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A Review of a Calendar Year of Emergency Medical Admission into a Tertiary Hospital in a Semi-Urban Town in Southern Nigeria

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Abstract

The provision of a medical Emergency Department (ED) is an important component of a tertiary hospital, since most serious medical cases access hospital services through this pathway. However, there is a dearth of detailed information about the medical disease burden, admitted through the ED in our locality, whereas this information is highly needed in planning and policy formulation with regards to delivering optimal emergency medical care. Thus, this study aimed to determine the disease burden, distribution and outcomes for medical cases admitted to the ED.

The study is a one-year retrospective review of the medical admissions to the ED of a tertiary hospital. The data required were obtained from patients' and hospital medical records, which were analyzed using IBM/SPSS Version 23 package. A total of 787 medical patients were admitted to the Emergency department during the study period. There were 415 (52.7%) male and 372 (47.3%) female patients. The age range of the patients was 18-95 years, with a mean of 50.51 ± 17.97 years. The leading causes of admissions were stroke, complications of diabetes mellitus, and heart failure with a combined total of 206 patients (26.0%). Non-communicable diseases (NCD) formed a significant majority of the admissions (56.8%), with cardiovascular disorders the leading cause of NCDs (29.3%). Sepsis was the major cause of infectious diseases with 50 patients making up approximately 6% of the total admitted cases. The commonest causes of death were NCDs, with 39 (61.53%) deaths; amongst which diabetic complications accounted for the greatest number with 6 patients (15.38%). Severe sepsis was a major cause of death due to communicable disease with 5 patients (12.82%). The study showed that NCDs constituted a significant majority of admissions. Efforts geared towards reducing NCDs and improvement of the hospital infrastructure for optimal management in the ED is necessary for improved outcomes.

Keywords: Emergency-Department, Medical Admission, Tertiary-Hospital, non-communicable diseases.

INTRODUCTION

The availability of an Emergency Department is an important component in a hospital, as a reasonable number of patients, access hospital services through the emergency departments (Reynolds *et al.,* 2018). In most healthcare settings the department is known as the 'Accident and Emergency' (A&E) department. Accident and Emergency departments are usually medical treatment units equipped to deliver timely effective interventions to save people with

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acute life-threatening conditions. In Europe and North America as much as 50 - 70% of hospital admission is via the medical emergency department of the hospital (Schuur and Venkatesh, 2012).

In developing countries such as Nigeria, where large proportions of the citizens live in rural and semi-urban areas (The World Bank Group, 2024; Omoruan *et al.,* 2009), it is almost the practice for sick patients to present to the hospital via the Accident and Emergency (A&E) department, as they tend to delay presentation until they are very ill (MacRorie, 1998). The increased utilization of emergency medical departments worldwide has been related to the increasing complexity of society, rapid growth in population, and increased population of poor people (Wittenberg *et al.,* 2014; Wang *et al.,* 2014).

Accident and Emergency admissions give a panoramic view of medical emergencies in any population. It provides a suitable micro-population for quantifying the disease burden in the index population. Such information may help to guide policy formulation, resource allocation, funding priorities, training, and research, subsequently making healthcare systems more responsive to meet patients' expectations, improve service utilization, and improve outcomes (Wang *et al.,* 2014). There is therefore need for up-to-date information regarding the trend in admission patterns into the A&E in hospitals in this locality. The study objective was to provide an assessment of the current disease patterns and the outcomes of patients admitted in a medical unit of an A&E department in a semi-urban tertiary health facility in South-South Nigeria.

MATERIALS AND METHODS

Study area: This study was carried out in Delta State University Teaching Hospital (DELSUTH), Oghara, Delta state, Nigeria. Oghara is a semi-urban town with rather rapid progress to urbanization on account of modern facilities and amenities, consequently is envisaged to witness an exponential increase in medical emergencies in the normal course of time. The adult emergency area of the hospital has a contiguous floor plan with a medical and surgical area further divided into male and female sections. The hospital maintains a policy of patients not staying longer than 24 to 48 hours in the A&E unit before being sorted out to the ward for admission, transferred out or discharged as pertinent. The hospital has a full complement of trained medical and support staff to render quality medical services to admitted patients.

