Sri Lanka
Health System Review
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Preface

The Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system, and of reform and policy initiatives in progress or under development in a specific country. Each profile is produced by country experts in collaboration with international editors. To facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a profile.

A HiT profile seeks to provide relevant information to support policymakers and analysis in the development of health systems. This can be used:

- to learn in detail about different approaches to the organization, financing and delivery of health services, and the role of the main actors in health systems;
- to describe the institutional framework, process, content and implementation of health-care reform programmes;
- to highlight challenges and areas that require more in-depth analysis;
- to provide a tool for the dissemination of information on health systems and the exchange of experiences between policymakers and analysts in different countries implementing reform strategies; and
- to assist other researchers in more in-depth comparative health policy analysis.

Compiling the profiles poses a number of methodological issues. In many countries, there is relatively little information available on the health system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services is based on a number of different sources, including the World Health Organization (WHO), national statistical offices, the Organisation for Economic Co-operation and Development (OECD) health data, the International Monetary Fund (IMF), the World Bank, and any other sources considered useful by the authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.
The HiT profiles can be used to inform policymakers about the experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analyses of health systems. This series is an ongoing initiative, and the material will be updated at regular intervals.

Comments and suggestions for further development and improvement of the HiT series are most welcome and can be sent to the apobservatory@who.int. HiT profiles and HiT summaries for countries in Asia Pacific are available on the Observatory’s website at https://www.healthobservatory.asia and https://www.apo.who.int/.
The authors of the Health System in Transition (HiT) profile on Sri Lanka gratefully acknowledge the valuable contributions of many persons during its preparation. Prof Amala De Silva (Professor in Economics, University of Colombo), Dr Prabhath Werawatte (Director, Teaching Hospital, Kuliapitiya) and Dr Olivia Nieveras (Public Health Administrator, WHO Office, Colombo) provided expert technical inputs. A special word of thanks to many colleagues in the Ministry of Health for helping with the required information. Dr Nima Asgari-Jirhandeh, Dr Anns Issac and Ms Ritu Aggarwal, acting as the Secretariat for the Asia Pacific Observatory on Health Systems and Policies (APO), provided the overall support for development of the HiT.

The authors are grateful to Drs Viroj Tangcharoensathien, Walaiporn Patcharanarumol and Haruka Sakamoto for their editorial inputs. They give special thanks to the three independent reviewers, Dr Eduardo Benzo, Dr Owen Smith and Dr Rohan Jayasuriya, for their valuable commentaries on the profile.
## Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>A&amp;E</td>
<td>accident and emergency</td>
</tr>
<tr>
<td>ADIC</td>
<td>Alcohol and Drug Information Centre</td>
</tr>
<tr>
<td>AI</td>
<td>agglomeration index</td>
</tr>
<tr>
<td>AMR</td>
<td>antimicrobial resistance</td>
</tr>
<tr>
<td>AR</td>
<td>administrative regulations</td>
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<tr>
<td>ART</td>
<td>antiretroviral therapy</td>
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<tr>
<td>BH</td>
<td>Base Hospital</td>
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<tr>
<td>BMI</td>
<td>body mass index</td>
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<tr>
<td>BOI</td>
<td>Board of Investment</td>
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<tr>
<td>BP</td>
<td>blood pressure</td>
</tr>
<tr>
<td>CDD</td>
<td>Cosmetic Devices and Drugs</td>
</tr>
<tr>
<td>CHE</td>
<td>current health expenditure</td>
</tr>
<tr>
<td>CKDu</td>
<td>chronic kidney disease of unknown aetiology</td>
</tr>
<tr>
<td>CMC</td>
<td>Ceylon Medical Council</td>
</tr>
<tr>
<td>CMCC</td>
<td>Sri Lanka Medical College Council</td>
</tr>
<tr>
<td>CRVS</td>
<td>Civil Registration and Vital Statistics (System)</td>
</tr>
<tr>
<td>CVD</td>
<td>cardiovascular disease</td>
</tr>
<tr>
<td>DALY</td>
<td>disability-adjusted life year</td>
</tr>
<tr>
<td>DCS</td>
<td>Department of Census and Statistics</td>
</tr>
<tr>
<td>DDC</td>
<td>District Development Committee</td>
</tr>
<tr>
<td>DDG</td>
<td>Deputy Director General</td>
</tr>
<tr>
<td>DGH</td>
<td>District General Hospital</td>
</tr>
<tr>
<td>DGHS</td>
<td>Director General of Health Services</td>
</tr>
<tr>
<td>DH</td>
<td>Divisional Hospital</td>
</tr>
<tr>
<td>DHS</td>
<td>Demographic and Health Survey</td>
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<tr>
<td>DM</td>
<td>diabetes mellitus</td>
</tr>
<tr>
<td>DNMS</td>
<td>District Nutrition Monitoring System</td>
</tr>
<tr>
<td>DP</td>
<td>development partner</td>
</tr>
<tr>
<td>DRPD</td>
<td>Disaster Preparedness and Response Division</td>
</tr>
<tr>
<td>DS</td>
<td>Divisional Secretary</td>
</tr>
<tr>
<td>e-IMMR</td>
<td>Electronic Indoor Morbidity and Mortality Reporting</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>TB</td>
<td>tuberculosis</td>
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<tr>
<td>TH</td>
<td>teaching hospital</td>
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<td>TM</td>
<td>Traditional Medicine</td>
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<tr>
<td>U5MR</td>
<td>under-5 mortality rate</td>
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<tr>
<td>UHC</td>
<td>universal health coverage</td>
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<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>UNHCR</td>
<td>United Nations High Commissioner for Refugees</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<tr>
<td>URTI</td>
<td>upper respiratory tract infection</td>
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<tr>
<td>VHI</td>
<td>voluntary health insurance</td>
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<tr>
<td>VPD</td>
<td>vaccine-preventable disease</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>WWC</td>
<td>Well Woman clinic</td>
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<tr>
<td>YED</td>
<td>Youth, Elderly and Persons with Disabilities</td>
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<tr>
<td>YLD</td>
<td>years lived with disability</td>
</tr>
<tr>
<td>YLL</td>
<td>years of life lost</td>
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Executive summary

