

# Leading Causes of Consultation at the Adult outpatient Department of Region 1 Medical Center

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## **Background:**

Recent statistical report of the Department of Health shows that cardiovascular diseases still account for the top leading causes of mortality in the Philippines. Region 1 Medical Center, a tertiary hospital located in Dagupan City has a primary objective of providing both primary and specialty care to patients of the city and nearby towns and provinces needing its service and outpatient consultations determine the leading morbidities in the province.

## **Objectives:**

This study aims to determine the leading causes of consultations at the Medical Section of the Outpatient Department of the Region 1 Medical Center. Specifically, it sought to find the following: 1) Leading causes of consultation of these patients; and 2) disease classification.

## **Method:**

This research utilized descriptive method of research by documentary review of patients' records in the medical clinic of the outpatient department from January 1, 2012 to September 30, 2012.

## **Results:**

Hypertension and diabetes mellitus remain to be the leading cause of consultation at the R1MC Outpatient Department.

## **Conclusion:**

- 1) Most patients who seek consult are in the middle age group (45 to 65 years old), female and married;
- 2) Hypertension and diabetes mellitus were consistent to be among the top five diseases seen, followed by urinary tract infection, lower respiratory tract infection and community – acquired pneumonia; and
- 3) Lifestyle diseases, non – communicable disease (NCDs) are the leading causes of consultation followed by the infectious or communicable diseases. This implies that year round health education and more hospital policies through programs geared towards prevention and control of lifestyle diseases primarily as well as on common infectious illnesses need to be done.

**Key Words:** Outpatient consultations

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## Introduction

Region 1 Medical Center is a training and research hospital classified as a tertiary hospital under the DOH. Its main function is to provide primary and tertiary care to inpatients (patients which need to be admitted for thorough evaluation and treatment) as well as the outpatients who seek consult for their health concerns. The Out Patient Department consist of four major sections namely the Medical, Pediatric, Surgery and Obstetrics and Gynecology. This study is focused on the Medical Section of the OPD where at present the Family Medicine resident currently operates.

This study aims to determine the leading causes of consultations at the Medical Section of the Outpatient Department of the Region 1 Medical Center. Specifically, it sought to find the following: 1) Clinical profile of the patients; 2) Leading causes of consultation of these patients; and 3) disease classification.

## Method

This study utilized the descriptive method of research through documentary review of the medical records of patients seen at the Medical Section of OPD from January 1, 2012 to September 30, 2012.

## Results

Hypertension is the leading cause of consultation in the months of February, May, July, August and September 2012. Urinary tract infection is the most common disease seen during the months of January and June 2012, while Diabetes Mellitus is the leading illness during the months of March and April 2012. The composite result is shown on Table 1.

This summary gleaned from table 1 for the study period January to September 2012 showed hypertension with the highest percentage of 8.82%. UTI ranks second leading cause of consultation with 7.41%, followed by DM type 2 occupying the third rank with 6.28%. LRTI with a percentage of 5.61 was the fourth and CAP is the fifth most common disease seen with 4.32%. Other causes of consultation are pulmonary tuberculosis, musculoskeletal disease, ischemic heart disease, upper respiratory tract infection, and cerebrovascular disease.

**Table 1. Top Ten\* Leading Causes of OPD Consultations at R1MC, Jan-Sept 2012**

| RANK | DIAGNOSIS                           | Average Percentage |
|------|-------------------------------------|--------------------|
| 1    | Hypertension                        | 8.82               |
| 2    | Urinary Tract Infection             | 7.14               |
| 3    | Diabetes Mellitus Type 2            | 6.28               |
| 4    | Lower Respiratory Tract Infection** | 5.61               |
| 5    | Community Acquired Pneumonia        | 4.32               |
| 6    | Pulmonary Tuberculosis              | 3.51               |
| 7    | Musculoskeletal Disease             | 3.44               |
| 8    | Ischemic Heart Disease              | 2.88               |
| 9    | Upper Respiratory Tract Infection   | 2.86               |
| 10   | Cerebrovascular Disease             | 2.18               |

\*Lower respiratory tract infections refer to bronchitis, asthma, and others which do not refer to pneumonia and PTB.

\* Complete top 20 causes are available upon request.

## Discussion

There has been a shift in the leading cause of morbidity and mortality in the developing and developed countries in the last decade, from infectious to non – infectious diseases. This has been the result of unhealthy sedentary lifestyle, adoption of the western culture, and the full blown computerization age promoting less physical activity.

Hypertension is considered as the biggest risk factor for deaths worldwide. According to World Health Organization, hypertension causes seven million deaths every year while 1.5 billion people suffer due to its complications.<sup>1</sup> In the Philippines, 21% or about one out of five Filipino adults 20 years and over is hypertensive. A study conducted by the Philippine Society of Hypertension found out that the prevalence of hypertension in the country is increasing. The prevalence of hypertension also increases with age<sup>2</sup>.

A study in India noted that in developing countries such as India, China, Philippines, Thailand, Sri Lanka, Iran, Pakistan and Nepal, the prevalence of hypertension has rapidly increased. In rural populations, the prevalence is 2–3x lower than in urban subjects. Hypertension and stroke occur at a relatively younger age in Asians and the risk of hypertension increases at lower levels of body mass index of 23-25 kg./m<sup>2</sup>. Overweight, sedentary behavior, alcohol, higher social class, salt intake, diabetes mellitus and smoking are risk factors for hypertension in most of the countries of Asia. In developed

countries like Australia, New Zealand, and Japan, lower social class is a risk factor for hypertension<sup>3</sup>.

