Original Article

Medical Admissions in a Rural Teaching Hospital in Southern Nigeria: A Retrospective Review

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Abstract

Background: Hospital-based morbidity and mortality records reflect the health status of host communities. This helps policymakers and industry actors plan and allocate resources for health services, research, training, and development. This study aimed to determine the pattern and outcome of medical admissions in a Nigerian teaching hospital.

Methodology: This was a three-year retrospective review from 2019 to 2021.Data on morbidity and mortality were extracted from ward registers. The relevant data was analysed using the IBM SPSS software. Tests were considered significant at p values of less than 0.05.

Results: A total of 2544 patients were admitted during the study period. There were 1420 females (55.8%) and 1124 males (44.2%), and the majority (36.9%) of patients were middle-aged. The mean age was 53.81 ± 18.81 years, and the mean duration of hospital stay was 9.07 ± 8.41 days, with 97.2% of the patients spending less than 30 days on admission. Non-communicable diseases (70.6%) were the most common causes of admissions. The top disease-specific causes of admissions were diabetes mellitus with its complications (14.9%), renal failure (11.8%), heart failure (9.2%), hypertension and its emergencies (9.2%), stroke (7.8%) and tuberculosis (7.0%). Cardiology (15.5%), endocrinology (15.1%), nephrology (15.0%), pulmonology (14.8%), and neurology (13.3%) accounted for the majority (86.4%) of the admissions. The major causes of death were renal failure (16.2%), stroke (15.8%), diabetes mellitus and its complications (12.5%) and HIV/AIDS (8.7%). The majority (86.7%) of patients were discharged, 10.4% died, 2.2% were discharged against medical advice, and 0.7% were referred.

Conclusion: The study found an increased burden of non-communicable diseases relative to communicable diseases. Effective health education and promotion initiatives must be implemented to combat the impact of the increasing prevalence of these diseases.

Keywords: Medical Admissions; Morbidity; Mortality; Nigeria; Communicable Disease; Non-Communicable Disease.

Introduction

Health as the well-being (physical, mental, and social) of a population is dynamic with respect to the burden, epidemiological pattern, and social determinants within and among populations. Prompt action by hospitals in the areas of diagnosis, prevention, and cure of disease has a positive impact on disease outcomes. In recent years, a change in epidemiology has resulted in an increased prevalence of non-communicable diseases (NCDs) in developing nations such as

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Nigeria.[1,2] Despite this, communicable diseases (CDs) have persisted with occasional outbreaks and epidemics due to their high burden in developing nations.[3] This suggests that these regions now bear a double disease burden.

Hospital-based records of morbidity and mortality are crucial because they usually reflect the health status of the host communities. It provides an understanding of the prevalent diseases within the population and provides an insight into the dynamics of disease trends within a community.[4] It also helps the health facilities prepare for an effective response to sick diseases that may include those of epidemic potential. Policymakers, industry players, and health regulatory bodies also have a ready repertoire for policy development, advocacy, planning, and allocation of resources for health services, research, training, and development.[4]

Statistics on morbidity and mortality are scarce in developing countries.[5] This could be the result of inadequate documentation or poor record-keeping culture of the little effort made in this area, with an attendant impact on the provision of an invaluable database for researchers and policy-makers.[5,6] This hospital-based record is particularly important in a country like Nigeria, where there is a paucity of population-based studies alongside a health system that is plagued with inadequate resource allocation.[7] Around 80% of reports in Sub-Saharan Africa are based on hospital-based records.[7] Due to the expense and logistic challenges associated with community-based surveys, hospital-based statistics have been the second-best option in Africa.[7] Most of these hospital-based studies come from tertiary medical facilities, which are usually found in urban centres.[7]

Even though a few hospitals have electronic data, the majority, particularly those in rural areas, still retain records manually.[6] The enduring staff deficit in hospitals in rural and urban areas is a significant factor also militating against the provision as well as the quality of hospital records. This harsh reality affects research as well as practitioners' access to tools that will help improve the quality of practice.[5,6]

