Portfolio of Outpatients Attending Centre for Urban Health, Madhya Pradesh, Central India

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Abstract

Background: Knowledge on distribution and burden of diseases in a community is essential for planning of public health services. In the absence of information on morbidity profile through community-based surveys, facility-based data provide a good alternative. The aim of this study was to describe the morbidity profile of patients attending the Centre for Urban Health All India Institute of Medical Sciences (AIIMS) Bhopal (CUHA).

Methodology: A record-based descriptive study was carried out in the CUHA Bhopal, Madhya Pradesh, Central India. Information on age, gender, residence, new case, and principal diagnosis were extracted from the outpatient registers for the period between January 2014 and December 2014. Only newly registered patients for the study year (2014) were included. Descriptive analysis was done.

Results: A total of 6685 new episodes of illnesses were treated. Adults (>15 years) constituted about 85.0%. Overall, the respiratory disorders were the most common (27.2%) followed by the digestive disorders (10.9%), circulatory disorders (9.9%), musculoskeletal disorders (8.8%), and infectious and parasitic disorders (7.4%).

Conclusion: This study gives a brief description of the morbidity profile of patients attending a primary health care center over a period of 1 year. This knowledge would help in planning health services to meet the patients’ needs and help in training health staff.

Keywords
community health, community health centers, primary care, prevention, patient centeredness

Introduction

The primary health care is essential health care based on practical, scientifically sound, and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It is an integral part both of the country’s health system and of the overall social and economic development of the community.¹ The World Health Report, 2008 reinforced the concept of primary health care as now more than ever.²

India has a unique primary health care structure. The Urban Health Centre (UHC) is one of the main components of the urban health system in India. There is a wide spectrum of patients attending the outpatients department of a PHC. A thorough knowledge of the distribution and magnitude of health problems is essential for understanding the burden of various diseases at the grass-root level. Morbidity reporting of a health facility further strengthens the data available for planning health services efficiently. In addition, the knowledge of the burden of diseases will also help in providing effective and timely treatment to the community.³ With the above-mentioned thought, the aim of this study was to describe the morbidity profile of patients

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Table 1. Morbidity Profile of Outpatients of an Urban Health Center in Bhopal, Central India (January-December 2014).

| S.No | Morbidity per ICD-10* | Adult Males, n (%) | Adult Females, n (%) | Children Male, n (%) | Children Female, n (%) | Total, n (%) |
|------|-----------------------|--------------------|---------------------|---------------------|-----------------------|--------------|
| 1    | Infectious and parasitic diseases (A00-B99) | 159 (4.8) | 221 (9.2) | 58 (11.2) | 58 (12.0) | 496 (7.4) |
| 2    | Diseases of the blood and blood forming organs (D50-D89) | 74 (2.2) | 16 (0.7) | 12 (2.3) | 4 (0.8) | 106 (1.6) |
| A    | Anemia | 13 (0.3) | 69 (2.9) | 1 (0.2) | 11 (2.2) | 94 (1.4) |
| B    | Protein energy malnutrition | 2 (0.1) | 0 (0.0) | 16 (3.1) | 18 (3.7) | 36 (0.5) |
| C    | External cause of morbidity (S00-Y98) | 65 (2.0) | 87 (3.6) | 24 (4.6) | 37 (7.6) | 213 (3.2) |
| D    | Respiratory system (J00-J99) | 737 (22.4) | 664 (27.8) | 209 (40.3) | 207 (42.8) | 1817 (27.2) |
| E    | Infectious and parasitic diseases (A00-B99) | 232 (7.0) | 157 (6.6) | 22 (4.2) | 21 (4.3) | 432 (6.5) |
| F    | Endocrine, nutritional, and metabolic diseases (E00-E90) | 199 (6.0) | 144 (6.0) | 0 (0.0) | 0 (0.0) | 343 (5.1) |
| G    | Gastrointestinal system (K00-K93) | 374 (11.4) | 284 (11.9) | 2 (0.4) | 3 (0.6) | 732 (10.9) |
| H    | Acute respiratory tract infection | 642 (19.5) | 556 (23.3) | 200 (38.6) | 197 (40.7) | 1595 (23.9) |
| I    | Asthma | 27 (0.8) | 26 (1.1) | 0 (0.0) | 0 (0.0) | 53 (0.8) |
| J    | Diseases of the blood and blood forming organs (D50-D89) | 344 (10.4) | 284 (11.9) | 52 (10.0) | 52 (10.7) | 732 (10.9) |
| K    | Diseases of esophagus, stomach, and duodenum | 225 (6.8) | 180 (7.5) | 22 (4.2) | 26 (5.3) | 453 (6.8) |
| L    | Endocrine, nutritional, and metabolic diseases (E00-E90) | 65 (2.0) | 87 (3.6) | 24 (4.6) | 37 (7.6) | 213 (3.2) |
| M    | Infectious and parasitic diseases (A00-B99) | 374 (11.4) | 284 (11.9) | 2 (0.4) | 3 (0.6) | 732 (10.9) |
| N    | Gastrointestinal system (K00-K93) | 915 (27.8) | 510 (21.3) | 123 (23.7) | 89 (18.4) | 1637 (24.5) |
| O    | Infectious and parasitic diseases (A00-B99) | 3293 (49.2) | 2390 (35.8) | 518 (7.7) | 484 (7.3) | 6685 (100.0) |

Abbreviation: ICD-10, International Classification of Diseases, Tenth Revision.

