Universal health coverage and the health Sustainable Development Goal: achievements and challenges for Sri Lanka

Amala de Silva¹, Thushara Ranasinghe², Palitha Abeykoon³

**ABSTRACT**

With state-funded health care that is free at the point of delivery, a sound primary health-care policy and widespread health-care services, Sri Lanka seems a good example of universal health coverage. Yet, health transition and disparities in provision and financing threaten this situation. Sri Lanka did well on the Millennium Development Goal health indicators, but the Sustainable Development Goal (SDG) for health has a wider purview, which is to “ensure healthy lives and promote well-being for all at all ages”. The gender gap in life expectancy and the gap between life expectancy and healthy life expectancy make achievement of the health SDG more challenging. Although women and children do well overall, the comparative health disadvantage for men in Sri Lanka is a cause for concern. From a financing perspective, high out-of-pocket expenditure and high utilization of the private sector, even by those in the lowest income quintile, are concerns, as is the emerging “third tier”, where some individuals accessing state health care that is free at the point of delivery actually bear some of the costs of drugs, investigations and surgery. This cost sharing is resulting in catastrophic health expenditure for individuals, and delays in and non-compliance with treatment. These concerns about provision and financing must be addressed, as health transition will intensify the morbidity burden and loss of well-being, and could derail plans to achieve the health SDG.

Key words: gender gap, healthy life expectancy, out of pocket, Sri Lanka, Sustainable Development Goals, universal health coverage

**BACKGROUND**

As Sri Lanka grapples with demographic and epidemiological transition and tight budgetary constraints, it is essential for policy-makers to evaluate the achievements and challenges in attaining universal health coverage (UHC) and the Sustainable Development Goal (SDG) for health.¹ UHC is defined by the World Health Organization (WHO) as ensuring that “all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship”.²

The SDGs were adopted by the United Nations General Assembly in September 2015.³ Of the 17 goals, Goal 3 is to “ensure healthy lives and promote well-being for all, at all ages”. Overall, Sri Lanka achieved good outcomes on Millennium Development Goal (MDG) health indicators but failed to reduce malnutrition significantly.³ The wider purview of the SDGs, covering all ages, all health conditions and all determinants of health, will make them more challenging for Sri Lanka to reach. Achievement of UHC is not only an SDG target in itself but also underpins success in meeting the other SDG health targets. As the SDG declaration says, “To promote physical health and well-being, and to extend life expectancy for all, we must achieve universal health coverage”.³ This paper assesses progress towards, and potential threats to, attaining UHC and the SDG for health in Sri Lanka.¹

**SRI LANKA TODAY**

The Sri Lankan health system has been recognized internationally since the 1970s as a highly successful low-cost model. This achievement was built on the foundations of a health-care system that has been free at the point of delivery since 1951; a sound primary health-care approach since the mid-1920s (significantly in advance of the Declaration of Alma-Ata in 1978);³ establishment of close-to-client primary health-care services as a consequence of universal adult franchise since 1931; and high female literacy. Although Sri Lanka is therefore well positioned to achieve UHC, current
demographic, epidemiological and economic transitions are challenges to ensuring universal and equitable health financing and care provision.

Sri Lanka is a lower-middle-income country, and has excellent life expectancy and indicators for neonatal, infant, under-five and maternal mortality. Data from the World Health Statistics 2015 include average indicators for countries by income group and allow comparison of Sri Lankan data with the averages for upper-middle and high-income countries (see Table 1). Sri Lankan indicators are better than those of the average upper-middle-income country category (World Bank classification of gross national income [GNI] per capita of more than US$ 1045 but less than US$ 12,736, with the upper and lower cut-off value, respectively, being US$ 4125) and close to those of the high-income country category (GNI per capita of US$ 12,736 or more), while being classified as a lower-middle-income country with a per capita gross domestic product (GDP) of US$ 3912 in 2015. Sri Lanka also performs better than the average for female life expectancy for an upper-middle-income country, and equally well for male life expectancy but less well with respect to healthy life expectancy (see Table 1). The gap between life expectancy and healthy life expectancy is greater in Sri Lanka than in the upper-middle- and high-income countries, reflecting the country’s relatively high burden of disease (see Table 1).

