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Recurrent Cost of Transferring COVID-19 Patients Using an Ambulance: A Case Study from Sri Lanka

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Abstract

As per the infectious nature of COVID-19, a safe mode of transport for infected patients to and from the quarantine centers to their residence is required. In the Sri Lankan context, a government funded Ambulances are used to ferry such patients. As such, this case study aims to calculate the average transport cost for Covid patient transport in Sri Lanka.

Key words: *COVID 19, Ambulance, Covid Transport, Ministry of Health, Sri Lanka*

1. Introduction

SARS-CoV-2 (henceforth referred to as COVID-19) is highly infectious virus which transmits from human to human via air, droplets and contact routes (1). Therefore, safe transport service is essential to mobilize suspected or confirm cases of COVID-19 patients (2). As such, the Ministry of Health Sri Lanka have decided to use Government funded ambulances throughout the country to transport the said patients. The objective of this case study was to calculate the average transport cost for COVID-19 patient transport.

2. Methodology

One ambulance (Mercedes-Benz WP NW 1821, Market value Rs 23000000.00), which has completely allocated to transport COVID-19 patients within the Western province of Sri Lanka, was selected to calculate the average unit transport cost. The Vehicle was specially used to transport patients from COVID-19 treatment centers for home quarantine. All the expenses from 18/11/2021 to 18/03/2021 were collected and divided by the number of patients transported during the estimated period.

3. Result

Table 1: Total expenditure for COVID-19 patient transport

Number of patients transported	1960
Number of total distances transported	52052 km
Fuel cost	Rs. 1145100.00
Salary cost	Rs. 528112.00
Cost for replacement of tires	Rs. 156000.00
Services cost	Rs. 160000.00
Total cost	**Rs. 1989212.00**
Per patient cost	**Rs. 1014.90**
Transport cost for one kilometer	**Rs. 38.23**

4. Discussion

According to the results, Rs. 1014.90 has been spent for per patient transport within the Western province. This ambulance traveled to Colombo, Kalutara and Gampaha district daily to drop patients from quarantine centers to home quarantine. Usually, it transported more than 10 to 15 patients per trip. Since most of the ambulances usually transport less than 7 patients, and some ambulances were used to transport patients to more distant destinations, the unit average cost may be slightly higher than estimated value. According to the Epidemiology Unit of Sri Lanka, 87907 have confirmed as COVID-19 patients as per the end date of the case study period (3). Ergo, the total transport cost for the discharge patient transport would be around 89.2 million. Majority of the Covid patients were found in the Western province, and admissions were mainly carried out by the Army buses. As such, the admission cost must be calculated separately. However, these 89.2 million rupees must be doubled (to Rs. 178.4 million) to aptly estimate both the admission and discharge expenditure.

5. Conclusion

One thousand and fourteen rupees and ninety cents (Rs.1014.90) has been spent as transport cost to transport the discharged COVID-19S patients from quarantine centers to their residence. Rs. 89.2 million rupees has been estimated to been spent on transport costs for the total discharge patients around the country. Occasionally few ambulances were sent to distant destinations for few patients which may increase the higher unit cost.

6. Recommendations

It is recommended to carry out further research to find out the unit transport cost for admitted patients to obtain the accurate admission cost.

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