



## MORBIDITY PROFILE AND ITS DETERMINANTS AMONG PATIENTS ATTENDING SELECTED RURAL HEALTH TRAINING CENTER IN DISTRICT DEHRADUN.

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### ABSTRACT

**Background:** Morbidity among the elderly has a significant impact on their physical and psychological well-being. Assessment of the morbidity profile and its drivers, with consequences for the inhabitants of Dehradun district. The goal of this study is to determine the relationship between morbidity, co-morbidity, and treatment seeking patterns, as well as the relationship between morbidity, disability, psychological distress, and socio-demographic variables, among patients attending a rural health training Centre in Dehradun.

**Methods:** A retrospective record-based study was conducted at OPD of Rural Health Training Centre located in Mothrowala village under department of community medicine of SGRIM&HS, Dehradun. All the patients who visited rural health training center were included in the study. Patients who attended the rural health training center were assessed for morbidity. Data collected by Secondary Data from OPD register of health officers in different OPDs, was entered into Microsoft Excel and analyzed using SPSS version-17.0.

**Results:** A total of 10168 patients visited the Rural Health Training Centre, among them 5513(54.22%) of them were males and 4655 (45.78%) were females. 423(4.16%) were in the age group of 0-9years, 1495(14.7%) were in age group of 10-19 years 6520(64.12%) were in age group of 20-60 years, 1730(17.01%) were above 60 years. It was observed that maximum number of cases 1831(18.01%) were presented with fever followed by 1367 (13.44%) respiratory problem. Diseases with musculoskeletal system and gastrointestinal system were reported among 1044(10.27%) and 1033 (10.16%) of the attendees respectively. It was observed that 6291(61.8%) were suffering from non-communicable disease compared to 3877(38.1%) communicable disease. About (24.45%) were reported in Autumn and (22.82%) were reported in winters, summer season shows the least number of patient influx (5.17%).

**Conclusion:** This study will improve the delivery of health care along with better management of resources available. The mapping of the specific disease profile along with seasonal variations will provide us ample amount of time to prepare and intervene so as to stop the disease at the root level. Hence serving the community in a more efficient and scientific way.

### KEYWORDS :

#### INTRODUCTION

For an effective and efficient running of a health center, morbidity profile and sociodemographic parameters of a disease can play a vital role. It helps in policy making and smooth administration of the health-facility as the clinician has a prior knowledge of a disease burden and pattern. Formulating policies to curb diseases which are more prevalent in a specific area will be a big step towards the disease-free community. The geographical variation of disease must be taken into account and to carry out continuous surveillance of different diseases in hospitals so that reliable and updated data are timely available for health administration to plan, implement and evaluate disease control and preventive program strategies. (3)

The study of illness's pattern along with their seasonal variation in a specified area is a crucial way to improve the health care delivery to the community. The continuous watch on such data will provide means to monitor the trends of ongoing diseases and other health related events. And if situation arises proper interventions can be taken. Studies which are reporting about morbidity patterns provide information not only about the health status of various subgroups but also help to identify the type and extent of prevailing morbidities, and this will help in setting up the priorities while reforming the health services. (11)

Surveilling diseases and their pattern will keep clinicians a step ahead. World health assembly in the year 1995 advocated the strengthening of the surveillance of the diseases for the early detection of emerging and re-emerging infections. (4)

India is facing a double challenge as both communicable and non-communicable diseases are prevalent. Recently India has seen up & downs of various disease trends and we are gradually entering the phase of epidemiological transition. Epidemiological distribution of diseases carries immense importance for its prevention and control. Continuous scrutiny over morbidity & mortality indicators may provide evidences which will help in planning of health care and resource allocations. (5)

Seasons have a significant impact on human health. Hippocrates

mentions the effects of seasons on health as early as 460-377 BC in his writings. Seasonal variation of diseases helps in making etiological hypothesis, further enhancing the quality of health care.

Keeping all the above-mentioned things in mind this study is carried out in a RHTC which is located in outskirts of Dehradun city, capital of Uttarakhand state. This institute is usually the first contact point between patient and a doctor. It provides service in field of medicine, OBG, ortho, Ent, Ophtha and dental surgery.