### Women and children do well

Improving maternal health and child survival remain within the SDG targets as part of the “unfinished MDG agenda”. World Health Statistics 2016 reports the maternal mortality ratio as 30 per 100,000 live births for Sri Lanka in 2015 (with the 2030 SDG global goal as 70 per 100,000). In addition, 93% of pregnant women have four or more visits for antenatal care and 99% of births are attended by skilled health personnel. Institutional deliveries make up 99.9% of the total number reported. The proportion of married or in-union women of reproductive age using modern family-planning methods is 69.4%, while the rate of adolescent births (per 1000 women aged 15–19 years) was 20.3 in Sri Lanka, compared with an overall average of 33.9 for the WHO South-East Asia Region.

Sri Lanka’s neonatal and infant mortality rates for 2015 are 5.4 and 9.8 per 1000 live births – well below the new SDG health targets of 12/1000 and 25/1000, respectively. Two recent developments should further improve neonatal mortality rates: first, a recommendation that first births should occur at base- or higher-level hospitals; and second, the fact that, following a successful pilot introducing vehicles and staff equipped to transfer preterm and critically ill neonates to a neonatal intensive-care unit at Lady Ridgeway Hospital for Children, Colombo, the service is being rolled out nationally.

### Disparities in health between men and women

To explore the male factors in Sri Lanka that are relevant to UHC, it is useful to compare with Canada, a high-income country with good health performance and social health insurance. Life expectancy in Sri Lanka compares relatively well with that for Canada: 80 years and 84 years respectively for women, and 72 years and 78 years respectively for men. The gender gap in Sri Lanka is greater than for Canada, reflecting a greater health disadvantage for men in Sri Lanka. From the WHO estimates of disability-adjusted life-years (DALYs) for 2012, the DALYs per 100,000 can be calculated as 34,389 and 26,416 for Sri Lankan and Canadian men, respectively. The equivalent data for women are very similar: 23,967 for Sri

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Sri Lanka</th>
<th>Upper-middle-income country average</th>
<th>High-income country average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth, years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>72</td>
<td>72</td>
<td>76</td>
</tr>
<tr>
<td>Female</td>
<td>78</td>
<td>76</td>
<td>82</td>
</tr>
<tr>
<td>Both sexes</td>
<td>75</td>
<td>74</td>
<td>79</td>
</tr>
<tr>
<td>Healthy life expectancy at birth (both sexes), years</td>
<td>65</td>
<td>66</td>
<td>70</td>
</tr>
<tr>
<td>Mortality rate per 1000 live births</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neonatal</td>
<td>5.9</td>
<td>9.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Infant</td>
<td>8.2</td>
<td>15.6</td>
<td>5.3</td>
</tr>
<tr>
<td>Under 5 years</td>
<td>9.6</td>
<td>19.6</td>
<td>6.3</td>
</tr>
<tr>
<td>Maternal mortality ratio (per 100,000 live births)</td>
<td>29</td>
<td>57</td>
<td>17</td>
</tr>
</tbody>
</table>

Lanka and 23,934 for Canada. Although there are biological and behavioural health differences for the sexes, preventive and curative health-care provision may also differ, such that male health needs are insufficiently addressed. Addressing this concern will be key to achieving UHC and this is discussed later in this paper.

When the data are disaggregated by disease types, as expected, the figure for Sri Lanka is much higher in the category of communicable diseases and maternal, perinatal and nutritional disorders, at 4,128 DALYs per 100,000 in Sri Lanka compared with 1,341 DALYs per 100,000 in Canada. The male and female DALYs per 100,000 in this category are 4,625 and 3,652 for Sri Lanka and 1,390 and 1,292 for Canada. The SDG health targets also include noncommunicable diseases and injuries. For noncommunicable diseases, the burden is very similar for both countries (20,635 per 100,000 for Sri Lanka and 21,775 per 100,000 for Canada). However, in Sri Lanka, 56% of the total DALY burden of noncommunicable disease is in the age group 0–59 years, compared with 46% in Canada (higher percentage in Sri Lanka for all but the 70 years and older category). This finding could reflect earlier onset of noncommunicable diseases and greater severity. This is probably a result of delays in diagnosis.

Sri Lanka’s burden of disease from injuries is 4,303 DALYs per 100,000, double that of Canada. The difference between sexes is striking in Sri Lanka: the DALY burden for injuries in males is triple that for females. Road traffic mortality is also extremely high in Sri Lanka: 17.4 per 100,000 population, compared with 6.0 per 100,000 in Canada.

