

Out-of-pocket expenditure in a country with universal health coverage: A qualitative study on patients with liver cirrhosis in Sri Lanka

Isurujith Kongala Liyanage¹, Dinesha Jayasinghe², Kremlin Khamaj Wickramasinghe³, Pubudu de Silva⁴, Eranga Thalagala⁴, Rayno Navinan⁴, Jevon Yudhishdran⁴, and Indika Karunathilake²

¹University of Sri Jayewardenepura Faculty of Medical Sciences

²University of Colombo Faculty of Medicine

³WHO Collaborating Centre on Population Approaches for NCD Prevention, Nuffield Department of Population Health, University of Oxford

⁴Ministry of Health and Indigenous Medical Services, Colombo

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Abstract

Abstract Rationale, aims and objectives: Sri Lanka has a well-established government-funded universal health coverage which provides free health care to all citizens. The aim of this qualitative study was to examine the out-of-pocket expenses incurred by patients with cirrhosis during admission to a tertiary care government hospital in Sri Lanka, and the impact such expenses might have on equity of care and patient outcome. **Methods** This is a qualitative study conducted among patients with cirrhosis admitted to a tertiary-care hospital, their caregivers and physicians. Quota sampling was used until data saturation was achieved. Data was collected through individual interviews and small group discussions using directed and open-ended questions. Thematic framework method was used to analyze data. Out-of-pocket expenses incurred by patients, its impact on equity of patient care and outcome were investigated. **Results** Costs for laboratory investigations, drugs purchased from the private sector and hired caretakers for hospitalized patients were reported as direct expenses. Loss of work and other sources of income were the primary indirect expenses. The impact of such expenses was higher in patients and families from lower socioeconomic categories, especially among those who were dependent on a daily income. Health care workers actively tried to minimize these out-of-pocket expenses, resulting in choice on investigations, drugs and other interventions often being made by the clinician and occasionally not being discussed with the patient, resulting in poor patient satisfaction. **Conclusion** This study reveals a substantial direct and indirect economic impact on patients despite being cared for in a government hospital with universal health coverage. The impact was more in patients from lower socioeconomic strata, potentially resulting in inequity in the care provided as well as the health outcomes.

Introduction

Sri Lankan government provides universal health coverage through a well-established public health care delivery system. The quality of clinical care in the public sector, which cater to the health care needs of the majority of Sri Lankans, is known to be comparable to that provided in the private sector, which delivers

health care services only to a minority of the population¹. In addition, there is more public trust towards the government health system². Health care in this free public sector is universally accessible and provides unlimited health care for all citizens. This may have aided Sri Lanka to achieve better health care indices compared to other countries with a similar socioeconomic status³⁻⁵.

Curative services in the public sector are provided through government hospitals. There are several strata of hospitals based on physical and human resources, ranging from primary care centers such as rural hospitals to tertiary care centers with advanced facilities that are located in major cities in association with medical schools. There is no compulsory referral system, hence patients seek treatment from different centers based on their preference³⁻⁵.

Sri Lankans who are treated in government hospitals should ideally receive equal care across different hospitals. If absolute equity is maintained patients of all socioeconomic levels should receive equal care. It should be cost-free as the public health system is funded by taxpayers and has been designed to eliminate costs to the consumer. In this context, this study was planned to answer the following questions: Is the government health care system completely cost-free? If not, what are the costs borne by the patient? Is the current system equitable?

Methods

This study was carried out in the largest and most equipped tertiary care center in the country, among patients with cirrhosis of liver who were in-patients in two general medical wards, and referred to the Gastroenterology and Hepatology Unit. Ethical clearance was obtained from the institutional review board of the hospital.

Patients were selected from two medical wards and both patients and their caregivers were interviewed by the principal investigator (IK). Quota sampling was used to ensure equal participation of both genders and to include participants belonging to all income quintiles according to 2012 national data⁶. Sampling was done until data saturation was achieved. Selected patients who consented to participate were first interviewed to obtain their household income, occupation and disease status. This information was used to stratify patients (table 1) into different sample groups.

