ECONOMIC BURDEN OF COVID19; A COST ILLNESS STUDY IN TERTIARY CARE HOSPITAL

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Abstract:

The COVID 19 is an infectious disease caused by the SARS-COV-2 Virus. Patient characteristics, clinical outcomes, and resource use of hospitalized COVID-19 patients have been described. However, limited data are available describing the direct healthcare costs associated with hospital resource utilization among hospitalized COVID-19 patients. Therefore, economic models of the impact of COVID-19. Specific data describing the healthcare costs of hospitalized COVID-19 patients are needed to fully understand the economic burden of COVID-19 and to aid decision makers as they plan future investments in COVID-19 prevention and treatment strategies. The main aim of study was to assess the total estimated health-care costs associated with COVID-19. It is a Retrospective data analysis study was conducted in Government General Hospital, Guntur for a span of 6 months (September 2021 – February 2022) after obtaining ethical committee approval. The economic burden of covid 19 was assessed based on the treatment provided and medication cost of government.161 Patients Who met the inclusion criteria were included in the study. The data obtained was tabulated and analysed using advanced Microsoft excel and found the median hospital length of stay was 12 days, median hospital charges were 4500. On an average a patients costs of 450 rs to 500 rs a day.Our study findings provide a comprehensive profile of hospitalized COVID-19 patients offer valuable insights into the patient health outcomes and the hospital economic burden of COVID-19 in the INDIA stratified by disease progression state, age groups, and medication cost. Further studies are warranted in both inpatient and outpatient settings, especially with longer study time frames and further stratifications (e.g., by other patient demographics and clinical characteristics), in addition to studies on the evaluation of treatment patterns and continuum of care, to provide an accurate understanding of the health outcomes and healthcare economic burden of patients with COVID-19 in their entirety.

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1. INTRODUCTION

COVID 19 is an infectious disease caused by the SARS-COV-2 Virus. It is highly Spreadable respiratory disease caused by SARS-CoV-2 Virus. It extends beyond the respiratory system. It causes acute respiratory illness. Most of the people who are infected experienced mild to moderate illness some people are severely infected and required medical treatment. Based on current data, it seems that bats might initially host COVID-19, which might have transmitted to humans through pangolin or other wild animals sold at the Wuhan seafood market, with subsequent spread via human-to-human transmission. In India total covid conformed cases till 12April 2022 was 497,960,492, conformed deaths are 6,181,850 and vaccines administered are 11,250,782,214. In china 81% of population had mild symptoms, 14% had severe disease, 5% were affected with critical illness, mortality rate was 2.3 %.

2. METHODOLOGY

Study Place: Government General Hospital, Guntur.
Period Of Study: 6 months
Study Design: Retrospective data analysis
Sample Size: Patients diagnosed with Covid - 19
Data Tools Used:

- Patient consent form
- Patient data collection form

Inclusion Criteria:

- Patients who are suffering with COVID and Recovered.
- All age groups
- COVID-19 infection, confirmed by RTPCR, CRP, CT SCAN and all the patients diagnosed with COVID.
- Mild to severe COVID-19 infection
- Able to provide informed consent

Exclusion Criteria:

- Patients who were not diagnosed with covid-19.
- Not willing to participate.

Study Procedure: The study will be conducted in the tertiary care hospital after obtaining ethical clearance from the Institutional Ethical Committee. All the data under the inclusion criteria are included and assessed.

Statistical Analysis
The data obtained was entered in advanced Microsoft excel spread sheet and evaluated

3. RESULTS AND DISCUSSION

Table depicts the information regarding distribution of patients within age groups of 15 to 80 years. Majority of patients were found within 41-50 years (38.54%) followed by 31-40 years (24.62%), 21-30 years (22.46%) and 51- 60 years (22.77%), 61-70 years (3.85%), 71-80 years (1.85%),15-20years (1.21%).

