

Pharmacoeconomics amidst a financial crisis

A U Medagedara, S S Williams, H A de Silva

Abstract

Cost effective strategies must be implemented amidst an economic crisis in Sri Lanka to mitigate ever increasing medicinal costs. Exploration of measures such as evidence based generic prescribing, cost effectiveness analysis, value-based pricing, identification of low cost, high value medication and being

sensitive to the ability of the patient to purchase medicine is a necessity. Clinicians must be sensitised to this issue to contribute actively to the process. Policies in line with pharmacoeconomic realities must be pursued.

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Background

The COVID-19 pandemic and the Russo-Ukrainian war resultant economic downfall have led to a recession worldwide. The International Monetary Fund (IMF) has predicted a slowing of the global economy this year as well (1). In this backdrop, Sri Lanka is recovering from a state of bankruptcy declared last year.

Sri Lanka spent 4% of its gross domestic product (GDP) for 2021 on health, amounting to a health care expenditure of Rs. 202 billion, out of the total government expenditure of Rs. 3912 billion (2). More than 30 to 35% of this health care expenditure has been spent on medications. Due to the economic downfall the GDP of Sri Lanka contracted by 11.8% in the third quarter of 2022 and is expected to contract by a further 4.2% in 2023. The key inflation rate remains at 54.2% (3).

Over 80% of the medical and pharmaceutical supply of Sri Lanka is imported and paid for in US dollars. Alarming, of the annual budget estimate of US \$300 million for importing medicine and surgical consumables only \$80 million is available hitherto (4). With inflation the quantity of medication purchasable for the same amount of money had declined significantly over the years.

Hence, Sri Lanka is in dire need of bridging this gap which can only be achieved pragmatically via either lowering the price of pharmaceuticals or reducing their usage (5). Therefore, analysis of strategies that have benefited other countries in similar situations is timely.

The way forward

Emergency measures adopted to manage drug shortages are, curtailment of the utilization of available stocks; usage of products with minor deficiencies such as defects with labelling and packaging (6); extending the expiry dates while ensuring they are safe (6); reallocating available stocks in a transparent, fair manner among different hospitals on a priority and necessity basis via a centralized supply system (7); optimal usage of left over medications and thwarting wastage of medications (8); instituting multidisciplinary expert panels, nationally and institutionally in order to prepare lists of drugs in shortage, lists of essential medications (9) and to recommend alternative treatment strategies that adhere to pharmacoeconomic guidelines (6).

A cost effectiveness analysis is a medium-term strategy to lower the money spent on pharmaceuticals (10). It determines whether a therapeutic agent is priced according to its therapeutic benefit and compares it with existing alternative medication. A recent study in Sri Lanka based on novel cancer therapeutics, showed that determining cost effectiveness thresholds, unanimous agreement on the indications for the usage of novel therapeutics instead of arbitrary prescribing and usage of the most cost-effective option where alternative options are available for the same indication were indispensable for ensuring the sustainability of novel cancer therapy in Sri Lanka (11). The benefits of cost-effective prescribing on health economics are undisputable (12-13).

If Sri Lanka is to move towards cost effective prescribing, prescription of generic medication is the most feasible strategy. According to a study done by Trinity Health of New England, a year worth supply of trazodone costs only \$35.10 while Desyrel a branded form in the same dosage is \$1080 (13). The situation is similar in Sri Lanka. While the retail price of one fluoxetine 20mg capsule, one co-amoxiclav 375mg tablet, one metformin 500mg tablet and one losartan 50mg tablet produced by the state pharmaceutical cooperation (SPC) is Rs: 9.00, Rs: 69.00, Rs 8.97 and Rs: 3.50 respectively (14); their branded forms are available at Rs: 26.01, Rs:108.26, Rs: 18.20 and Rs: 24.36 respectively. As a percentage of current health expenditure domestic private health expenditure exceeds the domestic general government health expenditure (15) accounted by non-generic prescribing.