Twelve medical doctors from the relevant wards were interviewed in order to acquire their perception on the issues raised based on the interviews with the patients and their caregivers. Their perspectives were also sought to obtain possible solutions to the questions that were raised during analysis.

During the interview, both guiding questions and open-ended questions were used. All interviews were carried out by the principal investigator. Interviews were done in the patient clerking room of the respective wards to maintain privacy and confidentiality. The interviews were tape recorded (with patients' consent) and transcribed later and these recordings and transcripts were stored securely. Coding was done both manually and using NVivo version 10 qualitative analysis software (QSR International). All transcripts and computer databases were anonymously and securely stored.

Thematic framework method was used to analyze data⁷. The framework was created and reviewed using emerging data to identify commonly occurring themes. The themes were indexed in each transcript and later collated by mapping under common themes.

Results

What are the costs to the patients and the family?

All interviewed patients reported direct and indirect costs related to hospital admission. Patients were asked to list different modalities of expenses incurred and the doctors treating these patients were also asked to list the out-of-pocket expenses for patients. The expenses identified are listed in table 2.

Although the patients were admitted to a government hospital, certain investigations were requested to be obtained from private sector laboratories. This is usually done in government hospitals when a particular investigation is unavailable in that hospital. Examples for such investigations include (but are not limited to) dengue antigen tests, lipid profile, urine protein quantification, rheumatoid factor, anti DS-DNA antibodies (some of these have been made available in some Sri Lankan government hospitals by the time of writing this manuscript). However, at times, tests that were available at the hospital such as complete blood counts, renal functions, serum calcium measurements and urine full reports were requested to be obtained from private laboratories.

Most of the patients interviewed or their family members were not aware of the reasons behind these investigations being ordered from the private sector. Some believed that they were not available in the hospital. Doctors, on the other hand, mentioned that in addition to unavailability of some required investigations, several other reasons such as incorrect reports from the hospital laboratories and delay in obtaining reports prompted the staff to order investigations from the private sector.

Doctor A from ward X mentioned; “test results issued from our (i.e. the hospital) laboratory are sometimes incorrect, especially those carried out in the night. Therefore, we are sometimes compelled to send common investigations to private laboratories. Sometimes reports get delayed, and there were some instances where the reports got lost. There were times that the report is ready in the laboratory, but we don’t have a staff member to collect it from the lab and bring it over to the ward. It matters a lot in acute situations like dengue fever, acute renal failure.” All doctors interviewed raised these issues.

Doctor B from ward Y said: “Hospital authorities discourage, and we too try our best to avoid ordering investigations from private laboratories. This is only done in situations where an investigation is not available in our hospital or cannot be done on time. When we order however, we explain the requirement to the patient and give the choice to the patient.”

Seriously ill or disabled patients in some wards were requested to keep a bystander or a caretaker during their in-ward stay. Some patients were looked after by a hired caregiver and the cost for this ranges between Rupees 1500 to 2500 per day. These paid caregivers did a variety of patient-related duties such as cleaning the patient, taking him/her to the toilet, monitoring patients (e.g. urine output, diarrheal episodes), keeping the patient restricted to bed and accompanying patients to other units when needed (e.g. for referrals and investigations). In some patients, family members chose to act as the caregiver for the period of hospitalization. “While I was with my father in the ward, I had to push his wheelchair to take him for his X ray. I also monitored his urine output and wrote it down as instructed. I saw how some patients’ investigations, procedures and monitoring was delayed or not done because they didn’t have anyone staying with them. My father stayed in the ward for six days. For the days on which I couldn’t stay, I hired a paid bystander. I am unhappy about the way he looked after my father”, said one patient’s son who stayed with his father in the hospital during his admission.

Other direct expenses of hospitalization included purchasing food and other consumables for the patients. Government hospitals provide three meals a day for all in-patients free of charge. However, some patients preferred homemade food or food from other sources. In addition, many milk-based food products including dietary supplements and fortified milk products were purchased by patients. Transport of the patients as well as their visitors to and from the hospital added to these costs.