The most common diseases were stated under the main disease categories. The difference in morbidity pattern between adult male and female (P value < .001).

The difference between morbidity pattern of male and female child (P value = .17).

Methodology

This is a record-based study carried out using the morbidity registers maintained for outpatients at a Centre for Urban Health AIIMS Bhopal (CUHA) in the Madhya Pradesh, Central India. The CUHA caters to a population of about 10 000. An outpatient clinic managed by 3 to 4 registered medical practitioners in the CUHA provided services for 5 days in a week, and the average patient attendance was about 100 patients per day. Patient details, diagnosis, and treatment provided by physicians were documented in the morbidity register. Information such as age, gender, residence, new or old case, and principal diagnosis were extracted from the registers using a data extraction sheet. The diagnosis was coded per International Classification of Disease, Tenth Revision (ICD-10) classification of 2010 by 2 doctors independently. Newly registered outpatients between January and December 2014 were included in the study. Those outpatients who visited for follow-up of acute illnesses and chronic conditions such as diabetes and hypertension were excluded. Analysis was done in SPSS version 17.0. Descriptive analysis was performed, and patients less than 15 years of age were considered as children and proportions given wherever necessary.

Results

The total number of new episodes of illnesses that was treated in the outpatient department (OPD) during 2014 was 6685. Adults (>15 years) constituted about 85.0%. Among children, males (51.7%) and females (48.3%) constituted nearly equal proportions, but among adults, about 57.9% were males. The differences in morbidity pattern in attendance rate among the age-groups were found to be statistically significant (P < .0001). The overall difference in morbidity in attendance between male and female was found to be statistically significant (P < .001).

Overall, the respiratory disorders were the most common (27.2%) followed by the digestive disorders (10.9%), circulatory disorders (9.9%), musculoskeletal disorders (8.8%), and infectious and parasitic disorders (7.4%); Table 1).

In adults, the most common diseases were in the respiratory system (in males 22.4% and in females 27.8%). The 5 most common diseases among adult males were acute respiratory tract infections (19.5%); diseases of the musculoskeletal system (11.4%); primary hypertension (11.1%); diseases of esophagus, stomach, and duodenum (6.8%); and diabetes mellitus (6.0%). The corresponding diseases among adult females were acute respiratory tract infections (23.3%); primary hypertension (9.5%); infectious and parasitic disorders (9.2%); diseases of musculoskeletal system (7.8%); and diseases of esophagus, stomach, and duodenum (7.5%); Table 1). The difference in morbidity pattern between adult male and female was found to be statistically significant (P value < .001).

Among the pediatric cases, the most common diseases were respiratory disorders (in boys 40.3% and in girls 42.8%) followed by infectious and parasitic disorders (in boys 11.2% and in girls 12.0%) and digestive disorders (in boys 10.0% and in...
Discussion

Our study outlines the spectrum of health problems that presented to our Centre for Urban Health during the year 2014. The results of the present study showed that commonly diagnosed diseases were respiratory disorders followed by the digestive disorders, circulatory disorders, musculoskeletal disorders, and infectious and parasitic disorders.

Another study conducted in India found skin disorders and acute respiratory tract infections as the most common illness in their setting.\(^5\) The major reason for this difference could be the different age distribution of the sample studied. In addition, the studies conducted in primary health care clinics of Nepal and Taiwan reported musculoskeletal diseases and hypertension as the common diagnoses.\(^6,7\) Other studies conducted in Pakistan and Saudi Arabia observed that skin disorders and acute respiratory tract infections were the most common illness in their setting.\(^8,9\) Similarly, a study conducted in Finland among patients attending primary health clinic had found that musculoskeletal disorders were the commonest cause of morbidity.\(^10\) The prevalence of noncommunicable diseases such as diabetes and hypertension varied from 6% to 10% in our study. The findings for diabetes were similar to a study conducted in 3 primary care clinic in Perlis, Malaysia.\(^11\)

In children, the most common illness identified was acute respiratory tract infections. Digestive disorders, injuries, and malnutrition were the common causes of morbidities. Another study conducted in rural areas of Aligarh among under 5 children found that respiratory and skin disorders were the most common illnesses.\(^12\) Similarly, a study conducted in primary health clinic in Pakistan reported that diseases of respiratory system (27.6%) and infectious and parasitic diseases (18.7%) were the most common.\(^13\) A study done among adolescents in 10 primary health centers in Saudi Arabia documented that 43% of patients had upper respiratory tract infection.\(^14\)

While acute ailments formed the major morbidities among children attending our OPD, chronic morbidities were common among adults. These findings point out that broad range of health care services need to be provided in the UHCs. Special health care services targeting children and elderly persons are the need of the hour in primary health care settings. The present study was conducted at Centre for Urban Health in central India, and hence it cannot be generalized to whole of India. Although the morbidity profile was stratified by age and gender, it was not possible to classify on socioeconomic structure. Since treating physicians sometimes recorded symptoms rather than a diagnosis, misclassification could have occurred during coding. However, the number of episodes of illnesses included in the study is large and is strength of the study.

The knowledge of the morbidity profile will help in providing effective and timely treatment to the community. It will also help public health planners provide enhanced and high-quality service to the community. This study gives a brief description of the morbidity profile of patients who attended a Centre for Urban Health over a period of 1 year. This knowledge will help in planning appropriate services to meet the patients’ needs and help in training of health staff to meet these needs.

Declaration of Conflicting Interests

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