Table 1: Age Vs No. Of Subjects

Age Of The Subjects (Years)	Number Of Subjects (N)=161
15-20	6
21-30	26
31-40	28
41-50	52
51-60	26
61-70	16
71-80	7

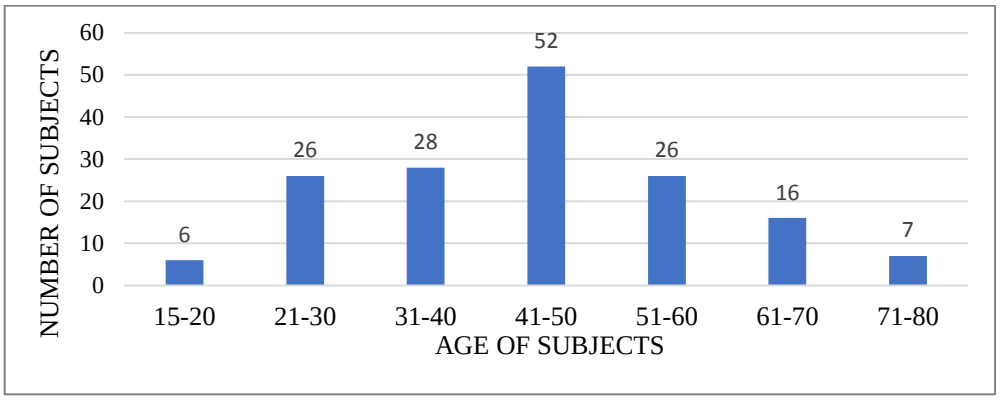


Table 2: Gender Vs No: Of Subjects

Table 2 depicts the information regarding distribution of patient's gender within age group. Female patients are 98 members and males are 63 members.

Gender	Number Of Female	Number Of Male
Total Number = 161	98	63

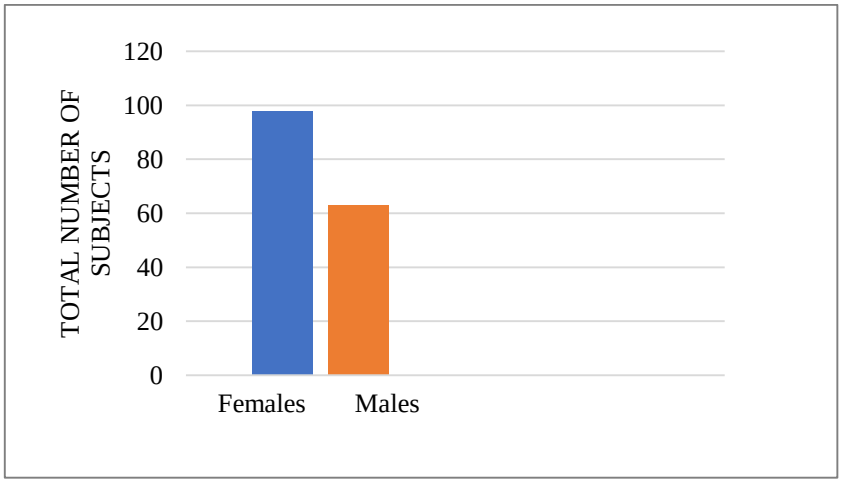


Table 3: Complication Vs No: Of Subjects

Table 3 depicts the information regarding distribution of patient's complications within age group. Number of patients with complications is 36 and without complications are 125.

