# Overseas Medical Treatment of Sri Lankan Medical Travellers

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**ABSTRACT**
More and more Sri Lankans reach for overseas medical treatment with the raising standards of living in the country. However, it is largely an unexplored area. Economic burden of overseas medical treatment is largely an out-of-the-pocket expenditure. Considering the economic burden and low health insurance penetration among Sri Lankans, healthcare decision-makers should explore the clinical dynamics of this subset of patients to improve the services within the country. The study aimed to describe the clinical characteristics and cost of medical treatment by medical travellers for treatment overseas. A descriptive study was carried out by a team of experts analyzing the data of estimated overseas medical expenditure recorded at the President Fund, a body established to assist Sri Lankans who need financial assistance for the said purpose. The team studied the deidentified databases for 2018 and 2019. Of the 60 patients studied, liver transplant, treatment for scoliosis, and bone marrow transplant topped the list by the number of cases and the estimated cost for the procedure overseas. Advance cancer treatment, cardiac surgery, and brain and spinal cord surgery also contributed significantly to the burden. Highest estimated unit cost per procedure has been recorded by the liver and bone marrow transplant surgeries. In conclusion, the healthcare decision-makers should liaise with relevant professional bodies to establish liver and bone marrow transplant services, advance brain and spinal cord surgery including treatment of scoliosis, and advance cancer treatment and cardiac surgeries. Considering the lack of data sources on the economic burden of overseas medical treatment, authorities should act promptly to capture nationwide details of this important group of patients.

**KEYWORDS:** Health Expenditure; Out-of-Pocket Expenditure; Overseas Medical Treatment; Medical Travel; Sri Lanka.

## 1. INTRODUCTION

Sri Lanka is a lower-middle-income country in the South Asian region. The per capita income of a Sri Lankan is USD 3853 in 2019 [1]. The investment by the government of Sri Lanka is a mere 1.7% of GDP [2], amounting to Rs. 162 billion. Out of that, just over 4 billion is invested in capital expenditure [3]. The low capital investment by the government has resulted in delays in achieving the latest technology in sufficient volume needed to fulfill the demand of the country. Meanwhile, the increased per capita GDP of the Sri Lankans has enabled their purchasing power of seeking overseas medical treatment.

Although Sri Lanka has a pluralistic health system, people mostly rely on the allopathic system which is operationalized in the country as two separate wings: curative and preventive health services. The curative health service comprises outpatient and inpatient services. Fifty percent of outpatient services are offered by the private sector, and 95% of the inpatient services are offered by a range of public sector government hospitals developed into different categories with varying levels of technical capacities and medical and surgical specialities. Advanced treatment options for transplant surgery, advanced cancer treatment, cardiac surgery, and brain and spinal cord surgery are lacking within the public health system, or long waiting lists exist, promoting an environment to seek overseas medical treatment. Private healthcare in Sri Lanka ranges from after-hours general practitioners who do dual practice to sophisticated private hospitals mainly in urban areas [4]. Private sector healthcare is profit-oriented and amounts to half of the total healthcare expenditure in the island [5]. The private sector caters the health needs of the new and growing middle class of the country with a higher quality of life. The private sector has immensely invested in the latest biomedical technologies and cleaner and more spacious infrastructure [6]. Treatment in the private sector results in increased out-of-the-pocket expenditure leading to a clear gradient by income level on the utilization of their services [5].

Within, Sri Lankan health and financial system data on overseas medical treatment and expenditure are fragmented. The Department of Immigration and Emigration has a database of a few patients who apply for a medical visa. Because of the lengthy documentation process, the number of Sri Lankans who apply for a medical visa is limited. Hence, there is a trend of getting tourist visas to cover the period of medical treatment. The exchange controller at the Central Bank of Sri Lanka also has limited details of foreign currency exchange for medical conditions, but the database lacks key information such as diagnosis and estimated medical costs. Several Sri Lankans transfer foreign currency for the medical expenditure through their credit cards or through illegal money exchangers where the details do not enter the system. The health insurance coverage of Sri Lankans is a

mere 5% of the population [3]. Contribution of health insurance is insignificant to understand the full context of the Sri Lankan's overseas medical expenditure.