The pattern of medical admissions varies greatly on a local, regional, and global scale.[5,6,8–11] A review of medical admissions at a teaching hospital in southeast Nigeria showed that cardiovascular (18.8%) and neurologic (15.9%) disorders were the most common reasons for hospitalization.[12] In that study, human immunodeficiency virus (HIV) infection and its complications accounted for 6.7% of admissions.[12] In 2006, HIV/AIDS and related comorbidities were the leading causes of admission at the University of Benin Teaching Hospital in South-South Nigeria. This was followed by cardiovascular, neurologic, and renal disorders.[6] The majority of patients hospitalized at the Federal Medical Centre, Makurdi, in North-Central Nigeria, had infectious (25.2%), gastrointestinal (23.5%), and cardiovascular disorders (13.1%).[13] These discrepancies can be due to the various epidemiological burden of diseases, sociocultural factors, effects of the environment, and other social determinants on health.

Given the need for sound planning and a sector-wide approach to health care issues, this study sought to determine the morbidity and mortality profile of medical admissions in a rural teaching hospital in South-South Nigeria.

Methodology

Study setting and participants

This was a retrospective descriptive study carried out in the medical wards of Irrua Specialist Teaching Hospital (ISTH), Irrua between January 2019 and December 2021. The hospital is a 434-bed capacity tertiary institution in the South-South geopolitical zone of Nigeria. It serves as a major referral centre for neighbouring states (Ondo, Kogi, Delta and beyond). It is also a centre for the diagnosis, management, and control of viral haemorrhagic fevers, with special reference to Lassa fever. The ISTH is situated in Irrua, which is the administrative centre of Esan Central local government area in Edo State, South-South Nigeria. Irrua is a rural community with its inhabitants mainly agrarian but is surrounded by a couple of tertiary educational institutions that provide its sizeable number of educated and professional clients.

Medical patients in ISTH are routinely admitted into the female and male medical wards, each of which has 36 and 33 beds, respectively. Admission into the

wards is mainly via the emergency room or the medical outpatient consultant clinics. Adults admitted to the medical wards during the study period constituted the study population. Patients younger than 15 and those with missing records were also excluded from the study. Patients treated for Lassa fever and COVID-19 infections in the isolation wards were also excluded.

Data collection

The data were obtained from the ward registers. Extracted data included age, gender, diagnosis, duration, and outcome of admission. In cases where the diagnosis was ambiguous, the case file was reviewed to determine the diagnosis. The outcome of admission was categorised as discharged, discharged against medical advice (DAMA), referred, or death.

Statistical analysis

The data collected were analysed using IBM SPSS Statistics® version 25 for Windows. Continuous variables were summarised and presented as means and standard deviations, while categorical variables were summarised as frequencies and percentages. Association between variables was analysed using Pearson's chi-square and/or Fisher's exact test. A p-value less than 0.05 was considered statistically significant.

Ethical considerations

Institutional ethical approval was obtained from the Health Research Ethics Committee of ISTH. All procedures were carried out in compliance with the 1964 Helsinki Declaration and its later amendments. All data were fully anonymized.

Results

A total of 2,544 adults were admitted for various medical conditions between 2019 and 2021. The highest number of admissions was in 2020 which constituted 34.7% of admissions. There were 1124 males (44.2%) and 1420 females (55.8%), with a ratio of 1:1.26. The mean age was 53.81 ± 18.81 years, with a range of 16–115 years. The majority (36.4%) of the patients admitted were in the 41-60-year age group. The mean duration of admission was 9.07 ± 8.41 days (range: 1–90 days) and 97.2% of the patients spent less than 30 days on admission. The sociodemographic and clinical characteristics are summarised in Table 1.