#### MATERIAL & METHODS

**Study design:** A retrospective record-based study was conducted in OPD of rural health training center (RHTC).

**Study Area:** Rural Health Training Centre located in Mothrowala village. Field practice area under department of Community Medicine, SGRIM&HS, Dehradun.

**Study period:** The study was conducted from march 2019 to February 2020 for a period of one year.

#### Methodology:

**Sampling Method:** Purposive sampling technique was used to select the study area.

- RHTC caters to a total population of 15724 with average daily OPD visits of 10 and opens for 6 days a week.
- New cases of Self-reported health problems for which patients sought our OPD for treatment were included in the study.
- **Sample size:** A total of 10168 study participants were included in the study by total enumeration. These are the patients who made OPD visits during the study period from mar2019-feb2020.

#### Data collection

- Secondary Data was collected from OPD register of health officers in different OPDs.
- Patient demographic details (age, sex, residence), diagnosis and time of year was noted.

- All of the new cases were included and follow up patients were excluded in the study.
- In our study, children age group were taken from 6-19 years, adults > 19 years and elderly were taken as > 60 years of age (as per WHO guidelines).
- Diseases were grouped into communicable and non-communicable diseases with seasonal variations to look for any epidemiological transition of the diseases.

**Data analysis**

- Total number of patients suffering from different disease with their percentage in different months and according to their gender were calculated.
- Descriptive analysis was done.
- SPSS and Microsoft excel were used for analysis.

**RESULT**

**Table-1: Distribution of Morbidity with gender.**

Morbidity	Male Cases	%	Female cases	%	Total Cases	%
Respiratory	725	13.15	642	13.79	1367	13.44
HTN	246	4.46	246	5.28	492	4.84
DM	194	3.52	198	4.25	392	3.86
Genitourinary	71	1.29	117	2.51	188	1.85
GI	599	10.87	434	9.32	1033	10.16
Musculoskeletal	525	9.52	519	11.15	1044	10.27
Fever	1271	23.05	560	12.03	1831	18.01
Cardio	53	0.96	69	1.48	122	1.2
Trauma	267	4.84	105	2.26	372	3.66
ENT	111	2.01	120	2.58	231	2.27
Ophthalmology	59	1.07	33	0.71	92	0.9
Surgery	227	4.12	156	3.35	383	3.77
Dermatology	335	6.08	248	5.33	583	5.73
OBG	NA	NA	569	12.22	569	5.6
Dental	260	4.72	180	3.87	440	4.33
Deficiency	26	0.47	68	1.46	94	0.92
Psychiatry	59	1.07	35	0.75	94	0.92
Neurology	9	0.16	14	0.3	23	0.23
Others Weakness, metabolic, endocrine, swelling, headache, calculi, renal, tingling.	476	8.63	342	7.35	818	8.04
total	5513	54.22	4655	45.78	10168	100

Table 1 shows that the maximum number of cases (18.01%) were suffering from fever, followed by respiratory ailments (13.44%). Whereas least number of cases (0.23%) were suffering from neurological disorders. Males were affected mostly by fever (23.05%) followed by respiratory condition (13.15%) and least affected by neurological diseases (0.16%). Similar pattern was seen in females, who were also mostly affected by fever (18.01%) and followed by respiratory conditions (13.44%). Females were least affected by neurological conditions (0.3%).

**Table-2: Distribution of Disease pattern with gender**

Disease pattern	Male		Female		Total (%)
	Number	%	Number	%	
1 Communicable	2062	37.4 %	1815	38.9 %	3877 (38.1%)
2 Non-Communicable	3451	62.6 %	2840	61.0 %	6291 (61.8%)
Total	5513	100 %	4655	100 %	10168 (100%)

Table 2 shows us that maximum number of cases (61.8%) were suffering from Non-Communicable Diseases as compared to Communicable diseases (38.1%). The pattern of disease was similar in both sexes with 62.6% of males suffering from NCDs and 37.4% from communicable diseases. Similarly, females too were suffering more from NCDs i.e., 61.8% and 38.1% were suffering from communicable diseases.