Complications	No. Of Subjects
Present	36
Absent	125

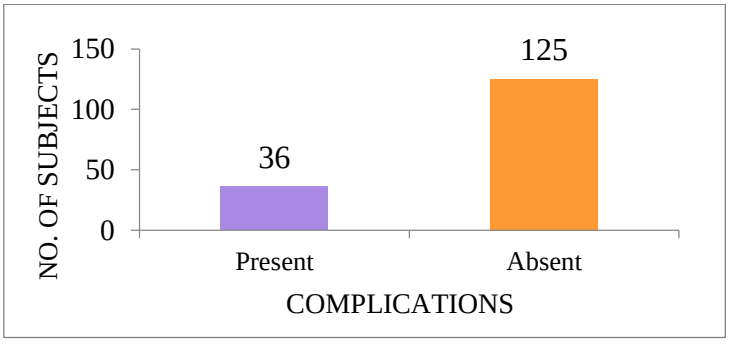


Table 4: Length Of Stay Vs No: Of Subjects

Table depicts information of distribution of patients depending on length of stay. Majority patients are with 6-10 day (60) followed by least was 26-30 days (3).

Length Of Stay (Days)	No. Of Subjects
1-5 days	48
6-10 days	60
11-15days	32
16-20days	12
21-25 days	6
26-30 days	3

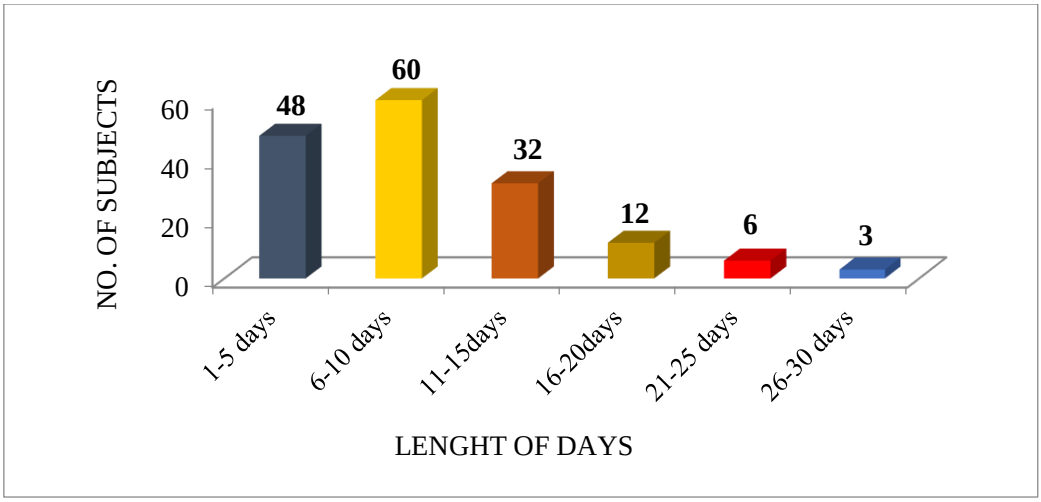


Table 5: Past Medical History Vs No: Of Subjects

Table depicts the information regarding distribution of patients depending on their Pat Medical History.
Majority of patients were with no past medical history (108) followed by Diabetes mellitus (30), Hypertension (25), Asthma (9), Cardio vascular disease (2), Chronic kidney disease (2), Epilepsy (2), Hepatomegaly (1), CVA Ischemic stroke (1), Hypothyroidism (1), PCOS (1), Down syndrome (1),Tuberculosis (1).

Past Medical History	No: Of Subjects
Asthma	9
Cardio vascular diseases	2
Chronic kidney disease	2
Diabetes mellitus	30
Hypertension	25
CVA ischemic stroke	1
Epilepsy	2
Hepatomegaly	1
Hypothyroidism	1
PCOS	1
Down syndrome	1
Tuberculosis	1
NIL	108