Table 1: Sociodemographic and clinical characteristics of medical admissions

Characteristics	Frequency (N = 2544)	Percent (%)
Year		
2019	864	34.0
2020	882	34.7
2021	789	31.4
Age (years)		
<20	118	4.6
21-40	601	23.6
41-60	925	36.4
61-80	739	29.0
81-100	150	5.9
>100	11	0.4
Mean ± SD	(53.08 ± 18.81)	
Gender		
Male	1124	44.2
Female	1420	55.8
Disease category		
Communicable	749	29.4
Non-communicable	1801	70.6
Outcome of admission		
Discharged	2205	86.7
DAMA	57	2.2
Dead	265	10.4
Referred	17	0.7
Duration of admission (days)		
<30	2473	97.2
31-60	57	2.2
>60	14	0.6
Mean ± SD	(9.07 ± 8.41)	

DAMA, discharged against medical advice, N, total number of admissions

The majority (70.6%) of medical admissions were caused by NCDs. Based on the medical subspecialty, cardiology (15.5%), endocrinology (15.1%), nephrology (15.0%), pulmonology (14.8%), and neurology (13.3%) accounted for the majority (86.4%) of the admissions. The most frequent disease-specific causes of medical admissions were diabetes mellitus (DM) with its complications (14.9%), renal failure (11.8%), heart failure (9.2%), hypertension and its emergencies (9.2%), stroke (7.8%) and tuberculosis (TB) (7.0%). Septic arthritis ($p < 0.001$), pericarditis ($p = 0.003$), and seizure disorders ($p = 0.035$) were significantly more prevalent in males. The distribution of medical admissions is shown in Tables 2 and 3.

Table 2: Distribution of medical admissions based

on specialty

Medical Specialty	Total (N = 2544) n (%)	Gender Male n (%)	Female n (%)
Cardiology	395 (15.5)	168 (42.5)	227 (57.5)
Endocrinology	385 (15.1)	155 (40.3)	230 (59.7)
Nephrology	382 (15.0)	188 (49.2)	194 (50.8)
Pulmonology	376 (14.8)	168 (44.7)	208 (55.3)
Neurology	338 (13.3)	153 (45.3)	185 (54.7)
Gastroenterology	322 (12.7)	130 (40.1)	192 (59.6)
Infectious disease	178 (7.0)	80 (44.9)	98 (55.1)
Rheumatology	74 (2.9)	44 (59.5)	30 (40.5)
Haematology	59 (2.3)	23 (39.0)	36 (61.0)
Poisoning and envenomation	25 (1.0)	9 (36.0)	16 (64.0)
Dermatology	10 (0.4)	6 (60.0)	4 (40.0)

N, total number of admissions; All values are stated in number (percentages) unless otherwise stated.

Table 3: Pattern of distribution of medical conditions admitted in the medical wards