All patients interviewed stated that in addition to these direct expenses, there were indirect expenses incurred by them. If the patient was employed, hospitalization led to loss of income in some patients, especially when they were employed in daily-paid jobs or were self-employed. If the family member acting as the bystander of the patient was employed, this led to an additional loss of income. Furthermore, some patients pointed out that they had additional expenses during periods of hospitalization as they had to meet household requirements that are usually carried out by the patient, bystander or other family members who can no longer perform their usual duties as a result of the hospital admission.

Do these expenses affect equity of care?

All interviewed patients claimed to incur both direct and indirect costs due to the hospital admission. This was seen across all socioeconomic classes and income quintiles. However, the demand for out-of-pocket expenses due to prescription of investigations and drugs varied among the patients. It was observed that the health care workers looking after the patients were aware of the difficulties faced by the poorer patients. They reacted by either looking for alternative funding sources and sponsors, or by prescribing the least amount of investigations and medications that need to be obtained from the private sector for selected patients with financial difficulties. Doctor C stated, “There are instances where the patient cannot afford to do an investigation that is essential, but the investigation is also not available in our hospital. We try to find funds for such patients. Failing which, we try to settle for the next best thing for patient diagnosis and management.” This reflects the practice of health care workers in minimizing costs for poorer patients by choosing the next best alternative investigation or drug. Therefore, people from lower socioeconomic backgrounds received fewer prescriptions for investigations and medicines from the private sector.

This issue, however, was not always directly discussed with the patient. Targeted questioning revealed that some patients were unaware of the requirement of additional investigations that were available only in private sector laboratories. This was further reflected in the following statement by doctor B: “If it is a poor patient, we try our best to avoid ordering investigations from private laboratories. We look for an alternative or sometimes just do without that particular investigation. It is the same case with drugs where we sometimes ask patients to buy from pharmacies. For poor patients, despite being aware that a certain drug that is available in the private sector pharmacy is a better choice, we try to use alternatives (E.g. different antibiotics) that are available in the hospital. We don’t even tell these patients about the tests available in the private sector which they can’t afford.”

This practice resulted in patients from middle or higher socioeconomic backgrounds incurring a higher out-of-pocket expenditure for investigations and medications prescribed from the private sector. On the other hand, in trying to limit such expenses incurred by patients from lower socioeconomic backgrounds and resorting to what is available in the hospital, especially when done without consulting with the patient, optimum investigations and best options of drugs may not have been offered to such patients.

Indirect expenses

Loss of income due to hospitalization of the patient or a family member who has to stay with a patient in the hospital was observed in all income quintiles. We classified the employment status of the patients into three categories; as those who were 1. Unemployed 2. Employed with a daily wage or non-fixed income (daily-paid workers), 3. Employed with a monthly salary or retired with a pension.

The worst impact of hospital admission on household economy was seen in patients earning a daily wage or those whose mode of income was small-scale self-employment (e.g. manual laborers, owners of small shops, taxi drivers). The loss of income of hospitalization had a direct impact on their households. A patient who is a manual laborer mentioned, “I have been in the hospital for the last eight days. My household income is totally lost, and my wife had to leave the children with our neighbor and find daily-paid manual work. We also borrowed money from relatives.”

The impact was also seen to be higher among the poorer people who had minimal or no savings. This is illustrated in the following statement of a patient who was a manual laborer, belonging to the second income quintile: “Me and my son are the two breadwinners of the family. My wife stays at home and our two daughters are still schooling. I have been in the hospital for the last five days and my son has to stay with me. My son has to pay daily to the owner of the three-wheeler, which he drives. Thankfully he has been given a months’ time to pay his debt. My wife’s brother is helping us.”

On the other hand, loss of income was not a problem or was only a minor problem for patients with more stable, fixed-income occupations in either the government or private sector. A patient’s income is not affected if they are paid a monthly salary and the duration of hospital admission is within the approved quota for medical leave.

Patients with long-standing diseases such as cirrhosis are likely to be affected more by recurring out-of-pocket expenditures and disruptions to household income. Many of these patients had multiple medical problems requiring numerous hospital visits and admissions. As a result of their illness, most of their household activities and functions were also disturbed. Furthermore, there were patients whose illnesses have rendered them unsuitable to carry out their occupations and/or for employment.

