

# Common Geriatric Illnesses Seen at the Manila Doctors Hospital–Department of Family and Community Medicine (MDH-DFCM) Clinic at Barangay 662, Paco, Manila, from June 2011 to December 2016\*

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The global trend of decreasing mortality and decreasing fertility, has brought about “Population Aging”. The steady increase in the number of geriatric patients calls for the need to improve the holistic management of illnesses of this population. **Objective:** The objective of the study is to identify the common illnesses of geriatric patients seen at the Manila Doctors’ Hospital - Department of Family and Community Medicine Clinic at Barangay 662, Paco, Manila, from June 2011 to December 2016.

**Methods:** This a retrospective-descriptive study. Barangay 662, at Cristobal St., Paco, Manila, has been the adopted community of the MDH-DFCM since June of 2011. All patients aged sixty (60) years old and above seen at the said clinic were included in this study. Baseline demographics were obtained and patients’ charts were used as basis for this study. Frequency of consults and demographic data were tallied at the time of consult. Qualitative variables and percentages were analysed for this study.

**Results:** Over a span of 6 years, the most common illness of geriatric patients seen at the MDH-DFCM Clinic were osteoarthritis (n=145), hypertensive cardiovascular disease (n=126) and hypertension stage 2 (n=124). There were more consults by female patients (69% n=458). Purok 4 had the most number of consults (28% n=144). According to the ICD-10, reasons for consult belonged to disease of the circulatory system (n=344).

**Conclusion:** This study concludes that the most common illnesses of geriatric patients seen at the MDH-DFCM Clinic at Barangay 662, Paco, Manila, from June 2011 to December 2016 were non-communicable diseases.

**Keywords:** Geriatric population, common geriatric illnesses, barangay clinic

## INTRODUCTION

“Population Ageing” is said to be taking place in majority of the countries as stated by the United Nations

in their World Population Ageing report of 2015. Ageing is a result of decreasing mortality and decreasing fertility which results to a reduction in the proportion of children and an increase in the older persons in the population. The improvements in health and longevity aid in the prolongation of life, thus promoting longer lifespan. As stated in the World Population Ageing Report of 2015

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by the United Nations, it was said that the number of older persons aged 60 years and over living all over the world is projected to grow by 56 percent between 2015 and 2030. It is expected that over the next 15 years, the number of older persons in Asia is said to grow by a 66 percent increase in the population aged 60 years or over. As of 2015, one in 8 people was aged over 60 years old. It is expected by 2030, one out of 6 people will be over 60 years old.

The practice of Family Medicine is known to cater to patients from “womb to tomb”. Much attention is given to pediatric patients as can be seen by the multiple pediatric clinics in the metro. Geriatric patients however go unnoticed as the practice of Geriatric Medicine is quite new to the country with only a handful of physicians practicing Geriatric Medicine.

Geriatric patients are a growing number in the world with the improvement of health through the development of better medications, improved education on health promotion and having better access to health care. Geriatric patients in general have chronic diseases with a few acute illnesses.

In the 2010 National Statistics Office report on Population and Housing, it was said that senior citizens, aged 60 years old and over, constitute 5.75 percent of the household population in the National Capital Region. Barangay 662, at Cristobal St., Paco, Manila, has been the adopted community of the Manila Doctors’ Hospital - Department of Family and Community Medicine since June of 2011. Barangay 662 occupies approximately 0.917 hectares of land area and has a total population of 3,501 with 157 senior citizens as of 2017, comprising 4.48% of the community’s population. Male geriatric residents comprised 35% (n=55) of the population, while the remaining 65% (n=102) were female geriatric residents. According to age, 60% (n=94) of the said population were in the age range of 60-69 years old, 31% (n=48) were in the age range of 70-79 years old and 9% (n=15) were in the age range of 80-89 years old. There was no resident older than 89 years old. For place of residence, 16% (n=205) belonged to Purok 1, 11% (n=18) were from Purok 2, 18% (n=28) were from Purok

3, 17% (n=26) were from Purok 4, 10% (n=16) were from Purok 5, 9% (n=15) were from Purok 6, and the remaining 19% (n=29) were from Purok 7.