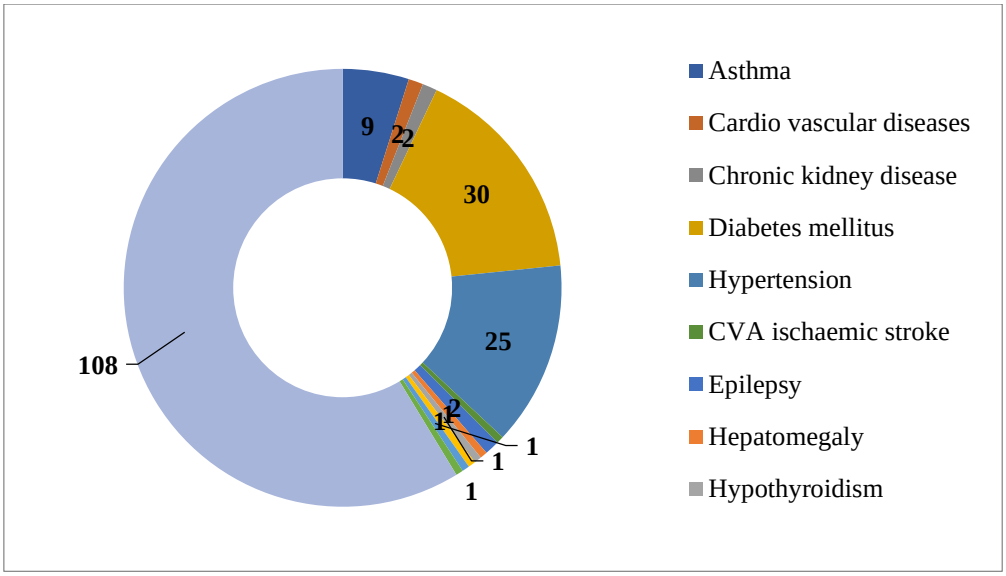


Table 6: Percentage Of Drugs Used Vs No: Of Patients

Table depicts the information regarding distribution of Medications used and the percentage of medications used. Mostly used is pantop with 96.9% meropenum is less used about 2.6%.

Name Of The Drug	No: Of Subjects Used	Percentage Of Drug Used
PANTOP	155	96.9
VITAMIN C	99	61.9
PARACETAMOL	90	56.3
METHYL PREDNISALONE	22	19.4
MULTI-VITAMIN	77	48.1
AZITHROMYCIN	74	46.3
IVERMECTIN	68	42.5
DERPHYLLINE	60	37.5
DOXYCYCLLINE	34	21.3
METRONIDAZOLE	19	11.9
SYRUP AMBROXL	10	1.9
MONTEC LC	11	1.6
CLEXANE	65	52.6
MONOCEF	60	49.7
PIPTAZ	25	15.6
MEROPENEM	15	2.6
ASTHALIN	40	38.4
BUDECORT	40	38.4
CEFIXIME	52	49.5
DECADRON	69	51.6
REMDESIVIR	43	39.2

