

Prevalence of HIV Associated Non-AIDS Conditions and Associated Risk Factors among Hospitalized HIV-infected Patients in India

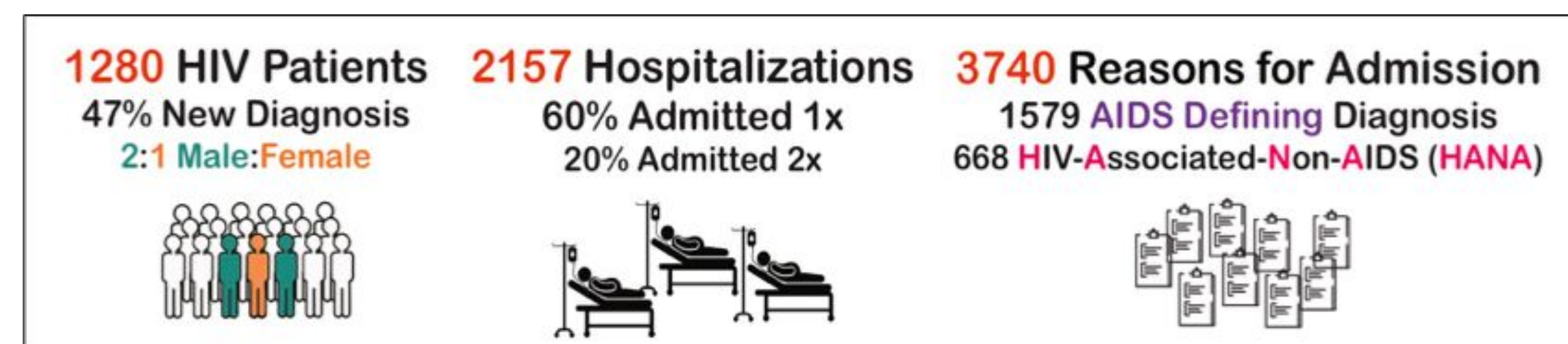
Celia Vitale Kucera, CORE MSIV¹; Amyeo Afroz Jereen, SELECT MSIV¹; Saniya Pervin, MBBS³; Seetha Lakshmi, MD²; Muralidhar Varma, MD³; Lynette Menezes, PhD²; Rajesh Radhakrishnan, PhD³
¹ USF Health Morsani College of Medicine, Tampa, FL; ² USF Department of Internal Medicine, Tampa, FL; ³ Department of Medicine, Kasturba Medical College, Manipal, India

BACKGROUND

HIV-associated non-AIDS (HANA) conditions are becoming common as People Living with Human Immunodeficiency Virus (PLWHIV) age. However, data estimating the prevalence of HANA conditions and associated risk factors is lacking in developing countries. This study evaluates reasons for hospitalizations among PLWHIV in Udupi, India in the antiretroviral era and describes associated risk factors.

METHODS

- 2157 medical records were reviewed using patient charts of 1280 HIV patients over the age of 18 who were admitted to Kasturba Hospital between January 1, 2013 and December 31, 2017
- Demographic data and reasons for hospitalization were collected for all patients and hospital admissions



RESULTS

- Patients' median age was 45 (18-80) years; 70% male. Median age of patients with AIDS-defining illness (45% of hospitalizations) was lower at 44 (18-75) years compared with HANA (15% of hospitalizations) at 48 (21-80) years.

