693 (37%)	
45-64	4,595 (25%)	1,104 (14%)	1,626 (33%)	751 (42%)	550 (43%)	564 (30%)	
65+	2,476 (14%)	551 (7%)	627 (13%)	602 (33%)	389 (30%)	307 (17%)	
Any clinic visits past year (ClinicLink)							<0.001
Number of clinic visits							<0.001
1	2,068 (22%)	1,242 (42%)	301 (8%)	151 (12%)	152 (21%)	222 (28%)	
2-4	3,084 (32%)	1,105 (38%)	1,153 (30%)	324 (25%)	230 (32%)	272 (35%)	
5+	4,409 (46%)	578 (20%)	2,370 (62%)	827 (64%)	343 (47%)	291 (37%)	

¹Pearson's Chi-squared test; Kruskal-Wallis rank sum test

Figure 2. Distribution of disease in the cohort (2a), and amongst participants with disease (2b).

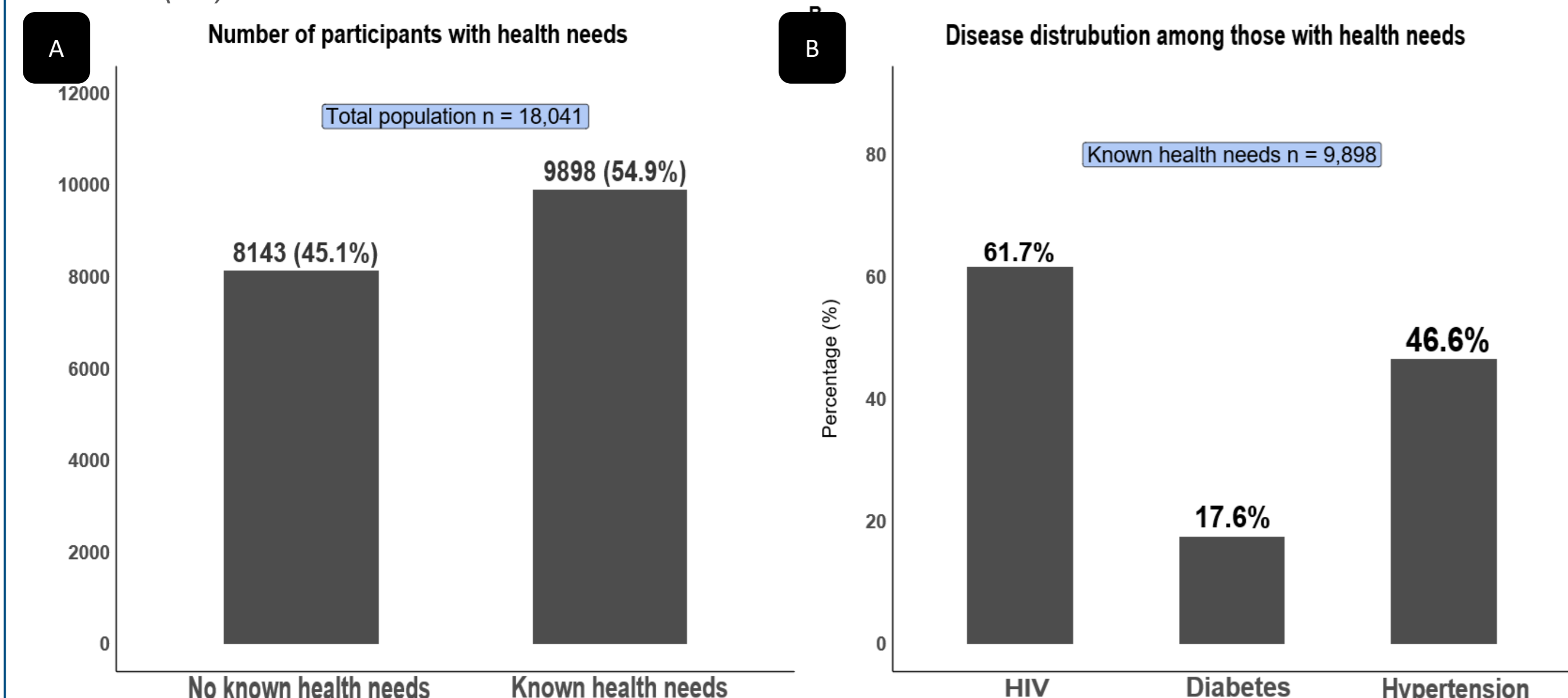


Figure 3. Distribution of met and unmet health needs for individual chronic health states. (3b) Distribution of met and unmet health needs for all three diseases combined (i.e. HIV, diabetes and hypertension).