Medical travel can be defined as a patient travelling abroad for medical or dental services. There are hubs especially in Asia growing as attractive destinations for medical travellers. The reasons for travel are multiple. Cost of treatment in their own country, lengthy waiting lists, increased availability, higher quality of treatment associated with lower levels of mortality, inferior technology being used, and superior service are some common reasons due to which people travel overseas for medical care. Sri Lankans commonly choose South India as their destination for overseas medical treatment for ease of travel and shorter travel time, reasonable cost, availability of services, and acceptable quality [7]. Few affluent Sri Lankans visit Singapore, Australia, and the United Kingdom for very high-quality treatment. Thailand is a popular destination for cosmetic surgery among Sri Lankans.

Although many Sri Lankans travel to India for highly specialized treatment in India, not all Sri Lankans can afford the high cost. Travel, accommodation, and hospital and medication charges for the patient and the family can amount to several millions. To assist the needy Sri Lankans who seek overseas (also private sector within Sri Lanka) treatment, the President's Fund (PF) has been established by the President's Fund Act of 1978. The Board of Governors of the PF comprise the President, Prime Minister, Speaker, Leader of the Opposition, Secretary to the President, and two other members appointed by the President. Their office is located at the Lake House building at Colombo [8].

PF assists a prerecognized list of diseases in any non-income tax-paying family unit whose income is not exceeding the limit of Rs.150,000, not eligible to get any assistance of 50% or more of the total cost for the treatment overseas from any other institution or insurance. The request should be certified by the Divisional Secretary where the patient is living. There is a cap for the maximum assistance provided by the PF. When recommending treatment at overseas hospitals, a specialist doctor registered with the Sri Lanka Medical Council must recommend the particular foreign hospital for the directed treatment [8]. The PF keeps a database of patients who were funded with the details of their disease and the estimated cost of the treatment. The research team studied this small picture to make the big picture of the economic burden of overseas medical treatment.

The overseas spent medical costs should be considered as an out-of-the-pocket expenditure. The value of this important aspect of healthcare expenditure is hardly captured within the system. Without this piece of information, healthcare expenditure of the country is incomplete. The clinical conditions that warrant overseas medical treatment should be explored well by healthcare planners to develop the specialities and technical capacities within the Sri Lankan health system to reduce the out-of-the-pocket expenditure. Economic burden of overseas medical treatment of Sri Lankan medical travellers is largely an unexplored area. However, in the Maldives, another island nation in the South Asian region, a similar study has revealed overseas medical treatment costs are a burden for the economy, incurring significant out-of-pocket health costs for the affected households [9]. The findings of this study will be useful for policymakers and healthcare decision-makers to understand the dynamics of medical travel and unveil the services that need to be developed within the country to reduce the economic burden among the affected Sri Lankans.

The study aimed to describe the clinical characteristics and cost of medical treatment by medical travellers for treatment overseas.

## 2. METHOD(S)

This was a cross-sectional descriptive study. All patients who received financial assistance from the PF for overseas medical treatment during the years 2018 and 2019 were included in the study. The study team got the administrative clearance to get deidentified secondary data from the PF with a brief description of the disease, country of treatment, estimated cost, and the contribution by the PF. The study team tried to access the other sources of data from the Central Bank, Department of Immigration and Emigration, Insurance Board of Sri Lanka, and commercial banks, but the background work revealed a lack of an informative database on overseas medical expenditure. Data were entered into a spreadsheet during analysis to present outcomes in a clinically and economically meaningful way. The estimated costs in Indian Rupees, US Dollars, and Singapore Dollars were converted into Sri Lankan Rupees based on exchange rates on July 16, 2020, on XE Currency Converter [10]. The diseases were grouped into liver transplant, bone marrow transplant, treatment for scoliosis, advanced cancer treatments, brain and spinal cord surgery, advanced cardiac surgery, and treatment of autism following discussion with an expert panel of medical specialists.

## 3. RESULTS

The frequency distribution of patients with their estimated medical cost is listed against the disease groups in Table 1.

The total estimated cost of overseas medical treatment is graphed against the identified disease groups in Figure 1. The estimated cost of liver transplant roofs the overseas medical treatment expenditure while bone marrow transplant, treatment for scoliosis, brain and spinal cord surgery, heart surgery, and treatment for autism follow.