Patients of lower income categories were less protected from these direct and indirect costs due to lack of savings, support, compensation or inability to find an alternative occupation. Patients from lower economic backgrounds often used terms such as “helpless, disrupted, lost, devastated” when describing the household impact of illness and hospital admission. The impact on patients in middle- and higher-income categories was less, mainly due to the availability of a monthly wage or pension, savings and stronger family support.

Patient satisfaction

Overall, patient satisfaction regarding the quality of care was observed to be high in this population. This trend was seen in patients of all socioeconomic levels. One patient stated, “The ward staff and doctors treated us nicely. They were kind even though they are very busy and overworked”.

However, some patients who were in the lower socioeconomic quintiles were less satisfied about the care they received. They perceived that they were at a relative disadvantage and many used phrases such as “although they treated him/her well” to mention a patient whom they perceived to have been treated better than themselves by the staff. “Some staff members were rude to us. They treated a patient who is related to a hospital staff member very well and ignored me. I don’t get medicines on time for the pain in my leg (pointing towards her knee joints)”, said one patient who was not very satisfied with the quality of care she received.

In general, patients in higher income quintiles were more satisfied about the care they received. In one ward, a patient belonging to the highest income quintile expressed his concern over the way the staff treated other “poor, less connected patients”.

Discussion

In Sri Lanka, government funded public hospitals provide curative services free of charge to all its citizens. These include out-patient consultations, in-ward treatment, medicines, investigations, other supportive services including linen and meals for in-patients. Sri Lanka is listed as a country with a low out-of-pocket expenditure for health, with less than 5% of households spending more than 10% of total expenditure on health care. Catastrophic economic impacts of ill health are minimal in Sri Lankans due to this system⁵. In an ideal situation, a publicly funded health care system should minimize the impact of ill health on individual households and reduce inequity in health care.

This study revealed different situations in which out-of-pocket expenses are incurred by patients and their households during a hospital admission. The impact of these expenses was greater in individuals of lower economic backgrounds. Those obtaining a daily wage or those whose income depended on small-scale self-employment were affected by loss of income due to hospitalization, sometimes severely disrupting the functions of their households. However, loss of income was not a major concern in individuals belonging to middle- and higher-income categories. This seems to create an important inequity in the household economic impact of ill health and hospitalization despite the availability of state sponsored health care.

The findings of the study support previous observations that patients with chronic diseases are more likely to encounter higher out-of-pocket expenditures⁸. Sri Lanka is facing a rapidly rising epidemic of non-communicable diseases. The relative inability of the state health care system to prevent significant incapacitation of the household economy in patients with chronic and multiple diseases may have a negative impact on the overall acceptance of its health care system⁴. This needs to be addressed by further discussion and improvement of economic security of low-income groups. The National Insurance scheme is an example where loss of income during hospitalization can be buffered by compensation.

Sri Lanka is a country with significant inequality in income distribution and household expenditure⁹. However, due to the structure of its public health system, Sri Lanka has minimal inequities in health care utilization. Utilization of inpatient facilities is equal across all economic quintiles. Outpatient facilities however, are utilized more by the pro-poor patients, as a result of the rich electively opting for private sector care^{10,11}. Public health sector in Sri Lanka is funded by a tax-based method^{3,11}. Hence every citizen contributes towards the funding of this service and has an equal right for equitable services from the government health sector. In this survey we demonstrate that other forms of inequity beyond utilization of health care exist, especially with regards to spending for health care, at patient level.