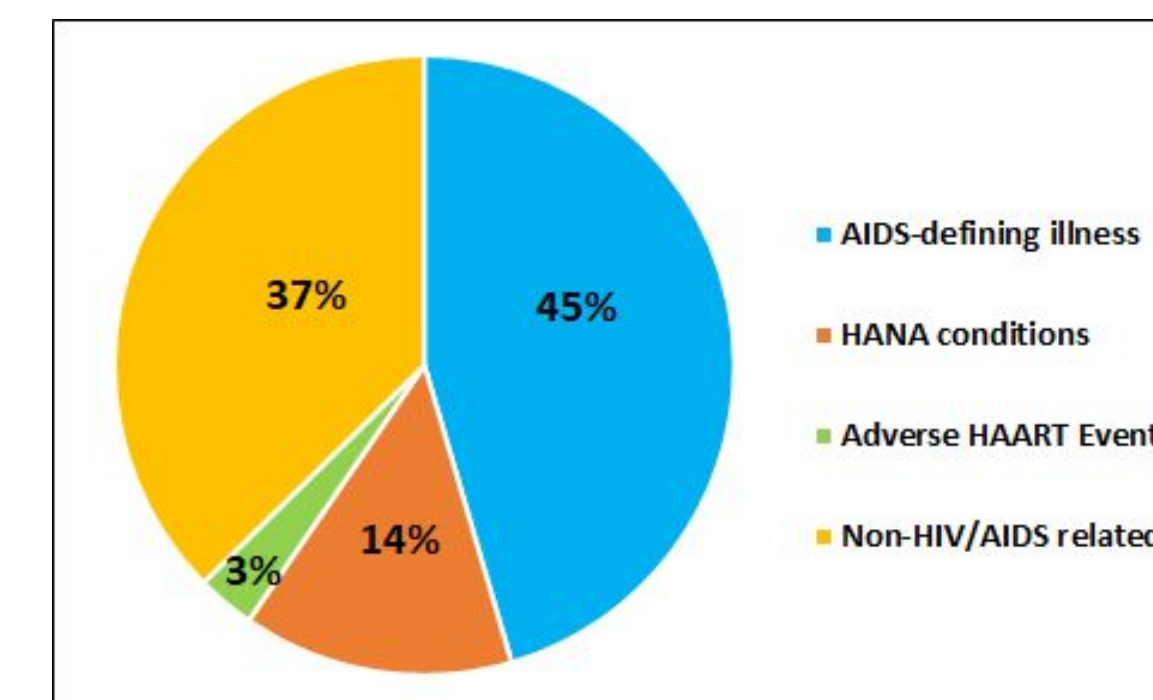


Figure 2. Primary reasons for hospitalization among PLWHIV in Manipal, India. Total number of hospitalizations (N = 2157) were categorized into 4 groups and recorded as percentages. Almost half of all admissions were due to AIDS defining illnesses.

Table 2. Top 10 AIDS-defining illnesses causing hospitalization among PLWHIV in Manipal, India.

AIDS-defining Illness	Percentage of All Admissions (%)
Extrapulmonary Tuberculosis	10.5
Pulmonary Tuberculosis	7.3
Oral Candidiasis	4.5
Bacterial Pneumonia	4.4
AIDS-Defining Cancers (NHL, DLBCL)	3.2
Chronic Diarrhea	2.4
Bacteremia/Sepsis	2.2
PJP Pneumonia	1.9
Cryptomeningitis	1.8
Esophageal Candidiasis	1.7

