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# Delivering care to address a double burden of maternal malnutrition in Sri Lanka

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## Introduction

Sri Lanka is an island in the Indian Ocean, with a population of 21.2 million and a birth rate of 16.9 per 1,000 population<sup>1</sup>. The country has made some impressive gains in improving maternal health, including reductions in maternal mortality. However, the double burden of malnutrition among women of reproductive age and maternal anaemia remain public health concerns, adding complexity to the nutrition challenges in the country.

Sri Lanka's healthcare system is increasingly under pressure from the high burden of diet-related non-communicable diseases (NCDs) among the general population and the Government is currently undertaking primary healthcare reforms in response. This article assesses how the country's service delivery platforms and packages are adapting to the double burden among pregnant women.

## Shift from undernutrition to overweight/obesity

Sri Lanka faces a rising double burden of maternal malnutrition. Prevalence of low body-mass index (BMI <18.5kg/m<sup>2</sup>) among pregnant women in their first trimester has decreased from 23.8% in 2012 to 18.8% in 2016<sup>2</sup>. In contrast, there has been a marked increase in overweight (BMI >=25 kg/m<sup>2</sup>) from 16.2% to 23.7% during the same period (see Figure).



## Sri Lanka Fact Sheet

### Women's nutrition 15-49 years

**THINNESS** (2016) Women who are thin (BMI < 18.5kg/m<sup>2</sup>)



**OVERWEIGHT OR OBESE** (2016)  
Women who are overweight or obese (BMI ≥ 25 kg/m<sup>2</sup>)



**ANAEMIA (WRA)** Anaemia among women of reproductive age

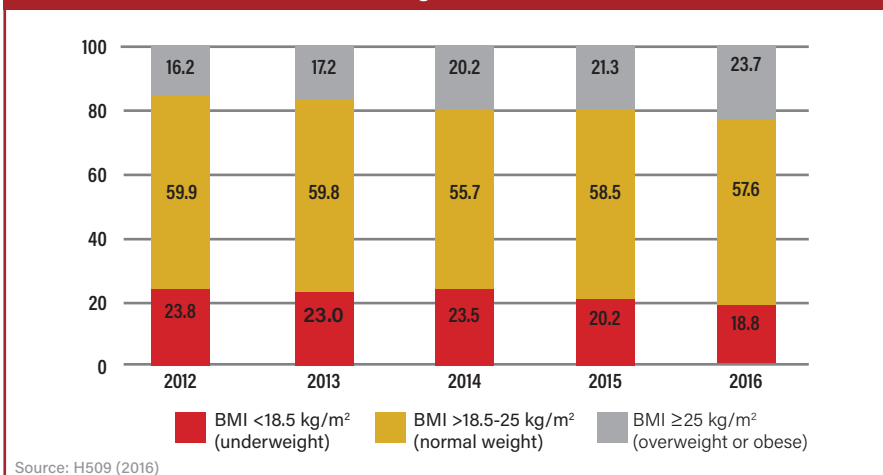


**39** **MATERNAL MORTALITY** (2017) **6.3** **NEONATAL MORTALITY** (2017)  
per 100,000 live births per 1,000 live births

<sup>1</sup> Sri Lanka Census (2016).

<sup>2</sup> Sri Lanka Field Handbook (2016).

**Figure 1** Percentage distribution of pregnant mothers with BMI status at first booking visit (before 12 weeks) (2012-2016)



The prevalence of underweight is highest in younger women and declines with age (22.9% in women aged 15-20 years and 6.2% in women aged 40-49 years); whereas overweight increases with age (20.9% in women aged 15-20 years and 52% in women aged 40-49 years). Women living in the estate sector<sup>3</sup> are more likely to be underweight (22%) compared to those living in urban (5.6%) and rural (9.1%) areas. Those living in urban areas are more likely to be overweight (55.8%), followed by rural areas (44.2%) and estate sector (23.4%)<sup>4</sup>.

### Policies and programmes

Sri Lanka has a strong policy framework for maternal nutrition, set out most recently in the *National Strategic Plan on Maternal and Newborn Health (2017-2025)*. In the last 10 years, overweight and obesity has emerged as an issue demanding greater attention. This is reflected to some degree in the plan's targets for increasing the proportion of pregnant women screened for hyperglycaemia by 2025, and activities to implement appropriate behaviour change communication and nutrition targeting at all stages of the life cycle.

The maternal nutrition programme response in Sri Lanka is primarily from the health sector through a package of nutrition-specific interventions that are delivered via antenatal care (ANC) and postnatal care (PNC) platforms. The Ministry of Health also manages the Thripasha food supplementation programme (see below). However, the social protection scheme which provides cash allowances to pregnant and lactating women is a joint programme between the Ministry of Social Welfare (the implementing agency) with Health Ministry support to identify beneficiaries.