Study design: The study was a retrospective descriptive cross-sectional analysis of records of patients admitted to the medical ED of the institution.

Study population: The adult patients admitted into the medical ED of the hospital from January 1st 2023 to December 31st 2023.

Inclusion/Exclusion Criteria: All patients admitted into the medical emergency of the ED in the study period were included. Patients who were admitted into the surgical, obstetrics, gynecologic and other non-medical ED were excluded as well as patients who were brought in dead (BID).

Sampling technique: A consecutive sampling technique was used to select eligible patients.

Study instrument and data collection method: A data extraction form was used to extract required data from case notes, medical records, charts, and nurses' report books of eligible patients. The patients' data retrieved included: patients' biodata, duration of admission,

clinical diagnosis, and clinical outcome within the period of stay at the A&E as well as the cause of death when applicable. Diagnosed diseases were further classified based on the system affected using the guidelines of the WHO International Classification of Diseases, Eleventh Revision (ICD-11), version 2024 (World Health Organization, 2024). The diseases were classified into communicable diseases and non-communicable diseases for ease of comparison with other studies. Outcomes for hospitalized cases were classified as follows: discharge, death, referral, admission into the ward/Intensive Care Unit (ICU), and discharge against medical advice (DAMA). The data obtained were analyzed using the International Business Machine (IBM) Statistical Package for Social Sciences (SPSS) software, version 23. Quantitative variables were summarized using appropriate measures of central tendency; while categorical variables were summarized using frequencies and percentages. Results were displayed in a descriptive tabular format.

Ethical clearance: Ethical approval was obtained for the study from the Ethical Research Committee of the hospital.

RESULTS

During the review period, a total of 787 medical patients were admitted to the A&E department. There were 415 (52.7%) male patients and 372 (47.3%) female patients; the male-to-female ratio was approximately 1.1:1. The age range of the patients was 18-95 years, with a mean of 50.51 ± 17.97 years. The age range for male patients was 18-94 years, with a mean of 52.64 ± 18.27 years. The female age range was 18-95 years with a mean of 48.24 ± 17.36 (Table 1).

Table 1: Age and gender distribution of admitted patients.

Age range (Years)	Male, n=415 (%)	Female, n=372 (%)	Total, n=787 (%)
18-30	57 (13.7)	70 (18.8)	127 (16.1)
31-40	58 (14.0)	57 (15.3)	115 (14.6)
41-50	76 (18.3)	87 (23.4)	163 (20.7)
51-60	76 (18.3)	68 (18.3)	144 (18.3)
61-70	79 (19.1)	54 (14.6)	133 (17.0)
71-80	39 (09.4)	18 (04.8)	57 (07.2)
81-95	30 (07.2)	18 (04.8)	48 (06.1)

The peak admission months were February, April, June, August and September grossing about 47.4% of the total admissions for the year, while the months of November, December and January have the least amount of patient admission; an average of 6.56% each month (Table 2).

Table 2: Monthly admission pattern into the A&E

Months	Male, n=415 (52.73%)	Female, n=372(47.27%)	Total, n=787 (100%)
January	30 (3.81)	28 (3.56)	58 (7.37)
February	37 (4.70)	35 (4.45)	72 (9.15)
March	36 (4.58)	30 (3.81)	66 (8.39)
April	39 (4.96)	40 (5.08)	79 (10.04)
May	36 (4.58)	30 (3.81)	66 (8.39)
June	40 (5.08)	32 (4.07)	72 (9.15)
July	36 (4.58)	30 (3.81)	66 (8.39)
August	44 (5.59)	34 (4.32)	78 (9.91)
September	33 (4.19)	39 (4.96)	72 (9.15)
October	32 (4.07)	29 (3.68)	61 (7.75)
November	27 (3.43)	22 (2.80)	49 (6.23)
December	25 (4.08)	23 (2.92)	48 (6.10)

The disease distribution pattern of admitted medical cases reveals that non-communicable diseases (NCD) formed a significant majority of A&E admissions (56.8%), with cardiovascular disorders the leading cause of NCDs (29.3%). The leading causes of admissions were stroke, complications of diabetes mellitus and heart failure with 206 patients (26.0%). Sepsis is the leading cause of infectious diseases with 50 (45%) making up approx. 6% of the total admitted cases in the A&E. in the period under review (Table 3).