Manila Doctors Hospital - Department of Family and Community Medicine has been holding regular clinic hours at the said Barangay clinic since June of 2011 and has seen numerous consults of geriatric patients. It is the aim of this study to identify the common illnesses of geriatric patients seen at the Manila Doctors Hospital - Department of Family and Community Medicine clinic at Barangay 662, Paco Manila so that primary healthcare providers will be able to appropriately address the health needs of the growing population of geriatric patients by providing preventive and curative holistic management in terms of health programs, medical consultations and health education.

## Objectives

The study aimed to identify the common illnesses of geriatric patients seen at the MDH-DFCM Clinic at Barangay 662, Paco, Manila, from June 2011 to December 2016.

Specifically, this study aimed to:

- i. Describe the socio-demographic variables of the elderly patients seen at the MDH-DFCM Clinic at Barangay 662, Paco, Manila as to age, gender and purok
- ii. Identify the top ten (10) reasons for consult of geriatric patients seen at MDH-DFCM clinic at Barangay 662, Paco, Manila, from June 2011 - December 2016
- iii. Identify the top ten (10) common illnesses of geriatric patients seen MDH-DFCM clinic at Barangay 662, Paco, Manila, per year starting from 2011 to 2016
- iv. Identify the proportion of male to female geriatric patients seen at the MDH-DFCM clinic at Barangay 662, Paco, Manila
- v. Identify the frequency of consults of geriatric patients seen at the MDH-DFCM clinic at Barangay 662, Paco, Manila, as per Purok (location)

- vi. Classify the common illnesses of geriatric patients seen at the MDH-DFCM Clinic at Barangay 662, Paco Manila as to the International Classification of Diseases-10

### METHODS

This study shows the demographic profile of geriatric individuals residing in Barangay 662, Paco, Manila which is the location of the Manila Doctors Hospital – Department of Family & Community Medicine adopted community. Patients who consulted at the Manila Doctors Hospital – Department of Family & Community Medicine Clinic at Barangay 662, Paco, Manila, from June 2011 to December 2016 with patient records were included in this study. Only patients with ages of 60 years old and above, were included in this study.

Records of patients with ages 59 years old and younger at the time of consult were excluded in this study. Patients who were enrolled in the home visit program, blood sugar screening program and paps smear program were likewise excluded from this study. A total of 157 geriatric patients were recorded to have been residing in Barangay 662 at the end of this study.

Charts were evaluated and the following were obtained: gender, age, date of consult, purok to which the patient resided in and final diagnosis at the time of consult. Data were inputted into the data collection forms. Frequency of consults, gender, age, puroks, illnesses and date of consult were recorded and analyzed. International Classification of Diseases – 10 (ICD-10) was used as basis for categorizing the illnesses seen in geriatric patients of the said clinic.

#### Study Design

This study is a descriptive retrospective study.

#### Data Analysis

Data analysis was performed and qualitative variables were tabulated as frequency and percentage. Different distributions are graphically presented as bar graphs.

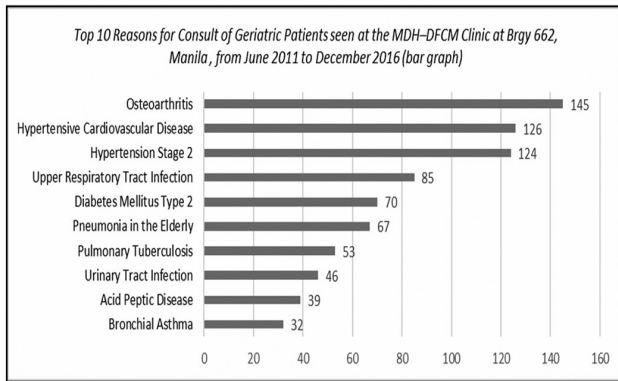
### RESULTS

Table 1 shows the socio-demographic profile of geriatric patients who consulted at the MDH-DFCM clinic at Barangay 662 from June 2011 to December 2016. The 6- year duration of this study included a total of 666 geriatric patient consults seen at the Manila Doctors Hospital – Department of Family & Community Medicine Clinic at Barangay 662, Paco, Manila.