Sri Lanka is a country with a population of 21.7 million which is ageing rapidly and is in the late stages of both demographic and epidemiological transitions. It has achieved strong health outcomes over and above what is commensurate with its income level. Equity and efficiency of these outcomes are largely credited to the strong state health care system.

Significant gains have been made in neonatal, infant, under-5 and maternal mortality. Life expectancy at birth has increased steadily for both sexes, and women currently live 6.7 years longer than men. The country has been able to eliminate malaria, filariasis, polio and neonatal tetanus and is set to eliminate other vaccine-preventable diseases such as measles and congenital rubella syndrome and other infectious diseases such as lymphatic filariasis and leprosy. These gains may be attributed to the socio-political milieu of the country from early on and the widespread health services which have been free at the point of delivery, which acted as drivers of demand.

Although much has been achieved in eliminating or reducing morbidity and mortality, communicable diseases such as dengue, leptospirosis, pandemic influenza and tuberculosis still remain important causes of morbidity. Noncommunicable diseases (NCDs), injuries and mental illness form the bulk of the current disease burden, while ischaemic heart disease, cardiovascular diseases and diabetes constitute the leading causes of disability-adjusted life years (DALYs) lost. It is estimated that nearly 75% of deaths in the country are due to NCDs. The prevalence of risk factors for NCDs is significantly high.

The health system constitutes of both curative and preventive services. Preventive healthcare is provided through 354 geographically defined areas covering the whole island. Each area is served by a medical officer of health (MOH) and a team of community-based professionals who provide a well-defined package of preventive services. A key strength of the MOH system is the strong supportive supervision backed by monitoring mechanisms that have evolved and been fine-tuned over the years. Curative care encompasses different levels, ranging from outpatient-only facilities and primary care institutions to tertiary-care institutions and specialized hospitals organized into a hierarchical network. They provide a comprehensive range of health care services but not an explicit package of benefits. All state provided services are free of charge at the point of delivery and covers about 95% of inward care and 50% of total ambulatory care in the country. There is also a
free community ambulance service, which provides increased health-care access in an emergency. The state also provides the required medicines and investigations free of charge to the patient.

Although there is no explicit targeting of the poor within the Sri Lankan health system, utilisation patterns suggest that there is implicit targeting of the poor due to the better off segments of the population opting out of the public sector where waiting times are longer, choice of provider is limited and service hours not very convenient. Studies suggest that the quality of care across public and private sectors is comparable.

The State health services function under a Cabinet Minister. The Ministry of Health, Nutrition and Indigenous Medicine (MoHNIM) is responsible for stewardship functions such as policy formulation and health legislation, program monitoring and technical oversight, management of health technologies, human resources and tertiary and other selected hospitals. Following the 13th amendment to the constitution, health became a partially devolved subject and the primary and secondary levels of curative care and preventive services came under the nine Provincial Ministries.