Table 3: The disease distribution pattern of admitted medical cases.

Systems and disease	**Male** n=415(52.7%)	**Female,** n=372(47.3%)	**Total,** n=787 (100%)
Cardiovascular system	**63 (15.1)**	**52 (13.9)**	**115 (14.6)**
Acute left ventricular failure	3 (4.8)	1 (1.9)	4 (3.5)
Anemic heart failure	2 (3.2)	3 (5.8)	5 (4.3)
Cardiac dysrhythmia	3 (4.8)	5 (9.6)	8 (7.0)
Cardiac arrest	3 (4.8)	2 (3.8)	5 (4.3)
Congestive cardiac failure	25 (39.7)	26 (50.0)	51 (44.3)
Hypertensive encephalopathy	12 (19.0)	7 (13.5)	19 (16.5)
Severe uncontrolled hypertension	13 (20.6)	8 (5.4)	21 (18.3)
Venous ulcer on the left lateral ankle	2 (3.2)	-	2 (1.7)
Endocrine system	**39 (9.4)**	**35 (9.4)**	**74 (9.4)**
DM Type 2 with complications	34 (87.1)	32 (91.4)	66 (89.2)
Myasthenia gravis	2 (5.2)	-	2 (2.7)
Type 1 Diabetes mellitus in DKA	3 (7.7)	3 (8.6)	6 (8.1)
Gastrointestinal system	**65 (15.7)**	**54 (14.5)**	**19 (15.1)**
Acute hemorrhoid	2 (3.1)	-	2 (1.7)
Acute hepatic failure	8 (12.3)	6 (11.1)	14 (11.8)
Exacerbation of Peptic ulcer disease	8 (12.3)	16 (29.6)	24 (20.2)
Decompensated Alcoholic liver	24 (36.9)	12 (22.2)	36 (30.3)
Chronic liver disease with UGIB	8 (12.3)	3 (5.6)	11 (9.2)
Chronic esophagitis and dysphagia	2 (3.1)	2 (3.7)	4 (3.4)
Food poisoning	3 (4.6)	6 (11.1)	9 (7.6)
Obstructive jaundice	2 (3.1)	1 (1.9)	3 (2.5)
Upper GI bleeding sec to PUD	5 (7.7)	6 (11.1)	11 (9.2)
Acute gastroententis	3 (4.6)	2 (3.7)	5 (4.2)
Hematological System	**11 (2.6)**	**13 (3.5)**	**24 (3.0)**
Severe anemia	5 (45.5)	9 (69.2)	14 (58.3)
Myelofibrosis r/o aplastic anemia	2 (18.2)	-	2 (8.3)
Sickle cell disease in VOC	4 (36.4)	2 (15.4)	6 (25.0)
Idiopathic Thrombocytopenia	-	2 (15.4)	2 (8.3)
Infectious Diseases	**52 (12.5)**	**59 (15.8)**	**111 (14.1)**
Retroviral disease stage 4	14 (26.9)	12 (20.3)	26 (23.4)
Schistosomiasis	1 (1.9)	-	1 (0.9)
Scorpion bite	-	2 (3.4)	2 (1.8)
Scrotal cellulitis	3 (5.8)	-	3 (2.7)
Sepsis (various forms)	23 (44.2)	27 (45.8)	50 (45.0)
Viral hemorrhagic fever	3 (5.8)	2 (3.4)	5 (4.5)
Dog bite	2 (3.8)	-	2 (1.8)
Severe malaria	6 (11.5)	16 (27.1)	22 (19.8)
Musculoskeletal system	**2 (0.5)**	**6 (1.6)**	**8 (1.0)**
Chest pain	2 (100.0)	6 (100.0)	8 (100.0)
Central Nervous System	**69 (16.2)**	**47 (12.6)**	**116 (14.7)**
Headache syndrome ?cause	5 (7.2)	3 (6.4)	8 (6.9)
Acute confusional state	6 (8.7)	2 (4.3)	8 (6.9)
Tetanus	2 (2.9)	-	2 (1.7)
Viral Meningioencephalitis	1 (1.4)	-	1 (0.9)
Cerebrospinal meningitis	2 (2.9)	1 (2.1)	3 (2.6)
Seizures disorders	7 (10.1)	6 (12.8)	13 (11.2)
Stroke	45 (65.2)	35 (74.5)	80 (69.0)
Myelocompressive disorder	1 (1.4)	-	1 (0.9)
Respiratory system	**67 (16.1)**	**57 (15.3)**	124 (15.8)
Acute pulmonary embolism	4 (6.0)	6 (10.5)	10 (8.1)