Urinary tract infection is the most common non-intestinal infection worldwide. It is the second most common infectious disease in women after gastrointestinal disorders. In the developed world, incidence and prevalence of urinary tract infection would be similar owing to the relatively short duration of illness experienced by women with ready access to healthcare services and antibiotic therapy. Additionally, the short time that women spend afflicted with urinary tract infection means that, in the developed world, there is little to no difference between the incidence of urinary tract infection and its prevalence as very few patients live with the condition chronically<sup>4</sup>.

In the low or middle income country, one might expect a high prevalence of this condition if the lack of treatment results in women living with urinary tract infection over long periods of time – as in the study done in Panama where women aged 18 to 45 years met the criteria for UTI and regarded UTI as a significant cause of morbidity in the region.<sup>4</sup> In the United States, urinary tract infection account for 8.3 million outpatient visits and 1 million hospitalizations annually<sup>5</sup>.

The pathogens causing urinary tract infection are consistent across the globe. The pathogenesis of involves ascending infection with coliform bacteria colonizing the perineum in susceptible women. Eighty to ninety percent is caused by *Escherichia Coli*,

5 to 10% by *Staphylococcus Saphrophyticus* with the remainder caused by *Proteus* and other gram negative rods<sup>6</sup>. Typical symptoms associated with UTI include the triad of dysuria (painful urination), urgency (the enhanced desire to void the bladder) and frequency (increased frequency of urination). While not thought to cause mortality, UTI has the potential for serious and life – threatening sequelae if left untreated or undertreated.<sup>7</sup> The inappropriate vaginal douching has been implicated in recurrent UTIs among females.

Diabetes mellitus is a metabolic disorder of multiple etiology, resulting from defects in insulin secretion, insulin action or both. The world prevalence of diabetes among adults aged 20 to 79 years is 6.4%, affecting 285 million adults in 2010, and will increase to 7.7%, and 439 million adults by 2030<sup>8</sup>.

The World Health Organization (WHO) estimates the Philippines to be among the top 10 countries in the world in terms of prevalence of diabetes. About 4.1% of Filipinos have diabetes. At the current estimate of the population, this means 2.5 million Filipinos are with diabetes, with perhaps an equal number which remain undiagnosed<sup>9</sup>. In the Philippines as in other low and middle income countries, diabetes is becoming a major public health issue. Availability and affordability of care and medicines are crucial to control diabetes. Many patients took intermittent medication based on their own judgment, and selected pieces of medical advice, subjectively weighing symptoms

against household budget<sup>10</sup>.

In a case study done in Pangasinan, a major problem faced by doctors is not the disease process itself. Some people with high blood sugar feel fine. It is hard to treat a disease that is asymptomatic since most people do not want to take a pill for something that they do not feel bad about<sup>11</sup>.

Acute Respiratory Tract Infection (ARI) is a major cause of morbidity and mortality in developing as well as in developed countries. ARI is an infection of any part of respiratory tract or any related structures including paranasal sinuses, middle ear and pleural cavity. ARI includes all infection of less than 30 days duration.

The prevalence of ARI was found to be 22% in India. It was higher in low social class (26.56%), illiterate patients (24.4%), overcrowded houses (28.5%). The prevalence of ARI was lower in urban areas (17.2%) as compared to rural areas (26.8%). In rural area, it is more because of lack of availability of basic health services, lack of awareness, and other associated factors like overcrowding, low socio – economic status, absence of cross ventilation, indoor air pollution are responsible factors<sup>12</sup>.

In industrialized countries such as the US, pneumonia remains a significant problem with 500,000 hospital admissions annually, ranking as the sixth leading cause of mortality. Pneumonia continues to be a leading cause of morbidity and mortality in the Philippines. According to the Department of Health – Philippine Health Statistics Yearbook (1989) from 1984 to 1989, pneumonia was the

number four cause of morbidity and number one cause of mortality in all age group.<sup>13</sup>

The most common predisposing factor for gram negative bacillary pneumonia were chronic obstructive pulmonary disease (COPD), smoking and the use of steroids. Both streptococcus pneumonia and H. Influenzae, the two most predominant microorganisms, were sensitive to Cotrimoxazole, an inexpensive first line antibiotic.<sup>14</sup>

#### Conclusion

In developed and developing countries which include the Philippines, the prevalence of non – communicable diseases as well as lifestyle diseases has skyrocketed in the last two decades. Hypertension and diabetes mellitus are two of the non – infectious diseases which the study has proven to be included in the top three leading cause of consultation at the R1MC- OPD and most possibly due to higher reportage and identification, higher consultation among patients, and increasing impact to changes in social activities including food choice and physical activity. They replaced the infectious diseases as the leading cause of morbidity in the past decades. This is probably attributed to advancement in global research for the discovery and production of antimicrobial agents as well as successful vaccination strategies. The implication to hospital management is the procurement of the right drugs for the management of these cases. For the Family and Internal Medicine department, there should be an increased health education activity in the hospital OPD (lectures), and family edu-

cation for those covered by the hospital training programs.

#### Recommendations

It is recommended that:

1. Patient Education related to the most common morbidities must be done in the OPD as patients are waiting for their turn during the consultation either through personal lectures, video presentation or other educational strategies
2. Routine Urinalysis may be included even for asymptomatics, because of its high prevalence though cost economics analysis need to be studied
3. Regular Screening for diabetes, weight analysis (BMI), other risk factors including lipid profile, family history of illnesses must be done especially for the high risk patients in the OPD barring financial constraints.
4. Create Advocacy On adult Immunization against Flu and Pneumonia in particular among the Elderly and the high risk.
5. Program hospital procurement of medications must be guided with the most common morbidities seen in the hospital to prevent an over-supply of medications in the hospital pharmacy.

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