**Table-3: Distribution of morbidity with seasonal variations**

Morbidity	Seasons						total
	Winter (%)	Spring (%)	Summer (%)	Monsoon (%)	Autumn (%)	Late Autumn (%)	
							1

Respiratory	517 (22.27)	41 (6.33)	29 (5.51)	197 (10.5)	194 (7.8)	389 (16.82)	1367
HTN	97 (4.18)	30 (4.64)	119 (22.6)	49 (2.61)	85 (3.42)	112 (4.84)	492
DM	82 (3.53)	34 (5.26)	29 (5.51)	86 (4.59)	105 (4.22)	56 (2.42)	392
Genitourinary	79 (3.40)	14 (2.16)	4 (0.76)	51 (2.72)	9 (0.36)	31 (1.34)	188
GI	235 (10.12)	55 (8.5)	23 (4.37)	160 (8.54)	265 (10.66)	295 (12.75)	1033
Musculoskeletal	269 (11.59)	43 (6.65)	21 (3.99)	135 (7.2)	191 (7.7)	385 (16.65)	1044
Fever	115 (4.95)	23 (3.55)	31 (5.89)	410 (21.9)	1118 (45)	134 (5.79)	1831
Cardio	31 (1.34)	9 (1.39)	11 (2.09)	20 (1.07)	30 (1.21)	21 (0.91)	122
Trauma	99 (4.27)	26 (4.02)	9 (1.71)	47 (2.51)	68 (2.73)	123 (5.32)	372
ENT	57 (2.45)	17 (2.63)	6 (1.14)	57 (3.04)	30 (1.21)	64 (2.77)	231
Ophthalmology	12 (0.52)	2 (0.31)	2 (0.38)	5 (0.27)	20 (0.8)	51 (2.2)	92
Surgery	100 (4.31)	12 (1.85)	11 (2.09)	75 (4.0)	50 (2.01)	135 (5.84)	383
Dermatology	123 (5.3)	40 (6.18)	4 (0.76)	72 (3.84)	136 (5.5)	208 (8.99)	583
OBG	210 (9.01)	68 (10.51)	24 (4.56)	237 (12.7)	23 (0.92)	7 (0.3)	569
Dental	96 (4.14)	82 (12.67)	71 (13.5)	41 (2.18)	12 (0.48)	138 (5.97)	440
Deficiency	41 (1.77)	8 (1.24)	3 (0.57)	13 (0.69)	12 (0.48)	17 (0.73)	94
Psychiatry	35 (1.51)	2 (0.31)	2 (0.38)	25 (1.33)	13 (0.52)	17 (0.73)	94
Neurology	5 (0.22)	1 (0.15)	1 (0.19)	10 (0.53)	2 (0.08)	4 (0.17)	23
Others	118 (5.08)	140 (21.64)	126 (24)	184 (9.82)	124 (5)	126 (5.45)	818
total	2321	647	526	1874	2487	2313	10168

Table 3 shows us that maximum number influx of patient was in autumn season closely followed by winter and late autumn seasons. Summer season saw the least number of patient influx. In autumn season maximum number of cases (45%) were of fever followed by gastrointestinal ailments (10.66%) while minimum cases were related to neurology (0.08%). In winter season maximum number of cases (22.27%) were of respiratory system followed by musculoskeletal ailments (11.59%) while minimum cases were related to neurology (0.22%).

**DISCUSSION**

This study found out that majority of patients are adults. Similar results were obtained in earlier study conducted by **Yadav V et al (1)**, AFFMC, Pune where the case rate was highest in adults. Also, in a study by **Gaur BPS** highest number of participants were adults.

Our study had slight male predisposition similar findings are shown by **Mathur SM (9)** in his study in which he found out that Males had higher prevalence in almost every disease than females except in UTI.

Most common reason for the visit was acute febrile illness followed by respiratory illness (13.44%) then musculoskeletal (10.27%) along with gastrointestinal related illnesses (10.16%) similarly **Sharma MK (5)** in his study found out that Majority of morbidity was Upper Respiratory tract infections followed by fever.

In pediatric age group the most common illness reported was acute respiratory tract infections, similar to our study, a study by **Shikha Verma et al (6)** found out that maximum number of children were suffering from respiratory illness, a study by **Gaur BPS (4)** shows in pediatric cases the most common disease reported were of respiratory system, a study by **Gopalakrishnan S et al (8)** shows that acute respiratory illness was highest in under five age group and it tapers with advancing age.