Acute severe bronchial asthma	3 (4.5)	4 (7.0)	7 (5.6)
Atypical pneumonia in a known DM	-	1 (1.8)	1 (0.8)
Bronchopneumonia	2 (3.0)	3 (5.3)	5 (4.0)
Chronic obstructive airway disease.	13 (19.4)	12 (21.1)	25 (20.2)
Lobar pneumonia	12 (17.9)	16 (28.1)	28 (22.6)
Lung abscess	2 (3.0)	-	2 (1.6)
Pleural effusion	13 (19.4)	7 (12.3)	20 (16.1)
Pulmonary tuberculosis	12 (17.9)	6 (10.5)	18 (14.5)
Upper respiratory tract infection	6 (9.0)	2 (3.5)	8 (6.5)
Nephrology	**41 (9.9)**	**45 (12.1)**	86 (10.9)
Acute on chronic kidney disease	14 (34.1)	18 (40.0)	32 (37.2)
Acute pyelonephritis	4 (9.8)	7 (15.6)	11 (12.8)
HIV associated nephropathy	6 (14.6)	4 (8.9)	10 (11.6)
Nephrotic syndrome	5 (12.2)	7 (15.6)	12 (14.0)
Uremic encephalopathy	5 (12.2)	5 (11.1)	10 (11.6)
Uremic paralytic ileus	1 (2.4)	-	1 (1.2)
Urinary tract infection	6 (14.6)	4 (8.9)	10 (11.6)
Rheumatology	-	**4 (1.1)**	4 (0.5)
Systemic lupus erythromatosus	-	2 (50.0)	2 (50.0)
Rheumatoid arthritis	-	2 (50.0)	2 (50.0)
Toxins and poisoning	6 (1.4)	-	6 (0.7)
Petroleum product poisoning	2 (33.3)	-	2 (33.3)
Snakebite with envenomation	2 (3.3)	-	2 (3.3)
Organophosphate poisoning	2 (33.3)	-	2 (33.3)

DM- Diabetes mellitus, DKA-Diabetic ketoacidosis, UGIB- Upper gastrointestinal bleeding, PUD-peptic ulcer disease, VOC-Vaso-occlusive crisis

With reference to clinical outcomes of the patients admitted into the A&E, 68 (8.64%) patients were discharged directly from the A&E; 655 (83.22%) patients were admitted into the ward/ICU. Five (0.64%) DAMA; 20 (2.54%) patients were referred to other centres; and 39 (4.96%) died within 24 to 48 hours of A&E admission. Among the deaths, there were 22 (56.4%) males and 17 (43.6%) females (Table 4).

Table 4: The clinical outcomes of patients admitted into the A&E.