ACHIEVING UNIVERSAL HEALTH COVERAGE

UHC is considered the core of the overall SDG health goal. It is concerned with coverage of the population by quality essential health services, along with financial protection, with a focus on equity. A UHC monitoring framework developed by WHO and the World Bank uses two indicators: a coverage index for essential health services, disaggregated where possible by key stratifiers, and a measure of lack of financial protection. The coverage index has four groups of tracer indicators: reproductive, maternal, newborn and child health; infectious diseases; noncommunicable diseases; and service capacity and access.

Service provision

As already described, Sri Lanka scores well on the indicators for reproductive, maternal, newborn and child health. With respect to service provision for infectious disease, indicators are good overall. Estimated DALYs for lower respiratory tract infections are relatively low at 21.8 and 4.5 per 1000 population, for the age groups 0–4 years and 5–14 years respectively. However, no data exist in relation to health-seeking behaviour for child pneumonia – the single largest infectious cause of death in children worldwide. The incidence of tuberculosis is 65 per 100,000 and the prevalence of HIV is low (<0.1 per 1000 uninfected population), but Sri Lanka scores poorly for antiretroviral treatment for HIV, with only 18% coverage among people living with HIV. Following implementation of intensive control measures, Sri Lanka has not had a local (i.e. non-imported) case of malaria since 2012. Improved water and sanitation sources are used by 96% and 95% of the population, respectively.

Sri Lanka fares less well in terms of provision of services to prevent noncommunicable disease. For example, screening for cervical cancer using the Papanicolaou smear test was initiated at community level in 1996, via “well woman clinics”. However, there have been many deficiencies in the programme and high rates of hospital admission for advanced stages of cervical malignancies persist. The age-standardized prevalence of tobacco smoking among persons aged 15 years and older was 28.4% for males and 0.4% for females in 2015. A worrying trend, however, is the prevalence of current tobacco use among adolescents aged 13–15 years, which is 15.7% for males and 5.4% for females. In 2011, the Ministry of Health addressed the lack of a structured screening service for noncommunicable diseases, with the introduction of Healthy Lifestyle Centres. In the same year, the Ministry of Health also recognized that the existing structure for curative health-care service needed to transition from episodic patient management to a continuing-care model that is more appropriate for noncommunicable diseases. Following pilots, a new organizational structure “the shared care cluster system” has been proposed, to accommodate the additional burden of noncommunicable diseases. Services will be grouped around a hospital providing specialist care at the apex, with primary-care curative institutions at divisional and primary levels.

The state provides a free medical health-care facility within 4.8 km of every household and a health-care facility can be found, on average, not further than 1.4 km from any home. Universal adult franchise in 1931 resulted in a demand for hospitals close to communities, with rapid growth of a widespread network of government hospitals. The emergence of the private health-care system since 1977 widened the options for access to basic hospital services. The density of doctors, nurses and midwives per 10,000 population was 30.5 in 2012. Although this is above the minimum density threshold set by the 2006 World Health Report of 22.8 skilled health professionals/10,000 people to provide the most basic health coverage, it is relatively low, particularly with regard to the increased need for nursing staff in response to health transition. The provincial maldistribution is also striking and needs to be rectified through systematic human-resource planning and training programmes.

A nationwide survey of the availability of 100 essential medicines found that in government hospitals in three of Sri Lanka’s 25 districts, the availability of 12 essential drugs for noncommunicable diseases was only 75% (personal communication, unpublished data). The mean availability of the 100 medicines was 73.2% in the government sector, while in the private sector it was 81.3%. A situational analysis of medicines’ supply, selection, use, regulation and policy in Sri Lanka, conducted by the WHO Regional Office for South-East Asia and the Ministry of Health in 2015, found that the availability of essential drugs was over 90% in teaching...
hospitals but was 72–79% in lower-level facilities,\textsuperscript{22} while a World Bank study found that only 57.5% of primary health-care institutions had a one-month buffer stock of 16 selected drugs for noncommunicable diseases.\textsuperscript{23}

**Equity of access by income quintile**

Is access to health facilities equitable across the income distribution? Sri Lanka’s Department of Census and Statistics publishes Household Income and Expenditure Survey (HIES) reports periodically. Analysis of the most recent data available, from HIES 2012/2013, suggests that there are minimal disparities in proximity to services among income quintiles (see Fig. 1).\textsuperscript{24} However, the pattern of care differs among quintiles, with the highest-income quintile using a higher proportion of private care. Notably, the use of private care is also significant in the lower-income quintiles; as discussed below, this is probably partly a result of non-availability of public services outside standard working hours. Further, analysis of data from the HIES 2012/2013 shows that private outpatient care is more widely spread geographically than state-sector outpatient facilities.\textsuperscript{24} These private outpatient locations include a range of facilities, from home-based makeshift clinics run by individuals to more established group practices and hospitals. They could involve full-time or part-time private practitioners, or government doctors working in their off-duty hours.