61.8 % of the patients were suffering from non-communicable disease while 38.1 had communicable disease. However, similar study by **Kumari R et al (3)** stated that about half of the disease burden was due

to communicable disease, while one fifth was accounted for by the non-communicable disease.

Amount of patient visiting due to HTN and DM are quite low despite rising trends nationally. Similar findings were presented in a study by **Gaur BPS et al (4)**, who found that prevalence diabetes and Hypertension were low i.e., 0.24% and 0.53% respectively.

Respiratory condition and musculoskeletal had highest prevalence during late autumn and winters similarly **Sharma MK et al (2)** in his study in Chandigarh found out that Most cases of ARI (76.5%) and Pneumonia (3.09%) were reported in winter and **Yadav V et al (1)** which shows increase in the number of cases suffering from URTI and Viral fever during winters. **Jyvasjarvi S et al (7)** found out that among the frequent attenders of a primary health clinic observed that musculoskeletal problems were the most common reasons for visit to the health center. Fever was most commonly sought condition during monsoon and early autumn, similar finding was seen by **Kumari R et al (3)** which showed that Pyrexia of Unknown Origin was highest in the month of July and, **Sharma MK et al (2)** in his study found out that Typhoid (1.57%) and Viral Hepatitis (1.23%) were seen in monsoon season.

## CONCLUSION

This study will improve the delivery of health care along with better management of resources available. The mapping of the specific disease profile along with seasonal variations will provide us ample amount of time to prepare and intervene so as to stop the disease at the root level. Hence serving the community in a more efficient and scientific way.

## REFERENCE

1. Yadav V, Manjunath SR, Mukherji S, Ramakrishnan TS. Morbidity Profile of OPD patients of an Urban Health and Training Center: A Tool for the Health Planners. *Ntl J of Community Med* 2015;6(2):46-50.
2. Sharma MK, Bhatnagar T, Goel NK, Verma A, Swami HM. Operationalisation of surveillance of communicable diseases in Chandigarh. *The Journal of Communicable Diseases*. 2005 Sep;37(3):197-202. PMID: 17080703.
3. Kumari R, Nath B, Midha T, Vaswani ND, Lekhwani S, Singh B. Morbidity profile and seasonal variation of diseases in a primary health center in kanpur district: a tool for the health planners. *J Family Med Prim Care*. 2012;1(2):86-91. doi:10.4103/2249-4863.104943
4. Gaur BPS, Paul SK, Pegu B. Morbidity profile of outdoor patients attending an urban health training center of South Andaman district, India. *Int J Community Med Public Health* 2016;3:3184-7.
5. Munes Kumar Sharma et al. Morbidity Profile of Patients Attending Field Practice Area of a Tertiary Care Hospital in Chandigarh City. *Sch J App Med Sci*, 2021 Mar 9(3): 441-444.
6. Shikha Verma et al *JMSCR* Volume 08 Issue 06 June 2020
7. Jyvasjarvi S, Keinanen-Kiukaanniemi S, Vaisanen E, Larivaara P, Kivela SL. Frequent attenders in a Finnish health centre: Morbidity and reasons for encounter. *Scand J Prim Health Care*. 1998;16:141-8.
8. Gopalakrishnan S, Ganeshkumar P, Katta A. Study of morbidity profile of a rural population in Tamil Nadu. *J Clin Diagn Res*. 2015;9(2):LC05-LC9. doi:10.7860/JCDR/2015/10424.5520
9. Mathur SM, Mandarwal D, Chahar BK, Singh S. Morbidity Pattern in Rural Area of Jaipur District (Rajasthan). *J Res Med Den Sci*. 2014;2(4):79-85.
10. Gupta A, Chellaiyan V, Lohiya A, Rizwan SA, Upadhyay RP, Palanivel C. Morbidity Profile of Out-Patients Attending a Primary Health Centre in Rural Puducherry, South India. *Natl J Community Med* 2014; 5(4):424-7.
11. Abdul Rouf , Dr Mahbooba Rasool, Dr S M Salim Khan, Dr Mariya Amin, Dr Sheikh Mohd Saleem. Morbidity Pattern among Patients Attending Urban Health Centre in North India. *Journal of medical science and clinical research* 2017. Vol 5. Issue 8. Page 26574-26579.