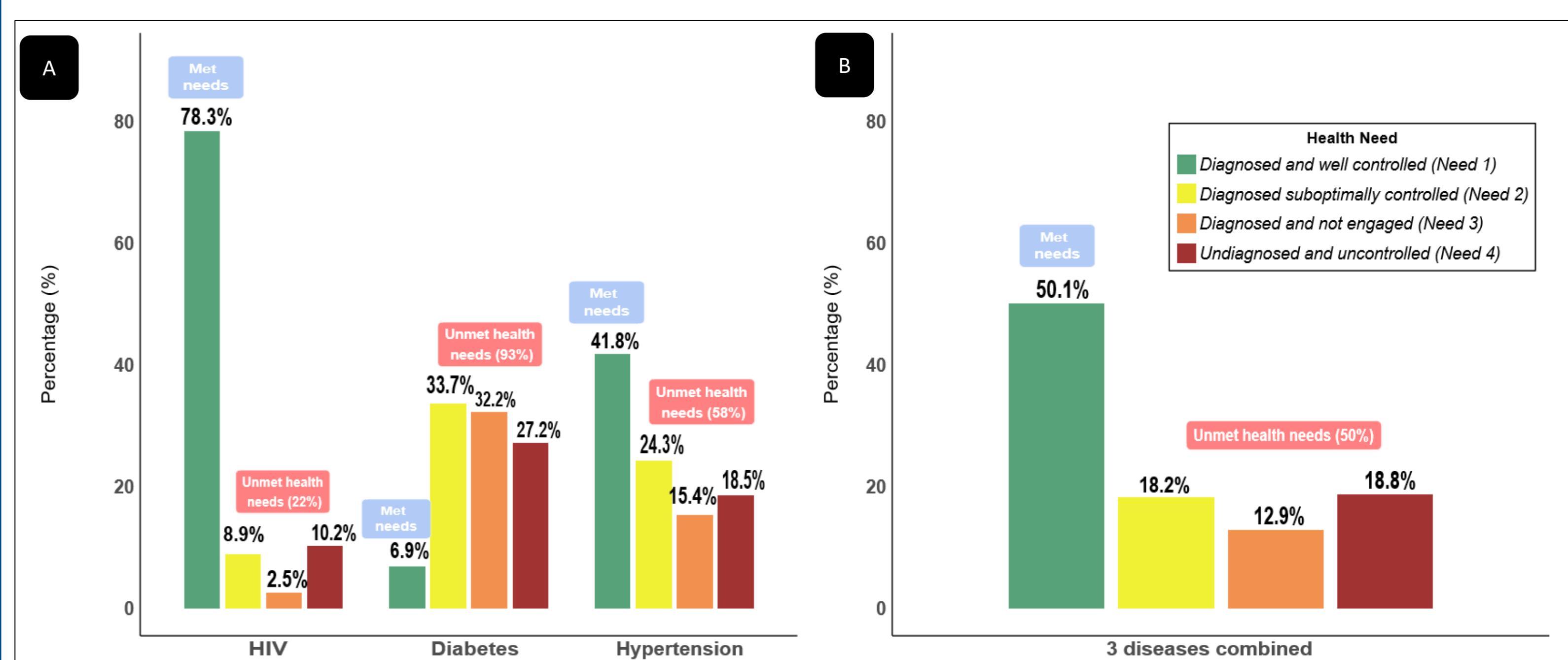
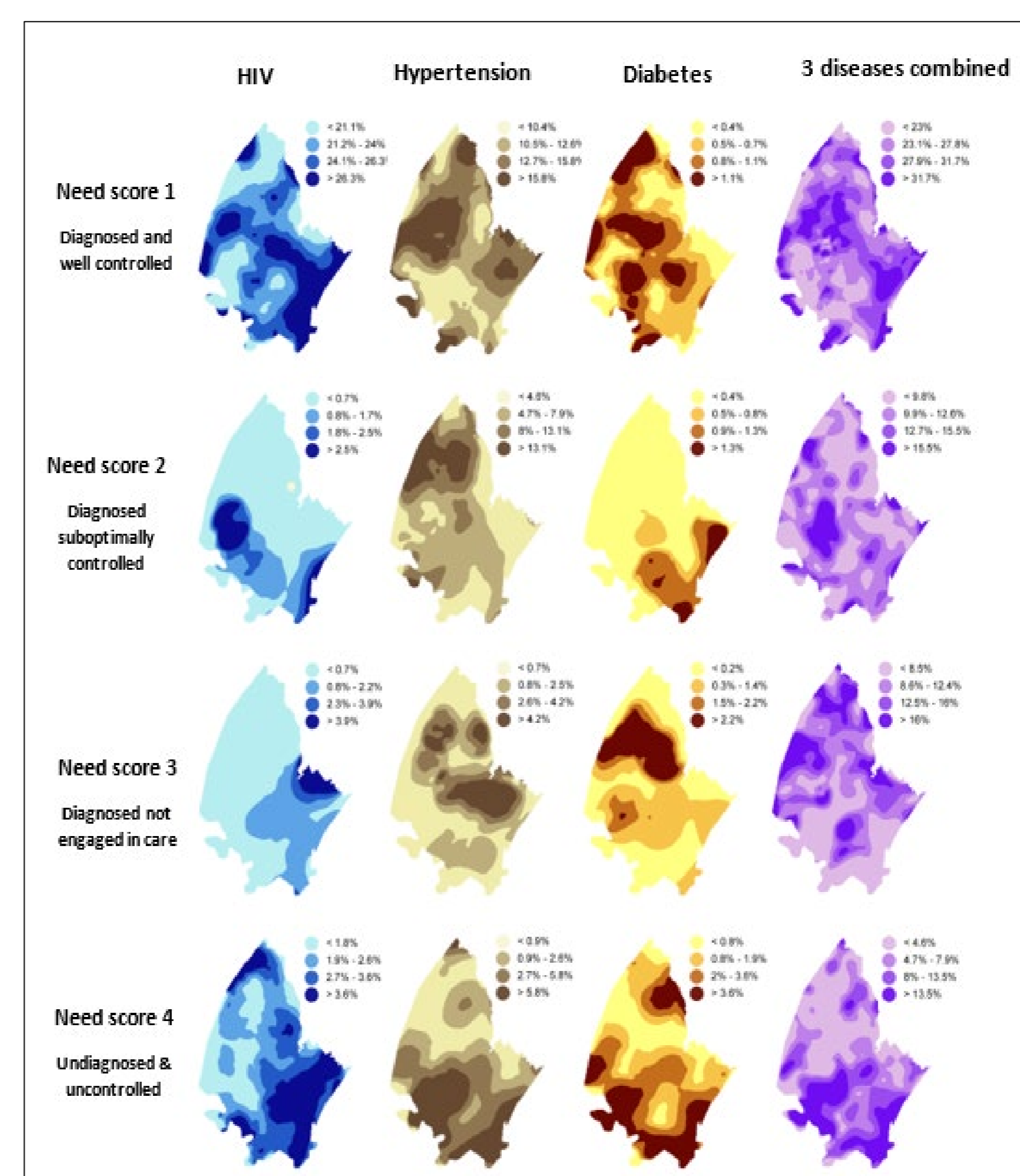


Figure 4. Geographic distribution of met and unmet health needs.



4. Conclusions

- Over 50% of all Vukuzazi participants had either HIV, DM or HPTN and 50% of all participants with at least one of these health conditions had their health needs inadequately addressed.
- Most people with HIV have their health needs met whilst those with non-communicable diseases (DM or HPTN) predominantly have their health needs unmet.
- Consideration needs to be given to an integrated health approach using pre-existing HIV frameworks for an effective cascade of care.

5. Acknowledgements

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