Medical conditions	Total (N = 2544) n (%)	Gender Male n (%)	Female n (%)	p-value
Upper gastrointestinal bleeding	76 (3.0)	36 (47.4)	40 (56.6)	0.570
Acute Gastroenteritis	81 (3.2)	30 (37.0)	51 (63.0)	0.188
Chronic liver disease	43 (1.7)	22 (51.2)	21 (48.8)	0.353
Hepatocellular carcinoma	28 (1.1)	8 (28.6)	20 (71.4)	0.094
Peptic ulcer disease	65 (2.6)	24 (36.9)	41 (63.1)	0.233
Acute gastritis	15 (0.6)	5 (33.3)	10 (66.7)	0.396
Acute viral hepatitis	13 (0.5)	8 (61.5)	5 (38.5)	0.206
Diabetes mellitus and complications	378 (14.9)	151 (39.9)	227 (60.1)	0.072
Sickle cell anaemia	26 (1.0)	8 (30.8)	18 (62.9	0.166
Hematologic malignancies[¥]	16 (0.6)	8 (50.0)	8 (50.0)	0.638
Organophosphate poisoning	14 (0.6)	4 (28.6)	10 (71.4)	0.238
Snake bite	11 (0.4)	5 (45.5)	6 (54.5)	0.932
Stroke	198 (7.8)	84 (42.4)	114 (57.6)	0.604
Meningitis	47 (1.8)	19 (40.4)	28 (59.6)	0.601
Tetanus	11 (0.4)	6 (54.5)	5 (45.5)	0.488
Seizure disorder	57 (2.2)	33 (57.9)	24 (42.1)	0.035*
Viral encephalitis	25 (1.0)	13 (52.0)	12 (48.0)	0.429
Systemic lupus erythematosus	15 (0.6)	5 (33.3)	10 (66.7)	0.079
Rheumatoid arthritis	8 (0.3)	4 (50.0)	4 (50.0)	0.740
Septic arthritis	10 (0.4)	10 (100.0)	0 (0.0)	< 0.001*
Gout	12 (0.5)	8 (66.7)	4 (33.3)	0.448
Degenerative joint diseases	36 (1.4)	19 (52.8)	17 (47.2)	0.296
Tuberculosis	177 (7.0)	80 (45.2)	97 (54.8)	0.778
Pneumonia	172 (6.8)	68 (39.5)	104 (60.5)	0.204
Lung cancer	26 (1.0)	15 (57.7)	11 (42.3)	0.163
Bronchial asthma	20 (0.8)	10 (50.0)	10 (50.0)	0.599
Chronic obstructive lung disease	25 (1.0)	12 (48.0)	13 (52.0)	0.699
Interstitial lung disease	14 (0.6)	9 (64.3)	5 (35.7)	0.129
Suppurative lung disease	8 (0.3)	4 (50.0)	4 (50.0)	0.740
Malaria	110 (4.3)	51 (46.4)	59 (53.6)	0.638
HIV/AIDS	141 (5.5)	53 (37.6)	88 (62.4)	0.105
Herpes zoster	8 (0.3)	5 (62.5)	3 (37.5)	0.296
Steven Johnson syndrome	2 (0.1)	1 (50.0)	1 (50.0)	0.868
Hypertension and emergencies	211 (8.3)	94 (44.5)	117 (55.5)	0.911
Ischemic heart disease	39 (1.5)	14 (35.9)	25 (64.1)	0.294
	234 (9.2)	110 (47.0)	124 (53.0)	0.361
DVT/Pulmonary embolism	12 (0.5)	4 (33.3)	8 (66.7)	0.448
Pericarditis	16 (0.6)	13 (81.3)	3 (18.8)	0.003

#, inflammatory bowel disease, hepatic abscess, gastroesophageal reflux disease, Bechet's disease, dermatomyositis, reactive arthritis, adult onset stills disease, systemic sclerosis, Addison's diseases, thyrotoxicosis, multiple myeloma, disseminated intravascular coagulopathy, polycythaemia rubra vera, mixed deficiency anaemia, essential thrombocythemia; β, chronic kidney disease and acute kidney injury; ¥, leukaemia and lymphomas; DVT, deep vein thrombosis; *statistically significant p - value. All values are stated in number (percentages) unless otherwise stated.

The majority (86.7%) of patients admitted during the period under review were discharged. The rate of discharge against medical advice (DAMA) was 2.2% and ranged from 1.9% to 2.8%, the highest being in 2021. On average, mortality occurred in 10.4% of medical admissions; the highest was in 2020 (12.4%). The majority of deaths (13%) occurred among patients between the ages of 21 and 40 years. Age and gender had a statistically significant association with the outcome of admission ($p < 0.001$). The distribution of the outcomes of medical admissions is shown in Table 4 and Figure 1.