In Greece the shift towards generic prescribing instead of originator prescribing and introducing policy reforms hierarchizing generic over originator medications in calling tenders to hospitals had led to a cost reduction from €5.2 million to €0.42 million in tendering for ciprofloxacin alone (16).

Though beneficial as depicted by research, cost effectiveness analysis is time consuming. Unless thresholds for inclination to pay are predetermined all products can be considered as cost effective. The WHO has recommended that costs more than three times the gross domestic product (GDP) per capita per disability-adjusted life year is not relatively cost effective (17). According to the aforementioned study done in Sri Lanka, the total budget needed to give novel cancer therapeutics to all eligible patients at a threshold of < 3 GDP / life year gain the cost is US\$ 24.4 million while at no threshold the cost reaches US\$ 330 million (11).

Doctors' ignorance of drug costs, lack of appreciation of the discrepancy between generic and branded medications, and over prescribing have been indicated as significant contributors to cost ineffective prescribing (18-19). A Sri Lankan study on lower respiratory tract infections in children showed that 98.9% had been prescribed antibiotics despite having mild and self-limiting infections. Of them, 71.9% had been prescribed intravenous antibiotics and 20.5% had been given third generation cephalosporins (20).

Besides disreputable prescribing practices of clinicians as mentioned above, mercenary motives of pharmaceutical companies and avaricious policy makers are responsible for such irrational usage of pharmaceuticals (19).

Yet at times prescribing costly medications becomes unavoidable due to unavailability of high-quality products in generic forms at low cost. The State Pharmaceuticals Corporation (SPC), along with its

collaborative stake holders is currently manufacturing only 15-20 % of the medication requirement of the entire country in fifteen manufacturing plants. Commencement of the construction of three pharmaceutical manufacturing facilities in Anuradhapura, Hambanthota and Millawa is a commendable step taken to overcome this situation (21). Furthermore, though locally manufactured medications are available in the government sector, the private sector pharmacies do not routinely stock them. To further strengthen generic prescribing, pharmacovigilance centres need to be established to ensure drug safety and quality. Another strategy that coexists with cost effectiveness analysis is value-based pricing: a concept that aims at pricing medications according to their benefit to the patient and health care system (22). The extensive level of technical, managerial, and financial assets required for the implementation of value-based pricing using health technology assessments, is beyond the scope of Sri Lanka. The initiative in Sri Lanka with the collaboration of all the medical professional colleges in identifying the most essential medicines for the country, based on the principal of essentiality, are laudable. However, the most crucial challenge would be prioritizing medications according to their value or their benefit for patients and the health care system. In Sri Lanka most of the budgetary allocations for pharmaceuticals are still spent on a few variants of medications which are of low volume and high cost. It is time to move towards high-volume low-cost medications to treat the maximum number of patients with the minimal cost possible.

Conclusion

A strong drive to educate both medical students and doctors through continuous professional development on evidence-based, quality use of medications can enhance cost effective, rational prescribing (23). Containing pharmaceutical companies and policy makers require enhanced communication between all stakeholders, evaluating multiple product suppliers and practicing 'good governance' as recommended by the WHO. The WHO not only encourages revising policies but also promotes the allegiance and alliance of all anti-corruption agencies (24). It is imperative that considering the national need, doctors should responsibly contribute to minimise the pharmacoeconomic burden in Sri Lanka.

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Statement of contribution

AUM, SSW and HAdS have equally contributed to the paper and approved the final manuscript.

Declaration of interest

None.

S S Williams, Department of Psychiatry, Faculty of Medicine, University of Kelaniya, Sri Lanka

A U Medagedara, H A de Silva, Department of Pharmacology, Faculty of Medicine, University of Kelaniya, Sri Lanka

Corresponding author: S.S.Williams

Email: shehan@kln.ac.lk

 <http://orcid.org/0000-0001-7764-5550>

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