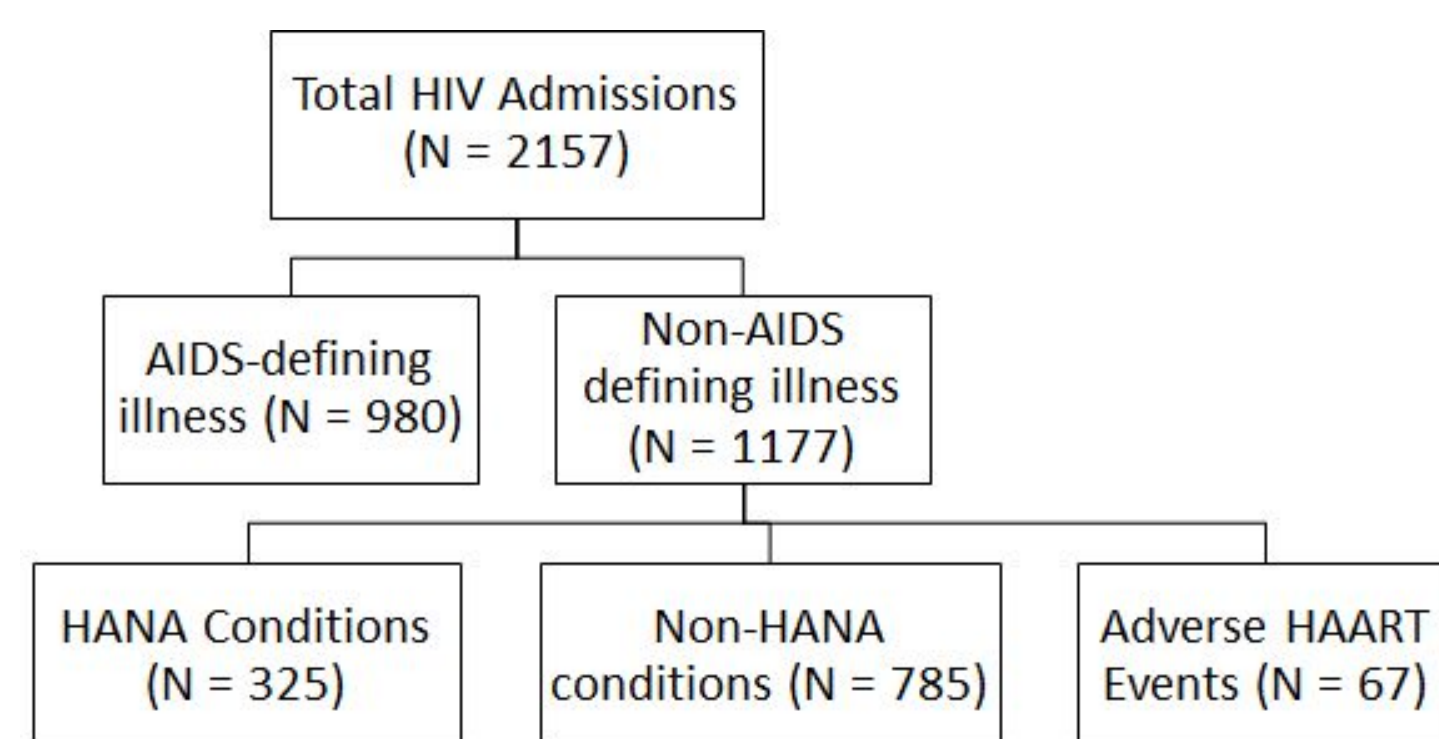


Figure 1. Flowchart with categorization of hospital admissions for PLWHIV in Manipal, India.

Table 1. Demographic data for PLWHIV in Manipal, India.

Variable	All patient, n= 1280 (100%)	Previous HIV diagnosis, n=686 (54%)	AIDS-defining illness, n=627 (49%)
Median Age (Range)	45 (18-80)	43 (19-80)	44 (18-75)
New Diagnosis	595 (46%)	-	304 (48%)
Unknown Duration of Treatment	408 (31%)	230(34%)	208 (33%)
9 months or more on HAART	321 (25%)	318 (46%)	130 (21%)
Tobacco Use	8%	8%	9%
Alcohol Use	11%	11%	12%
History of Hypertension	11%	11%	8%
History of Diabetes	10%	12%	8%
History of Coronary Artery Disease	2%	2%	<1%