Table 4: Distribution of the outcome of medical admissions

Characteristics	Total (N = 2544) n (%)	Outcome Discharged n (%)	DAMA n (%)	Dead n (%)	Referred n (%)	p-value
Year						
2019	864 (34.0)	769 (89.0)	16 (1.9)	74 (8.6)	5 (0.6)	0.160
2020	882 (34.7)	749 984.9)	19 (2.2)	109(12.4)	5 (0.6)	
2021	798 (31.4)	687 (86.1)	22 (2.8)	82 (10.3)	7 (0.9)	
Sex						
Male	1124 (44.2)	991 (88.2)	3 (0.3)	125 (11.1)	5 (0.4)	< 0.001*
Female	1420 (55.8)	1214 (85.5)	54 (3.8)	140 (9.9)	12 (0.8)	
Age groups (years)						
<20	118 (4.6)	107 (90.7)	1 (0.8)	10 (8.5)	0 (0.0)	< 0.001*
21-40	601 (23.6)	518 (86.2)	14 (2.3)	62 (10.3)	7 (1.2)	
41-60	925 (36.4)	787 (85.1)	11 (1.2)	120 (13.0)	7 (0.8)	
61-80	739 (29.0)	647 (87.6)	20 (2.7)	69 (9.3)	3 (0.4)	
81-100	150 (5.9)	136 (90.7)	10 (6.7)	4 (2.7)	0 (0.0)	
>100	11 (0.4)	10 (90.1)	1 (1.9)	0 (0.0)	0 (0.0)	
Duration of admission (days)						
<30	2473 (97.2)	2142(86.6)	54 (2.2)	260 (10.5)	17 (0.7)	0.659
31-60	57 (2.2)	50 (87.7)	2 (3.5)	5 (8.8)	0 (0.0)	
>60	14 (0.6)	13 (92.9)	1 (7.1)	0 (0.0)	0 (0.00	

DAMA, discharged against medical advice; n, frequency of each variable; N, total number of admissions;*statistically significant; All values are stated in number (percentages) unless otherwise stated

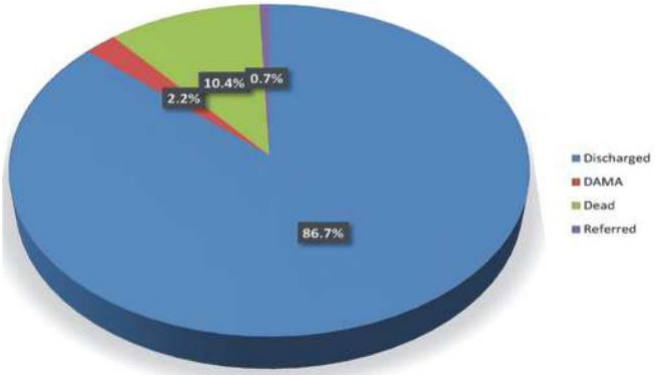

Figure 1: Distribution of the outcome of medical admissions

The highest mortality rates were recorded among neurology (22.3%), nephrology (17.7%) and cardiology (13.2%) cases. Low mortality rates were recorded in rheumatology (0.4%), poisoning and envenomation (1.5%), and haematology (3.0%). The dermatology specialty recorded no mortality during the period under review. The most common disease-specific causes of mortality are renal failure (16.2%), stroke (15.8%), DM and its complications (12.5%) and HIV/AIDS (8.7%). The distribution of mortality are shown in Figures 2 and 3.