**Table 1.** Socio-demographic variables of geriatric patients who consulted at the MDH- DFCM Clinic in Barangay 662, Paco, Manila from June 2011 to December 2016.

Characteristics	Number	Percentage (%)
Gender (Total N=666)		
Male	208	31%
Female	458	69%
Age (Total N=666)		
60-69 years old	420	63%
70-79 years old	233	35%
80-89 years old	13	2%
≥ 90 years old	0	0%

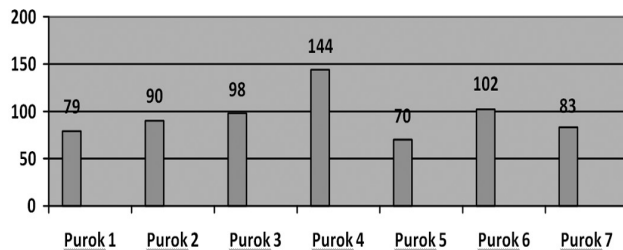
Figure 1 shows the top 10 reasons for consult at the said clinic during the duration of this study. During the 6-year period, osteoarthritis was the top reason for consult of geriatric patients seen at the MDH-DFCM Clinic at Barangay 662, Paco Manila with 145 recorded consults. This was followed by the following diseases: hypertensive cardiovascular disease (n=126), hypertension stage 2 (n=124), upper respiratory tract infection (n=85), diabetes mellitus type 2 (n=70), pneumonia in the elderly (n=67), pulmonary tuberculosis (n=53), urinary tract infection (n=46), acid peptic disease (n=39), and bronchial asthma (n=32).



**Figure 1.** Top 10 Reasons for Consult of Geriatric Patients seen at the MDH–DFCM Clinic at Brgy 662, Manila , from June 2011 to December 2016.

Table 2 illustrates the top 10 reasons for consult of geriatric patients at the said barangay during the year 2011 to 2016.

Barangay 662 at Paco Manila is made up of 7 Puroks or localities. During the duration of this study, it was noted that 12% (n=79) of consults were from Purok 1, 14% (n=90) were from Purok 2, 15% (n=98) were from Purok 3, 22% (n=144) were from Purok 4, 10% (n=70) were from Purok 5, 15% (n=102) were from Purok 6 and 12% (n=83) were from Purok 7.



**Figure 2.** Frequency of Consults among Geriatric Patients seen at the MDH–DFCM Clinic at Brgy 662, Manila , From June 2011 to December 2016.

The global classification of diseases follows the International Classification of Diseases -10 (ICD-10). For this study, the most frequent causes for consults were caused by diseases of the circulatory system (n=344), followed

**Table 2.** Top 10 Reasons for Consult of geriatric patients seen at the MDH–DFCM Clinic at Brgy 662, Manila per year from 2011 to 2016.