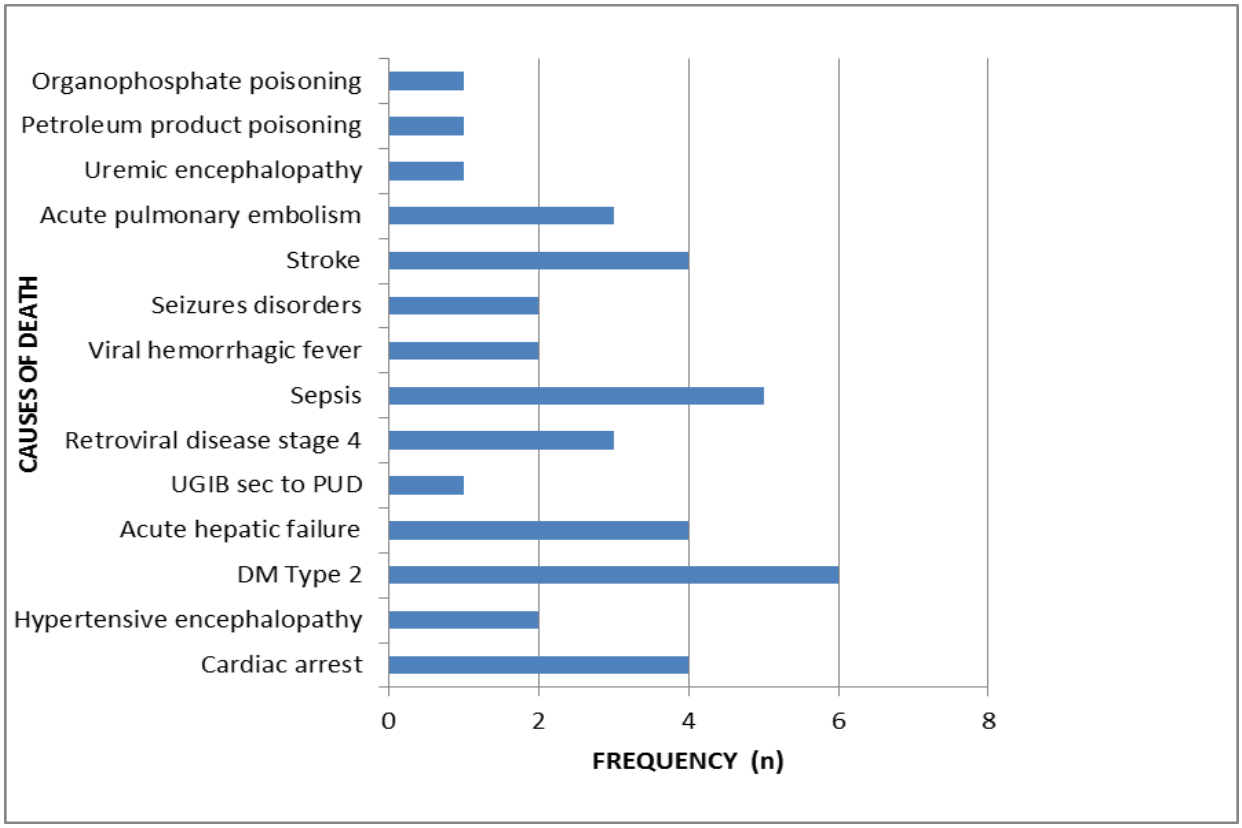
System	Discharged n= 68 (8.64%)	Ward/ICU admission n=655(83.22%)	DAMA n= 5 (0.64%)	Referred n=20 (2.54%)	Died n= 39 (4.96%)	Total n= 787 (100%)
Cardiovascular system						
Male	2 (66.67)	57 (53.77)	-	-	4 (66.67)	63 (54.78)
Female	1 (33.33)	49 (46.23)	-	-	2 (33.33)	52 (45.22)
Total	3 (100)	106 (100.0)	-	-	6 (100.0)	115 (100.0)
Endocrine system						
Male	2 (100.0)	34 (50.75)	-	-	3 (60.00)	39 (52.70)
Female	-	33 (49.25)	-	-	2 (40.00)	35 (47.30)
Total	2 (100.0)	67 (100.0)	-	-	5 (100.0)	74 (100.0)
Gastrointestinal system						
Male	6 (60.00)	57 (54.81)	-	-	2 (40.00)	65 (54.62)
Female	4 (40.00)	47 (45.19)	-	-	3 (60.00)	54 (45.38)
Total	10 (100.0)	104 (100.0)	-	-	5 (100.0)	119 (100.0)
Hematological System						
Male	3 (60.00)	8 (42.11)	-	-	-	11 (45,83)
Female	2 (40.00)	11 (57.89)	-	-	-	13 (54.17)
Total	5 (100.0)	19 (100.0)	-	-	-	24 (100.0)
Infectious Diseases						
Male	8 (36.36)	39 (50.65)	-	1 (50.00)	4 (40.00)	52 (46.85)
Female	14 63.64)	38 (49.35)	-	1 (50.00)	6 (60.00)	59 (53.15)
Total	22 (100.0)	77 (100.0)	-	2 (100.0)	10 (100.0)	111 (100.0)
Musculoskeletal system						
Male	2 (50.00)	0 (0.00)	-	-	-	2 (33.33)