**Equity of access by gender**

Could the health disadvantage for men in Sri Lanka be partly attributed to differences in utilization of health services? The constraint faced by men is that most state outpatient and clinic services are provided on weekday mornings and afternoons. The lack of an appointment system in most hospitals adds to this problem, causing queuing and long waiting times for consultations, diagnostic services and dispensing of drugs.

Labour-force participation rates of men and women in Sri Lanka were 74.6% and 34.7% respectively in 2014.\textsuperscript{25} Of the employed men, 62.4% work in the informal sector. Accessing government-sector outpatient and clinic services often involves sacrificing daily wages. This acts as a deterrent to men seeking government health care, resulting in aggravation of the severity of illness and delayed care.\textsuperscript{13}

**HEALTH-FINANCING BURDEN**

The outstanding health financing features in Sri Lanka are the heavy reliance on the private sector, involving out-of-pocket expenditure (43.9% of total health expenditure was private health expenditure in 2014, despite a system of health provision that is free at the point of delivery),\textsuperscript{26} and the predominance of out-of-pocket payments, which formed 95.8% of private health expenditure.
expenditure in 2014. This high dependence on out-of-pocket payments results in households lacking financial protection, making them susceptible to impoverishment and catastrophic health expenditure.

**Private-sector utilization**

From the pre-independence era (before the 1950s), Sri Lanka has had a strong state sector (first tier), with only a minuscule private sector. The liberalization of the economy in 1977 resulted in specialists and medical officers being given the right to undertake private practice outside their working hours. This led to rapid development of the private health-care system (the second tier involving dual affiliation of state-sector health personnel) in the country. This included large private hospitals, small outpatient clinics, laboratories, imaging centres and pharmacies. It provided patients with greater choice, though the two-tier system led to inequities in services and outcomes. The high level of utilization of this second tier, even by those in the lowest two income quintiles, is evident in Fig. 2.

“Push” and “pull” factors determine the choice of treatment source. Long outpatient waiting time, long delays in accessing inpatient care/surgery, drug shortages, and lack of laboratory and scanning facilities are pushing households to utilize private care. Among the pull factors, a major determinant is the time involved in accessing care. Most private health-care provision occurs outside normal working hours, not necessitating a loss of earnings to patients and caregivers. Other pull factors include the ability to gain “specialist” care and individual choice of a specific health-care provider.

Private health care is widespread, mainly as a result of medical officers and specialists undertaking private practice in off-duty hours, and is mainly financed through out-of-pocket spending. This is a major determinant of the high cost of health care in the country. Dual affiliation is also argued to create inefficiencies in the state sector, and is one of the major deterrents to implementing noncommunicable disease clinics and outpatient services in state hospitals in the evening.

**Emergence of the third tier**

The discussion regarding the health-financing burden on households is made more complex by the emergence of what is termed the “third tier” in Sri Lanka. In this paper, the third tier is defined broadly as payment to a private party for obtaining goods or services, as part of accessing state-sector services. There are two types. In the first, payments are made for medicines or laboratory services that should be covered as part of the service that is provided free at the point of delivery. In the second, costs are borne for goods and services that are needed to complement the free service but are not currently covered by state funding. Examples include purchase of intraocular lenses for cataract surgery, pins for bone-fracture repair, coronary stents, additional scans and blood tests, and higher-quality drugs. A 2012 study done under the Social Determinants of Health project found that, in state facilities, cardiac troponin assays were performed on more than 75% of

---

**Fig. 2. Utilization of outpatient care by quintile and source of care**

Quintile 1 = lowest income, quintile 5 = highest income.
Note: Columns do not add up to 100% as some patients access non-allopathic services.
Source: Based on data from the Department of Census and Statistics Household Income and Expenditure Survey 2012/2013.
patients with suspected myocardial infarction, despite these investigations not being available in the state sector, and that percutaneous transluminal coronary angioplasty was only done for the 4% of patients with ischaemic heart disease who could bear the cost (personal communication).