Year & Rank	Reason for Consult	Number of consults per year
<b>2011</b>		
1.	Osteoarthritis	38
2.	Hypertensive Cardiovascular Disease	36
3.	Diabetes Mellitus Type 2	20
4.	Upper Respiratory Tract infection	19
5.	Hypertension Stage 2	17
6.	Functional Constipation	10
7.	Hypersensitivity Reaction	8
8.	Contact Dermatitis	6
9.	Chronic Kidney Disease	6
10.	Pneumonia in the Elderly	6
<b>2012</b>		
1.	Osteoarthritis	34
2.	Hypertensive Cardiovascular Disease	24
3.	Acid Peptic Disease	21
4.	Hypertension Stage 2	19
5.	Diabetes Mellitus Type 2	15
6.	Pulmonary Tuberculosis	15
7.	Pneumonia in the Elderly	12
8.	Urinary Tract Infection	12
9.	Bronchial Asthma	10
10.	Upper Respiratory Tract Infection	9
<b>2013</b>		
1.	Hypertensive Cardiovascular Disease	31
2.	Upper Respiratory Tract Infection	25
3.	Osteoarthritis	20
4.	Diabetes Mellitus Type 2	19
5.	Pneumonia in the Elderly	13
6.	Urinary Tract Infection	12
7.	Hypertension Stage 2	10
8.	Musculoskeletal strain	10
9.	Pulmonary Tuberculosis	8
10.	Gouty Arthritis	7
<b>2014</b>		
1.	Hypertension Stage 2	28
2.	Osteoarthritis	26
3.	Hypertensive Cardiovascular Disease	22
4.	Diabetes Mellitus Type 2	15
5.	Upper Respiratory Tract Infection	14
6.	Pneumonia in the Elderly	13
7.	Contact Dermatitis	11
8.	Presbycusis	11
9.	Benign Prostatic Hypertrophy	8
10.	Functional Constipation	7

## DISCUSSION

The geriatric population residing in Barangay 662 at the end of this study in 2017 was 157, which is 4.57% of the total population of the barangay (3,501 individuals). This is comparable to the 4.7% of older individuals according to the Census of Population of the Philippines as of 2015. Males made up 35% (n=55) of the geriatric population. It is expected that beyond the age of 55 years old, females will outnumber males.<sup>1,3</sup>

Majority of geriatric patients belonged to the younger age group of 60-69. There was a decreasing number of geriatric patients as their ages increased<sup>3</sup>, with no individuals aged 90 years old or older residing in Barangay 662. The geriatric patients were well distributed in the 7 puroks of the barangay. Purok 3 (n=28), Purok 4 (n=26) and Purok 1 (n=25). The total number of geriatric consults at the MDH-DFCM clinic at the said barangay totaled to 666 over a course of 6 years. It was seen that majority of consults, with 69% (n=458) were by female patients which could be attributed to the overall geriatric population of the community, with women comprising 65%. In terms of place of residence, majority of consults were by individuals residing in purok 4 (n=144) which is the closest purok near the clinic. Reflecting the same pattern as that of the study of Sharma, Mazta and Parashar in 2016, place of residence emerged to be insignificant factor for health seeking behavior of geriatric patients in Himach Pradesh, North India. Those living near healthcare facilities were seen to have more frequent consults compared to those living farther away.<sup>5</sup>

The top 10 reasons for consult of geriatric patients seen at the MDH-DFCM clinic at Barangay 662, Paco, Manila, over a span of 6 years, was led by cases of osteoarthritis of varying locations and lateralities. This was followed by hypertensive cardiovascular disease and hypertension stage 2 which both belong to circulatory diseases, which ranked in the list as 2nd and 3rd, respectively. In the study of Tiwari, et al. this pattern is comparable as osteoarthritis ranked number 1 in the top health problems in their

Year & Rank	Reason for Consult	Number of consults per year
2015		
1.	Hypertension Stage 2	35
2.	Osteoarthritis	16
3.	Pneumonia in the Elderly	14
4.	Hypertensive Cardiovascular Disease	13
5.	Diabetes Mellitus Type 2	12
6.	Upper Respiratory Tract Infection	10
7.	Pulmonary Tuberculosis	9
8.	Bronchial Asthma	7
9.	Urinary Tract Infection	6
10.	Allergic Cough	6
2016		
1.	Hypertension Stage 2	18
2.	Osteoarthritis	12
3.	Pneumonia in the Elderly	9
4.	Pulmonary Tuberculosis	8
5.	Upper Respiratory Tract Infection	8
6.	Diabetes Mellitus Type 2	7
7.	Allergic Cough	7
8.	Chronic Stable Angina Pectoris	6
9.	Urinary tract infection	6
10.	Musculoskeletal strain	6

by diseases of the respiratory system (n=271), followed by diseases of the musculoskeletal system and connective tissues (n=138). (Table 3)

**Table 3.** Top 10 diseases seen in geriatric patients at the Barangay 662 MDH-DFCM Clinic from 2011-2016 according to ICD-10.