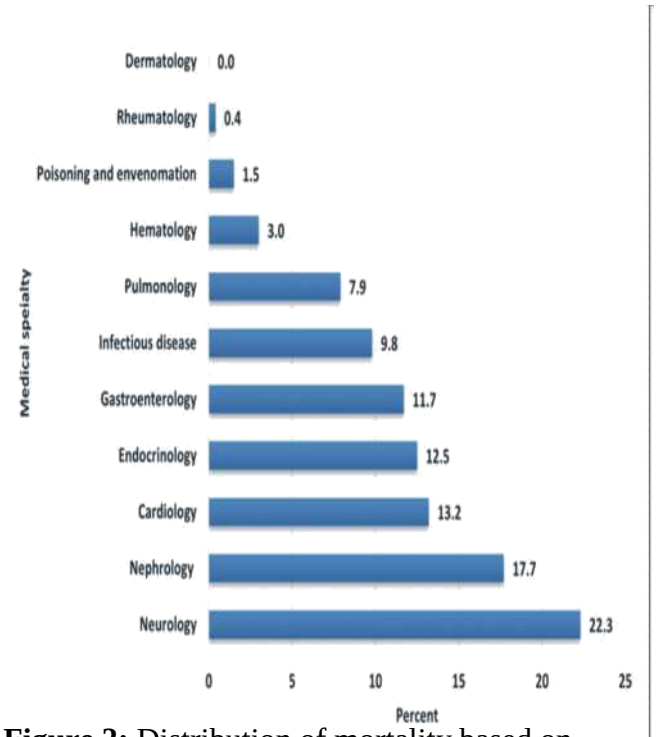

Figure 2: Distribution of mortality based on medical specialty/category

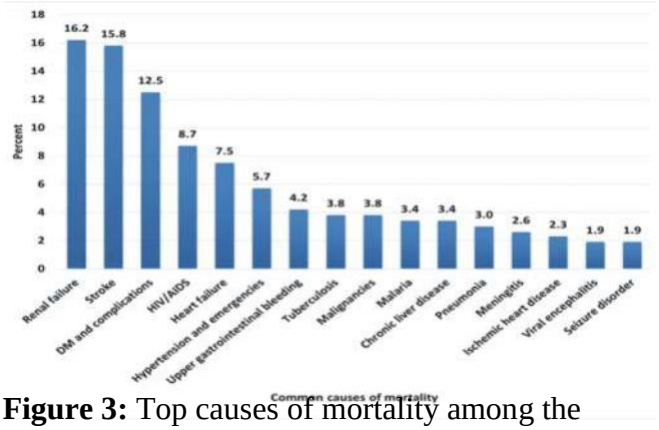

Figure 3: Top causes of mortality among the medical admissions

Discussion

This study emphasises the necessity of maintaining a well-managed database to preserve important information for planning, advocacy, policymaking, and research. The study provides information about the burden of NCDs and CDs in the institution's immediate vicinity. The high prevalence of NCDs over CDs is the key finding of this study. In addition, it shows the high incidence of neurologic and renal-related mortality.

The mean age (53.08 ± 18.81 years) in this study is comparable to that of other Nigerian studies.[11,14,15] It was found to be higher than that obtained in studies by Ali et al.[10] in Ethiopia and Akoria et al.[6] in Benin-City, South-South, Nigeria. In the index study, most of the admissions were in the age group of 40–60 years, followed by those aged above 60 years. This was comparable to earlier studies.[12,13,16] According to Nkpozi et al.[17] in Abia and Adeoti et al.[18] in Ekiti, most admissions were in the age group of over 60 years, followed by the middle age group. The result of this is a loss of man-hours and adverse economic effects. The elderly are susceptible to lowered immunity, increased vulnerability to disease, and degenerative disorders. Increasing age is a recognised risk factor for NCDs, which topped the list of admissions in this study. In a developing nation such as Nigeria, integrating geriatric care into medical treatment is necessary when formulating policies.

Previous research has shown variation in gender distribution in the pattern of medical admissions. More females than males were on admission over the study period. A comparable result was observed

in similar studies.[11,16,17] This could be attributed to the better health-seeking behaviour of females when compared to males, even though it has been shown that males are more likely to develop DM, stroke and other NCDs.[19,20] However, contrasting gender disparities were found in other similar studies.[2,9,13,15] This could be due to a perceived gender inequality in which men are perceived to be more empowered, allowing them greater access to health care than wo men. [1 3] Despite the overall female preponderance in this study, males were significantly more likely to develop septic arthritis, pericarditis, and seizure disorders. Several reports corroborate this finding of male preponderance in these conditions.[21–23]