Female	2 (50.00)	4 (100.00)	-	-	-	6 (66.67)
Total	4 (100.0)	4(100.0)	-	-	-	8 (100.0)
Central Nervous System						
Male	2 (50.00)	63 (59.43)	-	-	4 (66.67)	69 (59.48)
Female	2 (50.00)	43 (40.57)	-	-	2 (33.33)	47 (40.52)
Total	4 (100.0)	106 (100.0)	-	-	6 (100.00)	116 (100.0)
Respiratory system						
Male	5 (62.50)	47 (50.00)	1 (100.0)	12 (66.67)	2 (66.67)	67 (54.03)
Female	3 (37.50)	47 (50.00)	-	6 (33.33)	1 (33.33)	57 (45.97)
Total	8 (100.0)	94 (100.0)	1 (100.0)	18 (100.0)	3 (100.0)	124 (100.0)
Nephrology						
Male	3 (42.86)	35 (47.30)	2 (66.67)	-	1 (50.00)	41 (47.67)
Female	4 (57.14)	39 (52.70)	1 (33.33)	-	1 (50.00)	45 (52.33)
Total	7 (100.0)	74 (100.0)	3 (100.0)	-	2 (100.0)	86 (100.0)
Rheumatology						
Male	-	-	-	-	-	-
Female	1 (100.00)	2 (100.0)	1 (100.00)	-	-	4 100.00)
Total	1 (100.0)	2 (100.0)	1 (100.00)	-	-	4 (100.0)
Toxins and poisoning						
Male	2 (100.00)	2 (100.00)	-	-	2 (100.0)	6 100.0)
Female	-	-	-	-	-	-
Total	2 (100.0)	2 (100.0)	-	-	2 (100.0)	6 (100.0)

DAMA-Discharged against medical advice, ICU- Intensive care Unit

Within the study period, the commonest cause of death was non-communicable diseases, which accounted for 39 (61.53%) deaths; amongst which diabetic complications accounted for the greatest number with 6 (15.38%) patients. Severe sepsis topped the list of communicable disease mortalities with 5 (12.82%) patients (Figure 1).

Figure 1: Major Causes of death of Patients admitted into A&E



DISCUSSION

Admission into the ED gives a bird's eye view of medical emergencies in any society. It provides a suitable sample frame for profiling the prevailing disease pattern of the index population. Such information may help to guide policy formulation, resource allocation, funding priorities, training, and research, subsequently making healthcare systems more responsive to meet patients' expectations, improve service utilization, and improve outcomes (Wang *et al.,* 2014). In this study, in terms of demography, most of the admitted patients could be classified as relatively young, with young adults and middle-aged adults constituting the predominant population of admitted patients.