Rank	Disease Classification	Frequency (N)
1.	Diseases of the Circulatory System	344
2.	Diseases of the Respiratory System	271
3.	Diseases of the Musculoskeletal system and Connective Tissue	138
4.	Certain Infectious & Parasitic Diseases	90
5.	Diseases of the Skin and Subcutaneous Tissue	53
6.	Diseases of Genitourinary System	47
7.	Diseases of the Digestive System	41
8.	Diseases of the Ear and Mastoid Process	34
9.	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	34
10.	Endocrine, Nutritional and Metabolic Diseases	33

study population followed by hypertension.<sup>6</sup> In this study the authors categorized the illnesses based on the final diagnosis during consult. Osteoarthritis is also classified under musculoskeletal disease. The study of Sharma, Mazta and Parashar in 2016 noted that age related health problems were among the top comorbidities seen in their study population of geriatric patients.<sup>5</sup> Their study in 2016 showed that musculoskeletal disease is the most common morbidity seen in their study population as this is an age-related health problem. This is comparable in the present study spanning 6 years from 2011 to 2016. The top 5th most common reason for consult at the MDH-DFCM Barangay 662 clinic from 2011 to 2016 is Diabetes Mellitus Type 2. In the WHO Report on Global Health and Aging in 2016, it was reflected that non-communicable diseases such as hypertension, and diabetes were more common illnesses of the elderly population compared to communicable diseases such as infections.<sup>7</sup> Thirty-five percent (35%) of the overall illnesses seen at the MDH-DFCM Barangay 662 clinic comprised of respiratory problems during the duration of this study. These comprised of the top 4th which is upper respiratory tract infection, top 6th which is pneumonia in the elderly, followed by pulmonary tuberculosis in 7th place and bronchial asthma in 10th place. In the 2007 study of Francisco, et al. declining immune response with increasing age is a factor for increasing the susceptibility to pulmonary infection.<sup>8</sup> Bronchial asthma may present exacerbations due to bacterial or viral infections. Vianzon, et al. conducted a surveillance report on tuberculosis in the Philippines in 2013 and it was seen that 8% of the total population diagnosed with smear positive Acid-Fast Bacilli sputum stain were from the geriatric population.<sup>10</sup> These respiratory illnesses which were mostly infectious in origin can again be caused by the declining immune response seen in elderly individuals.<sup>8</sup> It was noted that smoking is a factor that influences respiratory infection<sup>8</sup>, however smoking history was not included in this study.

Urinary Tract Infection was 8th in the list of most common reasons for consult of geriatric patients in this study. Ageing entails many changes in the human body, including the genitourinary tract.<sup>11</sup> Elderly individuals are prone

to dehydration, hormonal changes, immunosuppression, incontinence and neurogenic bladder which makes them vulnerable to infection of the urinary tract.<sup>11</sup> Acid Peptic Disease was 9th in the list of top 10 reasons for consult at the Barangay 662 clinic. Frequency of this illness in geriatric patients was explained by Khaghan and Holt in 2000 as geriatric patients having physiologic changes in their gastric system and increasing comorbidities leading to taking in maintenance medications such as aspirin and non-steroidal anti-inflammatory (NSAIDs).<sup>12</sup> Given this scenario, geriatric patients easily develop peptic disease as seen in the study population. Comparing the results of this study with the study of Nasrin, et al. diabetes and hypertension were their top 2 most common diseases, with diabetes as number one.<sup>13</sup> Hypertension, which is also hypertensive cardiovascular disease, also placed second in the current list, but diabetes was only fifth and osteoarthritis being the most common reason for consult. Nasrin, et al. noted that variations in disease pattern between the developed and developing countries may be due to socio-economic, demographic and environmental factors.<sup>13</sup>