Government revenue and out of pocket spending are the two main sources of health financing. Government spending as a share of gross domestic product has remained around 1.7% during the period 2013 to 2016. The household contribution to current health expenditure (CHE) is significant and is largely from out-of-pocket expenditure (OOPE) but households reporting catastrophic health expenditure is low mainly because most of the OOPE is incurred by the rich and the fact that the government remains the key provider of inpatient care. The need for increased fiscal space for health is recognized. However, within the present budgetary constraints better health outcomes are being targeted through reorganization and retooling.

Although the organisation of the state sector curative care facilities is conducive to the implementation of a referral system, there are no clear referral policies and clearly demarcated catchment areas for institutions. Individuals are free to access services at any state sector institution without a proper referral. This has enhanced equity within the system to a certain degree but poses problems in the continuity of care needed particularly in dealing with NCDs. The phenomenon of bypassing has been shown to be based on people’s perceptions of better facilities, availability of medicines, and better quality of care and provider competency. The MoHNIM response to this problem until recently has been to enhance resource allocation to secondary- and tertiary-care institutions, However the focus has recently shifted to reorganising primary care services so as to make available quality
services close to patient homes ensuring continuity of care and referral when needed. The implementation of reforms acceptable to providers and the recipients while maintaining equity poses a major challenge.

In response to these challenges, a policy on health-care delivery for universal health coverage (UHC) [MoHNIM, 2018b] has been launched and many supportive policies towards promoting health have been formulated in recent years. The establishment of the National Authority on Tobacco and Alcohol (NATA), National Policy and Strategic Framework for Prevention and Control of Chronic Non-communicable Diseases, National Migration Health Policy, establishment of the National Medicines Regulatory Authority (NMRA), National Policy on Health Information, and Policy on Health Service delivery for UHC are some of these. However, implementation gaps have been identified and these highlight the need for strengthening these new agencies to fulfil their mandates.

Even though there have been many developments in recent times, information management remains a weak point in the health system. Some of the issues that have been identified as needing rectification are compartmentalisation of information governance, inadequate coordination and limited data sharing between existing systems and weaknesses in the quality of data collected.

The health system of the country has not transformed to address the demands of the demographic, epidemiological transitions and the changing expectations of a society undergoing social evolution. Addressing the risk factors of NCDs will need rational needs analysis and innovative approaches to ensure adequate numbers of appropriately skilled staff. Health workforce cadres as well as the optimal skill mix to match evolving health care needs of the reform process are areas that need attention. Human Resources (HR) planning, management and periodic audits will have to be institutionalized, as well as continuing processes to anticipate and respond to emerging health needs. Ensuring retention of HR in primary health care settings and equitable distribution across the country also pose challenges.

The MoHNIM has identified reorganisation of services with special emphasis on primary health care services while retaining the current strengths of the system as a means of addressing the challenges and enhancing UHC. These changes will necessitate increased government spending on the health sector and addressing the social determinants of health, ensuring equity in social, environmental, and economic policies. It will also need a concentrated and transformative effort to engage individuals and communities to adopt healthy behaviours and lifestyles and take responsibility for their own health.
1. Introduction

Chapter summary
Sri Lanka is an island in close proximity to the southernmost tip of India. It is home to 21.4 million people. It has a multiethnic society comprising Sinhalese (75%), Sri Lankan Tamils (15%) and Sri Lankan Moors (9%). The country’s population is rapidly ageing and the percentage of those over 65 years of age increased from 3.7% in 1970 to 10.8% in 2019, with an increasing feminization.

The country, had achieved upper-middle-income status although it was downgraded to lower-middle-income in July 2020. The earlier predominantly export-oriented agricultural economy has been transformed to a free-market economy. It recorded an average annual growth rate of around 6.4% during the period 2003–2012, but this had slowed down to 3.1% in 2017. The country remained a parliamentary democracy since Independence in 1948 till 1972, when it declared itself an independent republic. A new constitution adopted in 1978 provided for an elected executive president and a unicameral parliament. A major amendment in 1987 decentralized power to nine elected provincial councils.