The months of February, April, June, August and September were the peak periods of admissions into the A&E. This period generally correlates with the rainy season in this tropical rainforest town. This being mainly an agrarian community, exposure to inclement weather could also be a reason for increased admissions: especially for communicable diseases that tend to flourish in the rainy seasons e.g. malaria and gastroenteritis (National Research Council (US), 2001). In addition, the rainy season also leads to difficult traveling conditions making routine hospital visits for early and preventive care challenging thus predisposing patients to presenting in emergencies. The latter months of the year experienced a lower turnover of patients. This may be explained by the reduction in farming activities and the desire of most patients to avoid hospitalization, during the festive part of the year unless absolutely necessary. This observation is similar to what was reported in Ibadan and Sokoto where the months of May/June were the peak and the lowest admission was recorded in the months of November/January (Abiona *et al*., 2010; Agbo and Oboirien, 2014).

In this index study, non-communicable diseases (NCDs) were the predominant causes of patients' admissions to the A&E: this is similar to what was reported by workers in Ekiti, Aba, .Abakiliki and Kano, where NCDs constituted a majority of admitted medical cases. (Olarinde *et al.,* 2014; Nkpozi *et al*., 2020; Eze and Kalu, 2018; Mijinyawa *et al.,* 2010). This finding is not unusual given the high prevalence of risk factors for NCDs like hypertension, diabetes mellitus, obesity, high alcoholic consumption and dyslipidemias that exist in the population (Isara and Okundia, 2015). Concomitantly, there is increasing adoption of Westernized life style among the local populace, in addition to rapid urbanization, further increasing the risk for NCDs (Islam *et al.,* 2014; Alwan *et al.*, 2011). Consequently, there were a relatively high number of cases of patients with strokes, heart failures, complications of chronic kidney diseases, chronic liver diseases and diabetes mellitus presenting at the A&E. This relative increase in NCDs could also be ascribed to poor awareness among the populace of existing risk factors and their significance, as well as the downward trend of communicable diseases (CDs), following improvement in hygiene, immunization, sanitation, water supply and housing in recent times. This is a trend globally, especially in developing countries (WHO, 2011). Developing countries like Nigeria are likely going to bear more than their fair share of the burden of NCDs given their lack of a robust health system and financial limitations (Kengne and Mayosi, 2014). However, cases of patients with sepsis, severe malaria, respiratory tract infections and acute gastroenteritis still constitute a large percentage of infectious cases, with sepsis and malaria unsurprisingly the leading causes. This is similar to studies elsewhere where infectious and parasitic diseases constitute a significant disease burden (Olarinde *et al.*,2014; Nkpozi *et al.,* 2020; Eze and Kalu, 2018; Agbo *et al.,* 2014). Despite the relative prominence of NCDs, it is obvious that CDs are still a major health problem in Nigeria, especially in the rural and semi-urban areas probably due to rapid urbanization, slums, poor housing, overcrowding, poor sanitation and hygiene, poor waste and refuse disposal, improper town planning, ignorance, poor water source, poor food handling, weak