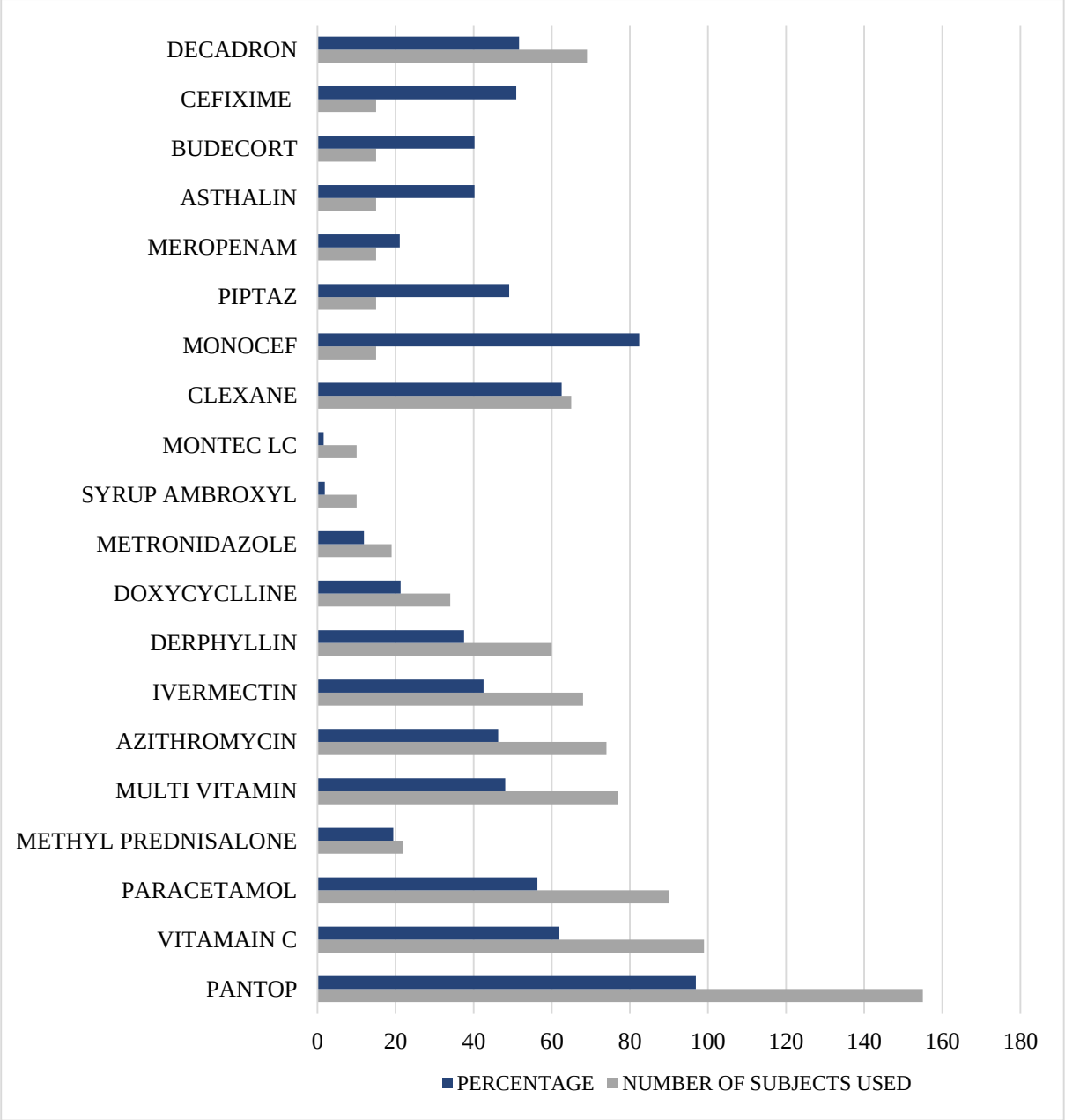
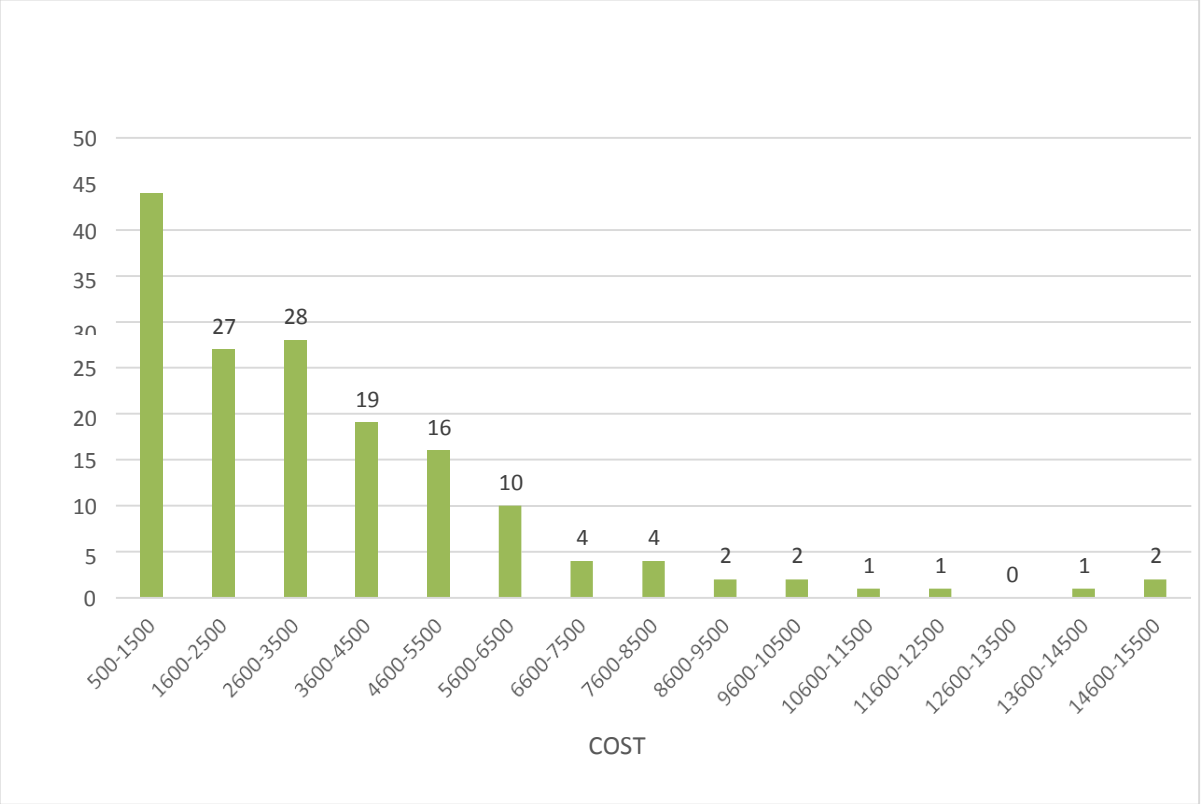