This tier is likely to still be small in economic terms and patient numbers. No systematic studies have yet been undertaken of this phenomenon, but it is significant and likely to expand further, given the state budgetary challenges in tandem with the expansion of health-care needs engendered by the health transition. This trend goes against the objective of UHC. It is adding an economic burden to households accessing what is considered to be “health care free at the point of delivery”. From a national perspective, it is an erosion of the policy of successive governments of “health care free at the point of delivery”. The fact that this expenditure is neither systematic nor fully predictable makes it sometimes catastrophic at household level. There are many instances when drug scarcities in the state sector force even poor households to purchase drugs from the private sector. In the case of noncommunicable diseases, this leads to poor compliance. In sudden medical emergencies, such as heart attacks or fractures, finding the money rapidly is an additional burden and leads to borrowing at high interest rates, selling of assets or selecting a suboptimal treatment option.

### POLICY CONCERNS

The first challenge to policy-makers in addressing the SDG for health at country level is likely to be the setting of national targets, based on data on the burden of disease, disaggregated by sex, age and disease, given the gender disparities. Sri Lanka needs to set health-indicator targets in line with those of high-income countries (for example, a country like Canada selected on the basis of population size, health performance and use of social health insurance as the financing mechanism; alternatives being Australia and the Netherlands) rather than being complacent about overshooting those of upper-middle-income countries.

UHC involves the whole range of health-care services. Enhancing UHC from a promotive health-care perspective could involve more interministerial coordination of activities beyond the Ministry of Health. The main challenges faced by Sri Lanka, such as eradicating communicable diseases, preventing premature mortality from noncommunicable diseases, and reducing road traffic accidents and substance abuse, which are all included as SDG health indicators, need multisectoral interventions. A national body that provides strategic direction and links all state-sector organizations, like the National Health Council that operated effectively in the 1970s in Sri Lanka, could be a step in the right direction to achievement of the SDG for health. Since better health is both the result of, and a prerequisite for, achievement of a number of SDGs, such interministry collaboration is essential.

Prevention of noncommunicable diseases, with health promotion that targets working men in particular, would seem to be crucial. If this population is not strategically targeted, there will be an economic impact in the long run, with an increase in premature mortality and morbidity of the skilled workforce. Gaining the leadership of employers in the process, and targeting men through the media, is vital.

The state health-care system handles both curative and rehabilitative care, mainly in hospital settings. Rehabilitative domiciliary care is poor, owing to the absence of adequate health cadres such as physiotherapists, speech and language therapists and occupational therapists in the state-sector hospitals. People with disabilities, including children with developmental problems and delays, are also adversely affected. There is limited provision of such services in the urban setting, mainly by the private sector, leading to geographic and economic inequities. Given the large population of elderly, and those afflicted by acute noncommunicable diseases, provision of domiciliary care backed by community nursing, and setting up hospices for palliative care would reduce the economic burden on households.

Finally, is the third tier a cause for concern at national level? Health-sector reforms have often stressed the need for public–private partnerships. It could be argued that shifting a part of health-care costs onto households is in line with such a policy. It could also be argued that, given rising health-care costs and severe budgetary constraints, a comprehensive health service that is free of charge at the point of delivery is no longer viable for the country. Both these arguments are rational. However, if the third tier is inevitable, then it should be better planned and managed, to differentiate between the poor and non-poor, and to determine what services are essential. Safety nets should be available to ensure financing of emergency care. If this issue is not addressed seriously, then the drive for UHC and the SDG for health will both be derailed.

### ACKNOWLEDGEMENTS

The authors wish to acknowledge and thank Dr Phyllida Travis, Director, Department of Health Systems Development, WHO Regional Office for South-East Asia, for her valuable comments on previous versions of this paper. Mr Dinesh R Kumara’s contribution in analysing the Household Income and Expenditure Survey data set is also acknowledged. The authors wish to thank Professor Saroj Jayasinghe, Dr Anuradhani Kasturiratne and Professor Priyadarshani Galappatthy for their assistance and for sharing their research findings.

### REFERENCES


Source of Support: Nil. Conflict of Interest: None declared. Authorship: AdeS and TR co-authored this paper, which was reviewed and enhanced by the insights provided by PA.