

## **PATTERN OF NON-COMMUNICABLE DISEASES AMONG MEDICAL ADMISSIONS IN PORT HARCOURT, NIGERIA.**

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### **ABSTRACT**

**Objective:** To determine the pattern of non-communicable diseases in the medical wards of the University of Port Harcourt Teaching Hospital (UPTH), over four consecutive years (June 2000 to June 2004).

**Methods:** The study was retrospective and data were obtained from the medical registers in the medical wards and the records department of the UPTH. Medical admissions due to non-communicable diseases were carefully selected and analyzed.

**Results:** There were 1853 cases of various non-communicable diseases out of a total medical admission of 3294 constituting 56.2% of total medical admissions. Diseases of the cardiovascular, endocrine and renal systems were the most prevalent constituting 35.7%, 18.5% and 16.8% respectively. Hypertension, diabetes mellitus, and chronic renal failure were the most common cardiovascular, endocrine and renal disorders respectively

**Conclusion:** Non-communicable diseases are a major cause of morbidity in Port Harcourt. There is need for adequate health education and lifestyle modification to reduce the burden of non-communicable diseases in Nigeria.

**Key Words:** Non-Communicable Diseases; Medical Admissions; Port Harcourt (*Accepted 27 February 2007*)

### **INTRODUCTION**

Non-communicable diseases (NCDs) are diseases that are associated with genetic predisposition and related to lifestyle with multifactorial environmental influences<sup>1,2</sup>. In contrast, communicable diseases (CD) arise from transmission of an infective agent or its toxins from an infected person, animal or reservoir to a susceptible host either directly or indirectly through an intermediate plant or animal reservoir or vector<sup>2</sup>. Non-communicable diseases particularly cardiovascular diseases, diabetes mellitus, cancer and respiratory disease are the major causes of morbidity and mortality in the developed world and are emerging as an important component of the burden of disease in developing countries<sup>2</sup>. The migration and urbanization of populations, as well as rapid economic and social change in some countries have been implicated as causative factors. Other factors for this health transition include the ageing of populations, reduction in fertility and improved control of infectious diseases<sup>3</sup>. In spite of the increasing prevalence of non-communicable diseases, in most developing countries

we still have an increasing or sustained prevalence of communicable diseases; thus, creating a double burden of disease on a background of limited resources and poor health infrastructure<sup>4</sup>. There is need for action against the scourge of non-communicable diseases while reinforcing the largely under-funded war on communicable disease

### **MATERIALS AND METHODS**

The study was carried out at the University of Port-Harcourt Teaching Hospital (UPTH). It was retrospective and spanned four consecutive years (June 2000 June 2004). Relevant information including patient's biodata and diagnosis were obtained from the medical ward registers as well as the medical records department. Cases with the diagnosis of non-communicable diseases were carefully selected, their data extracted and analyzed by simple descriptive statistical methods. Results are presented in graphic form.

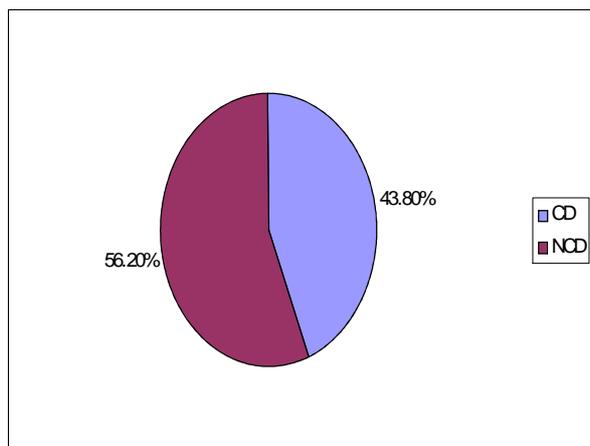
### **RESULTS**

There were 1853 cases of various non-communicable diseases out of 3294 total medical admissions, constituting 56.2% of total medical admission, while communicable diseases accounted for 43.8%

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Figure 1: Distribution of Diseases



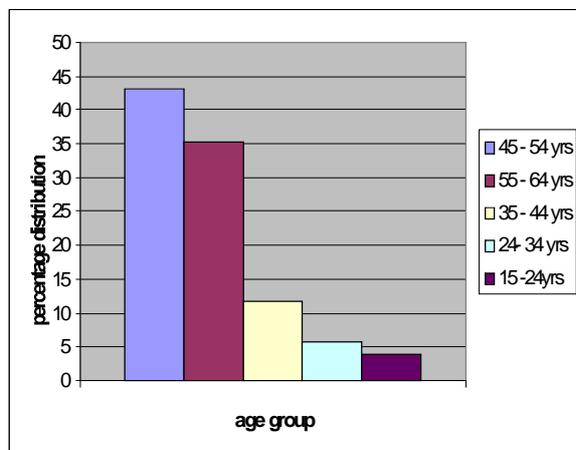
CD= Communicable diseases

NCD= Non-Communicable diseases

There were 1090 males and 763 females admitted with non-communicable diseases resulting in a male to female ratio of 1.7: 1.