The estimated unit cost per treatment is graphed against the diseases in Figure 2. The highest estimated overseas treatment unit cost was evident for a liver transplant. Bone marrow transplant, treatment for scoliosis, advanced cancer treatment and chemotherapy, heart surgery, and treatment for autism contribute to the estimated unit cost thereafter.

**Table 1: Frequency distribution of patients according to the disease groups.**

| Disease groups | Frequency (*n* = 60) | Percentage (%) |
|---|---|---|
| Advanced cancer treatment and chemotherapy | 6 | 10.0% |
| Bone marrow transplant | 9 | 15.0% |
| Brain and spinal cord surgery | 3 | 5.0% |
| Heart surgery | 4 | 6.7% |
| Liver transplant | 21 | 35.0% |
| Treatment for scoliosis | 16 | 26.7% |
| Treatment for autism | 1 | 1.7% |
| Total | 60 | 100% |

The total estimated cost of overseas medical treatment is tabled with their estimated unit cost to perform overseas in Table 2.

**Table 2: Total estimated cost of overseas medical treatment.**

| Disease group | Total estimated expenditure (LKR) | Unit cost (LKR) |
|---|---|---|
| Liver transplant | Rs. 123,231,500.00 | Rs. 5,868,166.67 |
| Bone marrow transplant | Rs. 50,472,400.00 | Rs. 5,608,044.44 |
| Scoliosis | Rs. 43,509,050.00 | Rs. 2,719,315.63 |
| Advanced cancer treatment and chemotherapy | Rs. 16,007,600.00 | Rs. 2,667,933.33 |
| Brain and spinal cord surgery | Rs. 8,355,156.50 | Rs. 2,785,052.17 |
| Heart surgery | Rs. 6,079,100.00 | Rs. 1,519,775.00 |
| Treatment for Autism | Rs. 1,839,420.00 | Rs. 1,839,420.00 |
| Total | Rs. 249,494,226.50 | |

## 4. DISCUSSION

Compared to the current annual health expenditure of 463 billion rupees, the study has only captured 249 million (for 2 years) of overseas medical treatment expenditure because of limited availability of data sources. The authors assume the unrecorded burden of overseas medical treatment is many times greater than what was captured by the study.

**Figure 1: The estimated total cost of overseas medical treatment for identified disease groups.**

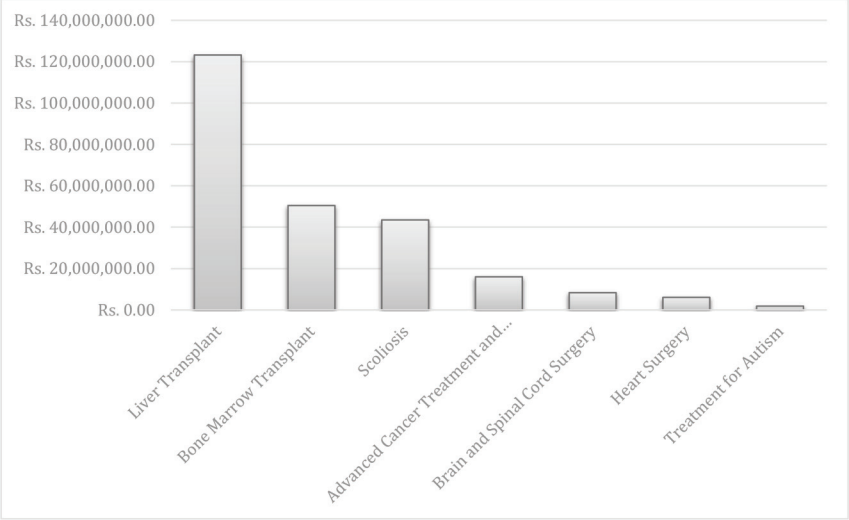
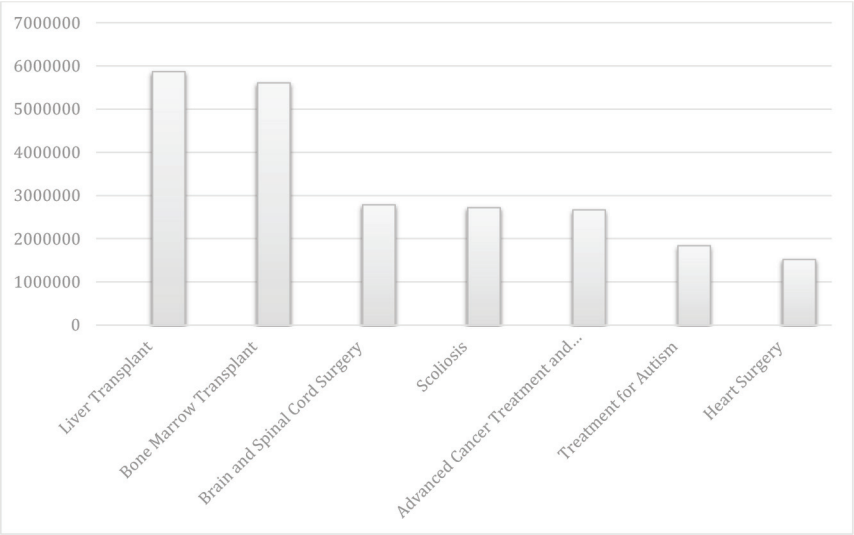