and overwhelmed health systems. Upper gastrointestinal bleeding (UGIB) was revealed as a relatively common cause of emergency medical admission; given the dire sequelae of a patient exsanguinating if massive blood loss is not properly managed. This may be due to the high prevalence of common causes of UGIB including chronic liver diseases (especially liver cirrhosis) peptic ulcer disease, and chronic gastritis secondary to the use of non-steroidal anti-inflammatory drugs (NSAID) for chronic pains by the majority of people especially rural dwellers who often, are engaged in vocations that leads to severe body pain and aches. Upper gastrointestinal bleeding was not commonly reported in other works across Nigeria, with a few cases documented in Ekiti and none in a series in Aba and Sokoto (Olarinde *et al.,* 2014; Nkpozi *et al.,* 2020; Agbo and Oboirien, 2014). Diseases due to poison and contamination, are relatively few, this finding is a bit unexpected given that this region has a lot of oil and gas activities ongoing. Perhaps they hardly present as emergencies. However a few cases of suicide and attempted suicide by organophosphorus poisoning were also admitted into the A&E. This unfortunately is a growing trend among young adults, who out of frustrations of life events may choose to commit suicide by ingesting organophosphates substances. A study in Abeokuta south west Nigeria also documented a number of deaths by intentional and accidental poisoning (Ogah *et al*., 2012). Despite this finding, attempted suicide by poisoning is still relatively uncommon in this community unlike some other regions of the world (Eddleston and Phillips, 2004). Also, that there were even fewer cases of snake and dog bites in this predominantly agrarian community is also unusual. This perhaps could be explained by the fact that most cases of bites are treated by traditional remedies at home. However, this contrasts with findings in a similar study in a rural town South-west Nigeria where a significant number of snake bites was reported (Ogah *et al*., 2012). The presence of Pulmonary Tuberculosis coexisting with HIV as an emergency is evident in this review though minimal. This may not be unconnected with the increasing presence of highly active antiretroviral therapy (HAART) in most centers and other interventions aimed at stemming the tide of these diseases. It could also be argued that perhaps the stigma associated with HIV/AIDS may have contributed to a relatively low representation in the A&E admission list (Olarinde *et al*., 2014). The relatively high number of patients presenting with chronic obstructive pulmonary disease (COPD) and its complications is not unexpected, given the high presence of risk factors of smoking and the use of biomass fuel for domestic and industrial purposes. Rheumatological and dermatological emergencies were quite rare. This may be due to the low prevalence in the population as well as difficulty in making the diagnosis in the first place, given the disparate mode of presentation of connective tissue disease against a background of relative scarcity of specialists in the field. Nevertheless, a few cases of systemic lupus erythromatosus (SLE) were admitted as emergencies. This observation is similar to what was found in Ido-Ekiti and Aba South-west and South-east Nigeria respectively, where a few cases of emergency rheumatological conditions were also admitted (Olarinde *et al*., 2014; Nkpozi *et al.,* 2020).

In terms of outcomes, a significant majority of the patients were admitted to the ward or ICU as pertinent, others were referred out, especially cases of Tuberculosis for lack of the necessary facilities or transferred to other centres with advanced expertise. A few patients were discharged against medical advice (DAMA), especially in terminal cases where patients or relatives insisted on leaving the care of the hospital. This is not an uncommon scenario in hospitals in this region as patients and their relatives sometimes insist on being discharged in order to seek further care from faith healers and tradomedical healers especially when they perceive a lack of progress from orthodox care. Some patients and relatives also choose the option of DAMA on account of the paucity of funds to continue care. Others may desire to DAMA if they perceive that the diagnosis or prognosis is very poor preferring to spend their

final days at home. A reasonable number of patients were discharged after due evaluation and care at the A&E, especially cases of acute severe asthma for follow-up at the clinic. There were also a few cases of death in the course of admission at the A&E, especially among patients presenting very late or in extremis.

The commonest causes of death were stroke, other complications of hypertension, sepsis, uremic encephalopathy and complications of diabetes mellitus, cardiac arrest and pulmonary embolism. The high number of stroke mortality is probably due to the high prevalence of risk factors and their poor management, ignorance, poverty and late presentations to the hospital as well as lack of timely interventions and proper management in the hospitals. Similar findings to those recorded in this study have been documented for urban populations in Nigeria and other countries (Onwuchekwa *et al*., 2008; Mathers *et al*., 2005).

CONCLUSION

This study found an overall higher proportion of males (especially among the older adults) among A&E admissions in this tertiary hospital in Oghara; a semi-urban town in Delta State South-South Nigeria. Non-communicable diseases, especially cardiovascular diseases and complications of DM were the most frequent causes of admission. The major causes of death were stroke, complications of DM and sepsis. It is evident from this study that there is a need to improve the emergency care service in all its ramifications, as it will continue to be a veritable avenue of accessing health care into the foreseeable future for a majority of patients. Preventive health measures at the level of the community to stem the rising incidence of medical cases, presenting as emergencies are also needed.

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Conflict of interest

None declared

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