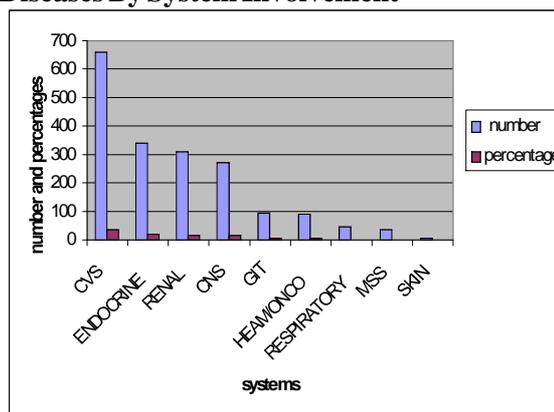
Most patients were in the 45-54 year age group (43.1%), followed by the 55-64 (35.3%), 35-44 (11.8%), 24-34 (5.8%) and 15-24 (4.0%)

Figure 2.: Age Distribution of Subjects With Noncommunicable Diseases



Diseases of the cardiovascular, endocrine and renal systems were most commonly seen accounting for 662 (35.7%), 342 (18.5%), and 311 (16.8%) respectively. The frequencies of diseases in other systems were: neurological 269 (14.5%); gastrointestinal 93(5.0%); hematological 91 (4.9%); respiratory 44 (2.4%); musculoskeletal 33 (1.82%); while dermatological diseases accounted for 7 (0.4%) of admissions

Figure3:distribution of Non-communicable Diseases By System Involvement



CVS = Cardiovascular system

CNS = Central Nervous system

MSS = Musculo-skeletal system

GIT= Gastrointestinal system

HEAM/ONCO= Heamatology and Oncology

Hypertension and hypertensive heart diseases were the most common cardiovascular disease presentation accounting for 79.0% of those admitted with cardiovascular diseases. Diabetes mellitus was the most common endocrine disorder (82.0%), followed by thyroid disorders. Chronic renal failure was the most common renal disease presentation accounting for 173 (55.7%) followed by nephrotic syndrome 88 (28.3%) and acute renal failure 61 (19.8%).

### DISCUSSION

Non-communicable diseases are a major cause of morbidity and mortality in Nigeria, as they constituted 56.2% of admissions in the medical wards as against 43.8% attributed to communicable diseases. This is in agreement with the emerging trend of disease transition in most developing countries<sup>4,5</sup>. The study was carried out in UPTH, an urban-based tertiary health establishment in Port Harcourt; a city associated with a rapid rate of urbanization. Migration and urbanization of populations, as well as rapid economic and social change in this region of the country has led to the acquisition of some “unhealthy” lifestyles of the industrialized world. The Global Burden Survey of Disease by Murray and Lopez<sup>6,7</sup> revealed that by 1990, non-communicable diseases had already overtaken communicable diseases as leading cause of mortality worldwide (56% of all deaths, compared with 34% attributed to communicable diseases and

10% caused by accidents and injuries). They predicted that non-communicable disease would cause 73% of all deaths worldwide by 2020, compared with an estimated 15% from communicable diseases. The predominance of males over females with NCD (1.7:1) in this study could be due to the availability of more male beds as the number of male beds was twice those of females at the UPTH.

However male gender, some social traits such as tobacco use and excessive alcohol consumption which are more common in males in this environment are identified risk factors for NCD and contribute to the higher prevalence of NCD in males as seen in this study. This study therefore compares with other studies which have revealed a male predominance in the prevalence of common NCDs<sup>8,9</sup>. The higher prevalence of NCD among patients who are 45 years and above is in keeping with the general trend of NCDs being more common with increasing age especially in the middle aged and elderly<sup>9</sup>. It is not surprising that diseases of the cardiovascular system (especially hypertension and related diseases) and the endocrine system (especially diabetes mellitus) were the main diseases identified. This is the trend globally as these diseases are related to urbanization and westernization with associated transition to "modern" lifestyles of the industrialized world. These include sedentary occupations; inadequate physical activity associated with an increase in vehicle use, high fat and refined sugar diets, tobacco use, and increased drug and alcohol consumption<sup>2,4,10</sup>. Genetic, racial and environmental factors have been shown to affect the prevalence of NCDs in certain populations. The black race is hypothesized to be genetically equipped to withstand frequent famines, and hence increased susceptibility to NCDs due to the effects of 'modern' lifestyle associated with over nutrition<sup>11</sup>. Similarly undernutrition in utero and in early life has been linked to an increased susceptibility to cardiovascular diseases and type 2 diabetes<sup>12</sup>. The predominance of chronic renal failure among renal disorders is probably due to the increasing prevalence of hypertension and diabetes as well as exposure to nephrotoxic agents in the industrialized cities like Port Harcourt. Hypertensive renal damage is the main cause of chronic kidney disease in most populations<sup>13</sup>. This is rather disturbing in view of the relative lack of adequate facilities for renal replacement therapy in this part of the world. Hypertension often co-exists with other potent cardiovascular risk factors, thus increasing the risk of early death from cardiovascular causes by about three fold<sup>13,14</sup>.

## CONCLUSION

Non-communicable diseases are a major cause of morbidity and contribute significantly to the burden of disease in Nigeria. Hypertension and diabetes mellitus with their related complications are the commonest non-communicable disease indications for medical admission.

## RECOMMENDATION

There is need for adequate health education and lifestyle modification to reduce the burden of non-communicable diseases in Nigeria as the war continues against the communicable diseases. There is also need for provision of more facilities in our health centers for early detection and treatment of NCDs and their associated complications. Government and other agencies in the health care sector should provide adequate and regular funding for epidemiological surveys on the burden of NCDs in the country and in addition ensure that the care of patients with NCDs like diabetes and hypertension is covered by the National Health Insurance Scheme (NHIS). Strategic plans should be made to ensure that drugs used in the treatment of non-communicable diseases especially diabetes and hypertension are more affordable and accessible to the population.

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