The prevalence of NCDs in the study was 70.6%, whereas that of CDs was 29.4%. This corroborates what other Nigerian studies have found about the high rates of NCDs and the epidemiological transition in Nigeria.[15,24,25] As a result of the changing epidemiology in Africa, NCDs are slowly taking over as the leading cause of morbidity and mortality from CDs.[3] In Sub-Saharan Africa, NCDs have been projected to account for more than half of all fatalities by 2030.[26] The constant and persistent increase in NCDs may be related to the rising incidence of cardiovascular risk factors such as hypertension, DM, and dyslipidaemia.[2] It may also be related to rising urbanization, decreased physical exercise, and the epidemic emergence of obesity, particularly in developing countries. In contrast, the prevalence of communicable diseases was higher in studies conducted in Shagamu,[11] Okada,[27] Bayelsa,[28] and Asaba.[14]

Diabetes mellitus related complications, renal failure, stroke, heart failure, systemic hypertension and accompanying crises, and TB were the leading causes of medical admissions at ISTH during the study period. Similar results were reported in earlier research conducted in Nigeria.[17,24,29] In the Asir region of Saudi Arabia, a similar disease distribution was noted.[9] It is not unexpected that DM was the leading cause of hospitalisation in this study. In Africa, where the prevalence of DM is at an alarmingly high level, there is the greatest potential for a 129% increase in burden by 2045.[30] Approximately one in seventeen Nigerian adults is currently affected by DM.[31] Diabetes mellitus has been linked to a higher risk of NCDs like stroke, heart failure, and kidney failure, which are the most common reasons for admission in this study.[32]

The most prevalent infectious conditions leading to medical hospitalisation during the study period were tuberculosis and HIV/AIDS. Previous research from Nigeria produced similar conclusions.[2,11,18,28] The prevalence of TB, a re-emerging disease, has increased due to the spread of HIV/AIDS. This could be made worse by the interaction between HIV/AIDS and latent tuberculosis, which could result in the reactivation and rapid advancement of the disease.[33] Sub-Saharan Africa accounts for up to 71% of the global HIV infection burden.[25] Young adults are typically more affected due to their risky behaviour, and this leads to a loss of man-hours and a huge economic burden. Although malaria is endemic in our environment, it is rarely reported as a cause of admission. This may be a result of the fact that most adult cases of malaria are treated as outpatients, with few exceptions made for severe cases.

Despite being an agrarian community, we saw very few occurrences of snake bites treated in the medical wards during the research period. In the study by Egbi et al. in a rural tertiary hospital, no occurrence of snake bites was reported.[28] The reasons for this are unknown, although it may be conceivable that the superstitious mentality of the population could play a role in decisions to forego hospital care for patients with snake bites.[28] Individuals with snake bites may have been treated and discharged from the emergency room, or they may have died at home without presenting to the hospital. In addition, the snakes in the vicinity may be non-venomous.

Mortality rates in hospitals are a reliable indicator of the quality of health care provided by an institution. In our study, the mortality rate (10.4%) is comparable to rates in Bayelsa (10.6%),[28] Ethiopia (28.6%)[10], and Asaba (12.8%).[14] However, it was lower than mortality rates in other parts of the country.[11,15,34,35] Ghamdi et al. in Saudi Arabia and Papadopoulos et al. in Greece found a mortality rate of 5.9% and 3.4%, respectively.[9,36] The cause of these disparities in mortality rates between published studies is unclear. However, some of the centres may have a larger number of specialists and

more up-to-date diagnostic tools.