Sri Lanka had achieved a relatively high standard of health while it was still a low-middle-income country. An effective maternal and child health (MCH)-care system dating back to 1926 produced significant gains in terms of infant mortality rate (IMR), neonatal mortality rate (NMR), under-5 mortality rate (U5MR) and maternal mortality ratio (MMR), but the rate of decline has slowed during the past decade. The country has eradicated polio, neonatal tetanus, malaria, filariasis and leprosy, and has achieved near elimination of other diseases covered by the Expanded Programme on Immunization (EPI). It is in the late stage of the epidemiological transition. However, an epidemic of noncommunicable diseases (NCDs) and emerging new infections such as dengue and re-emergence of old infections such as tuberculosis pose challenges to health.

Risk factors that underlie the disease burden are high fasting plasma glucose, dietary risk, high blood pressure and tobacco consumption, in that order. It is estimated that 90% of Sri Lankan adults (18–69 years) have at
least one NCD risk factor, 73.5% have 1–2 risk factors, and 18.3% have 3–5 risk factors, the prevalence being similar in males and females.

The changing epidemiology has prompted a reorganization of the health services, focusing on equitable, patient-centred quality care at the primary and secondary levels.

1.1 Geography and sociodemography

Sri Lanka is an island situated at the southern tip of India and separated from it by a strip of sea about 20 km in width at its narrowest point (Madduma Bandara, 2007). Historically, it has been referred to by many names. The British, the last colonial rulers, called it Ceylon. The country was officially renamed Sri Lanka in 1972, Lanka being the country’s ancient name and the prefix meaning resplendent. The island’s strategic position in relation to the ancient sea routes of the Indian Ocean and its close proximity to India has led to waves of immigration, invasion and colonization throughout its history. This diversity of influences has shaped the social, cultural, political and demographic picture of the country.

The total land area of the country is 65,625 sq.km and includes the main island and several small islands in close proximity to the main land mass. The mainland extends 433 km from north to south and 226 km from east to west at its widest point (Madduma Bandara, 2007). Administratively, the country is divided into nine provinces (Figure 1.1), which are subdivided into 25 districts. The districts are divided into 330 divisional secretary (DS) divisions and these are subdivided into grama niladhari (GN) divisions. There are 14,022 GN divisions constituting the smallest administrative units of the country (Ministry of Public Administration and Home Affairs, 2018).
The climate of the island is dominated by tropical monsoon systems. The mean annual temperature in Sri Lanka is largely homogeneous, regional differences being largely due to altitude rather than to latitude. In the lowlands up to an altitude of 100–150 m, the mean annual temperature
varies between 26.5 ºC and 28.5 ºC, while in the highlands, e.g. Nuwara Eliya, which is 1800 m above sea level, it is around 15.9ºC (Chandrapala, 2007). Analysis of long-term data on rainfall and temperature indicate a decrease in the annual average rainfall together with a higher variability in the annual rainfall anomaly and a trend of increasing air temperature, which have been attributed to climate change (Basnayake, 2007).

The population of Sri Lanka by province is given in Table 1.1. Trends in demographic indicators for selected years are given in Table 1.2. Trends in ageing and dependency in Sri Lanka are given in Table 1.3.

### Table 1.1 Population of Sri Lanka by province

<table>
<thead>
<tr>
<th>Province</th>
<th>Population in 1000's</th>
<th>% of total population</th>
<th>Population density</th>
<th>% of population 60 years and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Province</td>
<td>6129.0</td>
<td>28.3</td>
<td>1705.8</td>
<td>13.4</td>
</tr>
<tr>
<td>Central Province</td>
<td>2750.0</td>
<td>12.7</td>
<td>493.3</td>
<td>12.8</td>
</tr>
<tr>
<td>Southern Province</td>
<td>2637.0</td>
<td>12.2</td>
<td>472.3</td>
<td>14.0</td>
</tr>
<tr>
<td>Northern Province</td>
<td>1131.0</td>
<td>5.2</td>
<td>136.4</td>
<td>11.8</td>
</tr>
<tr>
<td>Eastern Province</td>
<td>1710.0</td>
<td>7.9</td>
<td>182.7</td>
<td>7.8</td>
</tr>
<tr>
<td>North Western Province</td>
<td>2536.0</td>
<td>11.7</td>
<td>337.9</td>
<td>12.2</td>
</tr>
<tr>
<td>North Central Province</td>
<td>1366.0</td>
<td>6.3</td>
<td>140.2</td>
<td>9.4</td>
</tr>
<tr>
<td>Uva Province</td>
<td>1364.0</td>
<td>6.3</td>
<td>163.6</td>
<td>10.8</td>
</tr>
<tr>
<td>Sabaragamuwa</td>
<td>2047.0</td>
<td>9.4</td>
<td>416.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>21 670.0</td>
<td>100.0</td>
<td>345.6</td>
<td>12.4</td>
</tr>
</tbody>
</table>