Table 7: No: Of Patients Vs Cost Range

Table depicts the information regarding cost range and the number of subjects. Majority of patients medication cost ranges between 500-1500(44),1600-2500 (27), 2600-3500(28), 3600-4500(19), 4600-5500(16),5600-6500(10),6600-8500(4), 8600-10500(2), 10600-12500 (1) 12600-13500(0), 13600-14500(1),14600-15500(2).

Cost Range	Number Of Patients
500-1500	44
1600-2500	27
2600-3500	28
3600-4500	19
4600-5500	16
5600-6500	10

6600-7500	4
7600-8500	4
8600-9500	2
9600-10500	2
10600-11500	1
11600-12500	1
12600-13500	0
13600-14500	1
14600-15500	2



4. CONCLUSION

In this retrospective analysis using a large GUNTUR GENERAL hospital-based administrative database, we evaluated health outcomes and the hospital economic burden of over 161 patients hospitalized for COVID-19 through the end of DECEMBER 2021 in the GUNTUR. Among the patients hospitalized with COVID19, severe patient health outcomes were observed, and substantial hospital resource use and costs were incurred by hospitals, particularly among patients admitted to an ICU and who required IMV. Our study findings provide a comprehensive profile of hospitalized COVID-19 patients and offer valuable insights into the patient health outcomes and the hospital economic burden of COVID-19 in the INDIA stratified by disease progression state, age groups, and insurance types. Moreover, the findings of this study support the urgent need for implementation of effective interventions, including safe and efficacious vaccines. Further studies are warranted in both inpatient and outpatient settings, especially with longer study time frames and further stratifications (e.g., by other patient demographics and clinical characteristics), in addition to studies on the evaluation of treatment patterns and continuum of care, to provide an accurate understanding of the health outcomes and healthcare economic burden of patients with COVID-19 in their entirety.

Limitations

This study was conducted in 161 patients to assess the ECONOMIC BURDEN OF COVID 19; A COSTILLNESS STUDY IN TERTIARY CARE HOSPITAL.A RETEOSPECTIVE DATA ANALYSIS. This study has to be further extended with more number of patients to derive a better conclusion.

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