**Figure 2: The estimated unit cost per treatment overseas for identified disease groups.**




The greatest economic burden is caused by liver and bone marrow transplant surgeries. Few liver transplant procedures were successfully performed within the country in the recent past [11]. Several private hospitals offer bone marrow transplant services within the country [12]. Professional bodies and health planners should further explore reasons for the inability to expand services for needy individuals. A proper dialogue with involved stakeholders would reveal technological, social, legal, and ethical barriers for the procedures under concern and would explain new means of addressing barriers for transplant surgery. If the cost of treatment in Sri Lanka is higher than getting the same treatment overseas, the government should grant financial incentives to the private sector to retain the investment within the country and also for the development for the speciality which will attract more medical travellers from the region.

Considering the higher estimated unit cost, facilities for brain and spinal cord surgery and treatment for scoliosis should be established within the country. Healthcare leaders of the country should further explore the possibility of performing these advanced procedures within Sri Lanka as the government healthcare system of the country possesses some state-of-the-art facilities in the region to cater advanced brain and spinal cord surgery [13].

Non-availability of reliable nationwide data on overseas medical expenditure is a fundamental prerequisite to minimize out-of-the-pocket expenditure due to overseas medical treatment. Proper data on this important subset of patients will ensure health planners to update their services, considering the demand for the overseas treatment. Further, having a proper data system will promote ethical practices within foreign medical travel by the Sri Lankans. Moreover, tight visa conditions, strong exchange control measures, and mechanisms to capture private sector data will streamline the entire spectra of activities related to overseas medical treatment.

Few limitations of the study are worth mentioning. First, the study has covered only a small fraction of overseas medical expenditure due to non-availability of data within other sources. Second, because the PF selects specific diseases for financial assistance, the spectrum of clinical diseases treated overseas is not fully understood with the data of the present study. Third, the diagnosis of the disease was entered by non-medical clerical staff, reducing the quality of information available in the database. Last, the cost for traveling, accommodation, and any other opportunity costs to the family were ignored in the study because of lack of data.

## 5. CONCLUSION

A descriptive study on the clinical characteristics and cost of medical treatment by medical travellers going for treatment overseas was carried out by analyzing the data of President's Fund during the years 2018 and 2019.

Out of the 60 patients who received financial assistance, liver transplant, treatment for scoliosis, and bone marrow transplant topped the list by the number of cases and the estimated cost of the procedure overseas. Highest estimated unit cost per procedure has been recorded by the liver and bone marrow transplant surgeries, and the Sri Lankan system possesses specialists to perform these procedures in-house.

Health planners and decision-makers should develop a constructive dialogue with respective professional bodies to sustain these services within the country after careful analysis of constraints that prevent their full establishment. Further, streamlining the capture of data on the overseas medical expenditure is a strongly felt need to figure out the big picture of the economic burden of overseas medical travellers of Sri Lanka.

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**AUTHOR CONTRIBUTIONS**
SDA, DDS, and PSA were involved in the conceptualization of the study. PSA drafted the manuscript and analyzed data. All authors contributed to improving the final manuscript.

**CONFLICT OF INTEREST**
There is no conflict of interest.

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