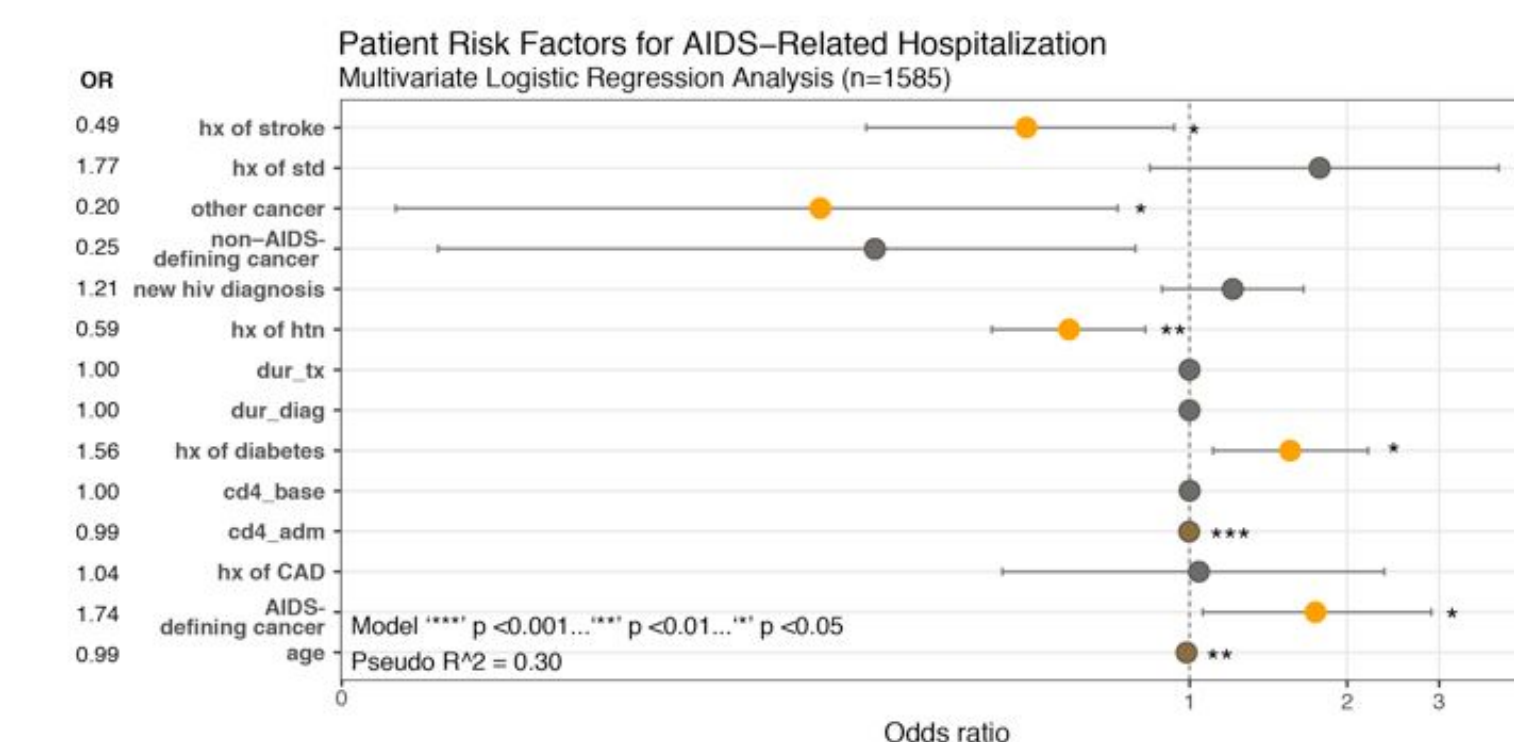


Figure 3. Patient medical history and demographic odds ratios for AIDS-defining hospitalizations for PLWHIV in Manipal, India. Hospitalizations (all, n=2157) were categorized into AIDS-Defining & Non-AIDS-Defining. Univariate logistical regression analyses were then performed to identify the 14 listed patient risk factors (p<0.05), which were entered into a multivariate logistical regression (MLR) analysis without controls for the results presented. Missing data: 572 hospitalizations were dropped from this MLR analysis; of the remaining 1586, 774 were AIDS-defining and 811 were non-AIDS-defining hospitalizations. Error bars represent 95% confidence intervals. McFadden's R squared analysis confirmed model fitness.