Comparing the data gathered per year in this study, 2011 had 4 diseases which were not present in the overall top 10 most common reasons for consult at the MDH-DFCM Barangay 662 clinic. These were functional constipation(6th), hypersensitivity reaction(7th), chronic kidney disease(9th) and contact dermatitis(10th). The elderly population undergo multiply physiologic changes including changes in the gut. Contributory factors to constipation in the elderly are drug intake, such as NSAIDs, opioid analgesics, NSAIDs, anticholinergic drugs, calcium-channel blockers and calcium supplements, reduced intestinal smooth- muscle contractility, poor fluid intake, diets low in fiber, impaired mobility, and other comorbid disorders such as neurological or cognitive disorders.<sup>14</sup> In the study of Nasrin, et al. kidney disease and skin disease were the 4th and 5th, respectively, diseases noted in their study population of geriatric patients in Bangladesh. Increasing prevalence of traditional risk factors such as diabetes and cardiovascular disease as well as new definitions of chronic kidney disease based



on glomerular filtration rate have contributed to the high prevalence of chronic kidney disease in the elderly.<sup>16</sup> Due to physiologic changes in the aging skin, mainly by decreased skin lipids thereby having an impaired permeability barrier homeostasis, these changes bring about xerosis or excessive drying of the skin which makes the elderly more sensitive to irritants.<sup>15</sup>

The top 10 common reasons for consult in our study population during the year 2012, 2015 and 2016 reflected the same diseases and as can be seen in the current overall list. These included musculoskeletal, cardiovascular and respiratory diseases. The list for 2013 now included musculoskeletal strain (7th) and gouty arthritis (10th). Both these diseases are age-related illnesses which are commonly seen in the geriatric population.<sup>5</sup>

The top 10 common reasons for consult during the year 2014 included presbycusis (7th) and benign prostatic hypertrophy (9th). Presbycusis is included in the common syndromes seen in the elderly primarily due to physiologic and anatomic changes.<sup>4</sup> Studies on prevalence of presbycusis in the elderly do not have a significant number as noted by Veras and Mattos in 2007. This is due to lack of diagnostic tests and audiologic services not being readily available to the elderly population.<sup>17</sup> Benign prostatic hypertrophy is a disease with multi-factorial etiologies but is seen in 50% of men over 50 years of age.<sup>18</sup> It is therefore an age-related disease which explains the presence of this disease in the study population in 2014. The study populations' most common reasons for consult were classified based on ICD-10. The top 3 categories were diseases of the circulatory system (1st), respiratory system (2nd) and musculoskeletal and connective tissue system (3rd). Non-communicable diseases which include hypertension were noted to be common illnesses of the elderly population.<sup>7</sup> There is a declining immune response with increasing age which is a factor for increasing the susceptibility to pulmonary infections.<sup>8</sup> Common reasons for consult in the geriatric population are brought about by age-related physiologic changes.<sup>5</sup> These age-related physiologic changes encompass all the organ systems

which result in the prevalence of certain diseases in the elderly.

## CONCLUSION

The common illnesses of geriatric patients seen in the Manila Doctors Hospital – Department of Family & Community Medicine clinic at Barangay 662 from June 2011 to December 2016 were musculoskeletal, cardiovascular and pulmonary diseases. Majority of these concerns were non-communicable and age-related illnesses.

In line with these findings, local health units should prepare programs that will help educate individuals in preventing the development of non-communicable diseases and promoting wellness through healthy lifestyle choices. Since majority of illnesses of geriatric patients are non-communicable illnesses, another recommendation is to do a study correlating diet preferences, social history and levels of activities of patients with their lifestyle-related or non-communicable comorbid conditions. Another recommendation is to conduct a study among geriatric patients to learn the basis for health seeking behaviors of those in urban communities.

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