We observed inequities in expenses incurred, satisfaction, patient management and possible clinical outcome across all quintiles based on the individual's household income. Wealthy patients were more likely to receive requests for investigations from private laboratories and drugs to be purchased from pharmacies. The poorer patients are given fewer requests depending on their financial capabilities and were largely unaware that they are receiving a "different" standard of care. This "informal exemption" of the poor from out-of-pocket expenses has been documented previously in Sri Lanka and Thailand⁵. Its impact on clinical outcome, however, has not been studied. We observed that there is significant inequity in patients being informed of their choices and available options based on their economic status. Although this appears to be an attempt to "safeguard" poorer patients from being unhappy about their treatment, this cannot be justified from an ethical point of view. Having a choice is one of the key principals of equity in health care¹², and it is necessary to take measures to change the current practices of the doctors when handling such situations. In addition, a universal health care plan should have horizontal equity where all patients are treated equally¹². In this perspective, it can be argued that the government should ideally fund/cover direct costs incurred by the patient when it is inevitable.

The current evidence supports that patients belonging to low socioeconomic groups are less satisfied with health services¹³. A health system funded by the public should, however, attempt to minimize this. The difference in satisfaction and examples provided by the patients in our study further emphasize that not having a choice and the perception of being treated unequally has contributed to this lack of satisfaction. This evidence calls for an attitudinal change among health care workers, including doctors and supportive staff.

Some expenses incurred by the patients cannot be justified in a government-funded health care system. Examples noted were the requests for investigations from private laboratories due to inaccurate reports or delays in the in-house laboratory services, and the need for bystanders to carry out patient-related work. These concerns need to be addressed and corrected as an internal exercise. Since data collection for this study, local authorities have implemented activities to improve laboratory and service standards. Current hospital policy (implemented after data collection for this study) has restricted medical staff on ordering investigations and obtaining medicines or equipment from the private sector for in-ward patients. Special permission from the director of the hospital is now required before obtaining these services or goods from the private sector after confirming that the good or service requested is not available in the state sector.

Limitations and scope for further assessment

Quantification of the out-of-pocket expenditure was not done in this qualitative survey, as the sampling strategy would not permit the results to be generalized. Further studies are needed to quantify the costs and assess the trends across hospitals.

This study only involved a few wards in the main tertiary care hospital in the capital city. The observations of this study need to be compared with similar studies in other health care institutions, especially smaller hospitals with minimum laboratory and imaging facilities where we believe that out-of-pocket costs borne by patients are much higher.

Conclusions and recommendations

This study highlights the complexity of achieving equity even in a country with a fully state-funded universal

health coverage. Although the state spends on universal health coverage, Sri Lankan patients incur direct and indirect costs when receiving hospitalized care in government hospitals. Some of these expenses can be avoided if the current system is improved with regards to quality, efficiency and staff training. Health care workers try to minimize the burden of these expenditures in less wealthy patients, but in the process, the patients are deprived of being fully informed about the range of choices in the investigation and treatment of their diseases. The impact of out-of-pocket expenditure is more on pro-poor households, especially among daily paid workers. There was inequity in patient satisfaction and type of care received, which increased the likelihood of the existence of inequity in the overall outcome. Household economic impact of ill-health and hospitalization is seen more in chronic diseases, which are rapidly rising in Sri Lanka.

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Author declaration

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Tables

Table 1: Household yearly income quintiles according to 2012 data in Sri Lanka and the purposive sample based on the income quintiles.

Quintile	Household Income (USD)
1	<90
2	90 - 139
3	140 - 199
4	200 - 314
5	>315
+ Participants' occupations excluding unemployed people and housewives	+ Participants' occupations excluding unemployed

Table 2 : Expenses identified by patients and doctors

Direct costs	Indirect costs
Investigations from private laboratories	Income loss of patient
Hiring of paid bystanders	Income loss of bystander ⁺
Expenses to transport the patient to and from the hospital	Income loss of others at home
Purchase of food and consumables for the patient ⁺	Costs of alternatives for duties the patient used to carry out for the family (e.g. cooking – having to buy food for family, hire a taxi for transport)
Expenses to visit the patient ⁺	
Purchase of drugs from pharmacies	
Purchase of equipment for procedures/patient care E.g. haemodialysis cartridges, air mattress, compression stockings ⁺⁺	
⁺ expenses recognized only by patients; ⁺⁺ expenses recognized only by the doctors	⁺ expenses recognized only by patients; ⁺⁺ expenses recognized only by the doctors