Both NCDs and CDs admissions contributed to the disease-specific death rate. In this study, the leading disease-specific causes of mortality included renal failure, stroke, DM, HIV/AIDS, and heart failure. The distribution of disease-specific mortality is comparable to that documented in related Nigerian studies.[17,24] Stroke, chronic kidney disease, and heart failure likely share a combination of cardiovascular risk factors, including hypertension and DM. Also, the advancing age of the study population may be a contributing factor. It is crucial to note that most of these risk factors are identified after the patients develop complications such as stroke, heart failure, and renal failure.[37]

Comorbidities like HIV/AIDS and tuberculosis contribute substantially to communicable disease-related mortality. Previous research also reported similar findings.[17,24,29] Egbi et al.[28] and Ezeala-Adikaibe et al.[15] reported HIV/AIDS as the most common cause of mortality overall in their studies. HIV/AIDS is linked to numerous life-threatening opportunistic diseases, including TB and other viral infections. Despite its myriad consequences, HIV/AIDS is the fourth leading cause of death in our population. A plausible explanation for this could be the hospitals' improved HIV care program.

The study's admission outcome data are comparable to those from Kano and Abia.[17,34] The majority of our patients were discharged with similar findings from other previous studies.[18,28] Being female and in the age group of 41–60 years was shown to better influence discharge following admission in our series. The reported rates of DAMA differ between centres and socio-cultural contexts. Egbi et al.[28] in Bayelsa, South-South Nigeria and Adeoti et al.[18] in Ado-Ekiti, South-West Nigeria reported rates of 5.2% and 7.6% respectively. A much lower DAMA rate of 2.2% was found in this study. Rate discrepancies may be explained by economic variations and contrasting study settings. It has been shown that patients who DAMA have a very high risk of being readmitted and dying, which is a cause for concern.[38] Patients have mentioned poverty, erroneous sociocultural or religious beliefs, and attributing disease to spiritual attacks as causes of DAMA.[28] In light of these findings, it is vital to enhance public health programmes aimed at preventing and controlling NCDs. This will reduce the impact of cultural and superstitious beliefs that lead to increased DAMA rates and late hospital presentations.

The mean duration of admission (9.07 ± 8.41 days) was comparable to other previous studies.[17,18] Patients with neurological disorders (primarily stroke), DM and its complications (DM foot ulcers), and infectious diseases (primarily HIV/AIDS) had the longest hospital stay. Adeoti et al. published a similar finding.[18] These disorders are associated with severe disability and attendant complications, which frequently necessitate longer hospital stay. Other associated issues may include the inability to pay hospital bills and neglect by family members.[18]

This study sheds light on the extent of health record features of most institutions in Nigeria. Manual/paper record keeping has inherent drawbacks, as data can easily be lost or missing, and books can be destroyed. This emphasizes the need for digital data storage in hospitals' medical records departments. Electronic medical records are advantageous because they are less susceptible to physical wear and tear and require less labour. Reduced medical errors, data compression, improved information access, and improved research capacity are further benefits.[39] Despite the drawbacks of paper records they continue to dominate the record-keeping system in the majority of hospitals in Nigeria. Some of the reasons for this are the high initial costs of digital technology, the ongoing costs of maintaining it, the loss of productivity caused by having to learn a new system, and employee aversion to change.[39]

The study is not without drawbacks. The reliance on the accuracy of study data may be of concern due to the retrospective nature. The hospital keeps paper records, which made data collection tedious and time-consuming and, in some cases, missing data. Despite these limitations, the results of this index research will serve as a clinical audit of medical admissions and will help influence hospital management and other industry leaders in the allocation of resources for healthcare and other healthcare improvement programs. It will also be a vital monitoring and evaluation tool for the hospital.

Conclusion

This study found a greater burden of NCDs relative to CDs. Most of the admitted patients were middle-aged and of the female gender. Renal failure, stroke, diabetes, and HIV/AIDS were the top causes of death. Effective health education and promotion measures should be implemented to combat the rising burden of NCDs and CDs. Modern health information management requires human resources and infrastructure. Increased healthcare financing, upgrading health centres, and personnel training and retraining are also crucial.

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