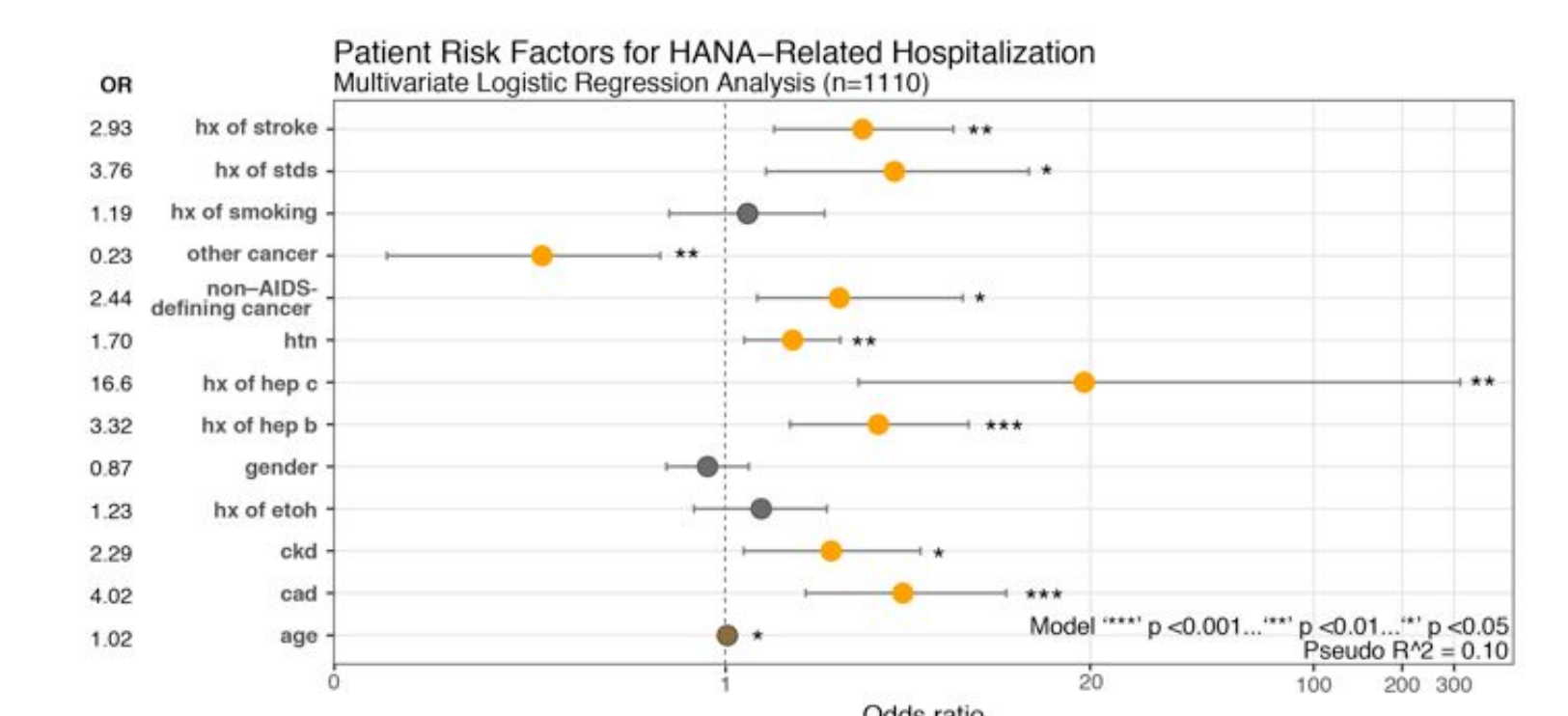


Figure 4. Patient medical history and demographic odds ratios for HANA-Related hospitalizations for PLWHIV in Manipal, India. HANA-Related hospitalizations (n=325) were compared to Non-HANA hospitalizations (n=785) using univariate logistical regression analysis to identify the 13 listed patient risk factors (p<0.05), which were entered into a multivariate logistical regression (MLR) analysis without controls for the results presented. No missing data for this MLR analysis. Error bars represent 95% confidence intervals. McFadden's R squared analysis confirmed model fitness.

CONCLUSIONS

Prevalence of HANA conditions was lower than AIDS defining illnesses possibly because of a younger population. Patients with AIDS-defining illnesses were also likely to have HANA conditions. Early detection and effective treatment of both HIV and HANA conditions is essential to decrease hospitalizations in low-resource settings.