### High coverage of maternal care package

Sri Lanka has achieved a high population coverage of its package of evidence-based interventions offered to all pregnant women, starting in early pregnancy. Public health midwives are an essential part of the health unit network, visiting pregnant women at home and registering them for ANC, thereby

<sup>3</sup> The estate sector is a third sub-division of population in Sri Lanka and is predominantly made up of Tamil workers who work in tea plantations and are among the most disadvantaged groups, with average life expectancy below the national average and an infant mortality rate higher than the national average.

<sup>4</sup> Sri Lanka Demographic and Health Survey (DHS) (2016).



Sri Lanka, like many countries in the region, is experiencing a double burden of malnutrition

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providing a critical link to the health system. Two thirds of pregnant mothers are registered for ANC before eight weeks of pregnancy and more than 95% are registered before 12 weeks<sup>4</sup>. In 2018 the average number of field clinic visits was 6.5 per pregnant woman<sup>5</sup>. The early gestational age at the first ANC registration, combined with the high number of ANC visits, are two reasons why coverage of maternal nutrition interventions is high in the country.

The maternal care package includes anthropometric assessment at the first visit through measuring height, weight and calculating BMI, as well as monitoring weight gain during pregnancy. Hyperglycaemia in pregnancy (including both chronic diabetes and gestational diabetes mellitus) is an emerging issue in Sri Lanka, and universal screening of pregnant women for blood sugar levels has been part of the maternal care package since 2014. Other interventions in the package include: screening for anaemia, with full blood count and management of identified cases, including referrals; micronutrient supplementation (iron folic acid, calcium and vitamin C) for all pregnant women; deworming for pregnant women when required; and dietary supplementation and nutrition counselling based on their nutritional status.

### Nutrition counselling

In line with WHO recommendations<sup>6</sup>, nutrition advice delivered by midwives has been tailored for women during ANC visits, based on BMI status in the first trimester. From that point onwards, pregnant women with a BMI  $\geq 25$  kg/m<sup>2</sup> are counselled on healthy eating and keeping physically active to stay healthy and prevent excessive weight gain during pregnancy. Midwives also counsel pregnant women and their extended family during home visits, addressing cultural norms such as the belief that pregnant requires eating for two.

During the postnatal period, micronutrient and food supplementation continues for six months after delivery and appropriate nutrition counselling continues. Home visits by the public health staff, postnatal clinic and immunisation and family planning clinics are used to deliver nutritional services for women after delivery.



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As part of antenatal care, midwives make home visits in Sri Lanka

### Developing a pre-pregnancy care package

As part of a preventative approach, newly married couples are invited to a pre-pregnancy care programme when they first register their marriage. The programme provides biomedical, behavioural and social health interventions to couples before conception occurs, including education on achieving a healthy weight via diet and exercise before becoming pregnant. Coverage for the initiative is currently at 50% across the country, but it is being scaled up and there are plans to extend the programme to include inter-pregnancy counselling.

### Remaining challenges

Some maternal nutrition interventions have been slower to adapt to the double burden among pregnant women. Thriplosa is a fortified supplementary food (made of maize, soya, milk and a vitamin and mineral premix), originally created in Sri Lanka in 1973 to address maternal and child undernutrition. A daily ration of 50g (providing 206Kcal of energy) is distributed free to all pregnant women and lactating women (up to six months) to prevent underweight/micronutrient deficiencies and as a social transfer (food transfer) intervention. However, the rising prevalence of overweight and obesity among women of reproductive age has raised concerns over blanket supplementation of Thriplosa. The Ministry of Health has initiated discussions about moving towards a targeted approach for supplementation and it is proposed that overweight or obese women be given nutritional advice, rather than Thriplosa.

### Nutrition allowance for pregnant and lactating women

Since 2015 the Government has provided every pregnant mother registered in the maternal care programme with a cash voucher worth SLR2,000 (USD11.45) per month for 10 months, covering the last six months of pregnancy and first four months following delivery. The objective of this allowance is to enable pregnant and lactating women to obtain nutritious food from pre-assigned retail outlets during this important period in life. The programme is implemented by the Ministry of Women's Affairs. As with Thriplosa, concerns have been raised that this allowance should be targeted to vulnerable women, such as those with low BMI and those of low socioeconomic status.

### Lessons learned and next steps

Sri Lanka has been successful in ensuring access to and demand for early and frequent ANC visits which ensure maternal nutrition interventions reach women in a timely manner. In addition, the Government recognises the growing problem of diet-related NCDs in women of reproductive age and is in the process of reviewing the package and targeting of maternal nutrition interventions to address this growing concern. Currently, tailored nutrition advice is offered by midwives at ANC visits, but there are plans to scale up the preconception care programme for wider coverage. The way forward for existing food supplementation programmes is to implement targeted interventions at a local level, instead of blanket coverage.

<sup>5</sup> Field Handbook (2018)

<sup>6</sup> WHO recommendations on antenatal care for a positive pregnancy experience (2016).