Source: Department of Census and Statistics, 2020

#### 1.1.1 Population and ageing

The country is home to 21.7 million people of whom 52% are females. The average population density is 347.1 persons per sq.km. However, the population is unevenly distributed among the nine provinces (Table 1.1). Nearly a third of the country’s population lives in the Western Province, the country’s administrative and economic hub (Department of Census and Statistics, 2015a). The population density of this province is nearly five times the country’s average at 1705.8 persons per sq.km. The crude birth rate, total fertility rate and average annual population growth rate have declined steadily over time, while life expectancy (LE) at birth has increased. It is noted that women have a nearly 7-year advantage over men in LE.
Table 1.2  Trends in demographic indicators, 1970–2019

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (in millions)</td>
<td>12.5</td>
<td>14.7</td>
<td>17.3</td>
<td>18.8</td>
<td>20.2</td>
<td>21.2</td>
<td>21.4</td>
<td>21.7</td>
<td>21.8</td>
</tr>
<tr>
<td>Population density (people per sq.km)</td>
<td>199.1</td>
<td>239.8</td>
<td>276.3</td>
<td>299.5</td>
<td>322.1</td>
<td>338.1</td>
<td>342</td>
<td>345.5</td>
<td>347.1</td>
</tr>
<tr>
<td>Population, female (% of total)</td>
<td>48.5</td>
<td>49.0</td>
<td>49.5</td>
<td>50.1</td>
<td>51.3</td>
<td>51.9</td>
<td>51.9</td>
<td>51.9</td>
<td>51.6</td>
</tr>
<tr>
<td>Birth rate, crude (per 1000 people)</td>
<td>30.6</td>
<td>27.0</td>
<td>20.6</td>
<td>18.5</td>
<td>17.5</td>
<td>15.3</td>
<td>15.0</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Fertility rate, total (births per woman)</td>
<td>4.3</td>
<td>3.4</td>
<td>2.5</td>
<td>2.2</td>
<td>2.2</td>
<td>2.0</td>
<td>2.0</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Death rate, crude (per 1000 people)</td>
<td>7.8</td>
<td>6.3</td>
<td>6.5</td>
<td>7.0</td>
<td>6.5</td>
<td>6.9</td>
<td>6.9</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Population growth (average annual growth rate)</td>
<td>2.1</td>
<td>1.9</td>
<td>1.4</td>
<td>0.7</td>
<td>0.7</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
<td>..</td>
</tr>
<tr>
<td>Life expectancy at birth</td>
<td>64.1</td>
<td>68.2</td>
<td>69.5</td>
<td>71.0</td>
<td>74.4</td>
<td>75.3</td>
<td>75.5</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Rural population (% of total population)</td>
<td>80.5</td>
<td>81.2</td>
<td>81.4</td>
<td>81.6</td>
<td>81.7</td>
<td>81.6</td>
<td>81.5</td>
<td>81.5</td>
<td>81.5</td>
</tr>
<tr>
<td>School enrolment – secondary (%)</td>
<td>45.9</td>
<td>53.6</td>
<td>72.0</td>
<td>..</td>
<td>96.9</td>
<td>97.7</td>
<td>97.9</td>
<td>..</td>
<td>..</td>
</tr>
</tbody>
</table>

Source: World Bank, 2020

The majority of the people (81.5%) live in rural areas (Department of Census and Statistics, 2015a). The proportion of the urban population has in fact decreased by 1% from the 1970 value. However, it must be noted that the definition of “urban” is based on an administrative demarcation, i.e. the population living within municipal and town council areas. This may have resulted in an underestimation of the degree of urbanization and the urban population. A study carried out by the Institute of Policy Studies has provided an alternate estimate of urban population at 43.8%. In this classification, each GN division is classified as urban based on a minimum population of 750 persons, a population density greater than 500 persons per sq.km, firewood dependence in less than 5% of households and well-water dependence in less than 5% of households. This value is closer to the 47% estimated by the agglomeration index [AI] (Weerarathne, 2016).

Sri Lanka is a multi-ethnic society, predominantly Sinhalese (74.9%), the majority of whom are Buddhists. Sri Lankan Tamils make up around 15.3% of the population and Sri Lankan Moors a further 9.3%. The proportion of each of the other ethnicities (Burgher, Malay, Sri Lanka Chetti, Bharatha and others) is 0.2% or less. Hindus form 12.6% of the population, 9.7% are
Catholics and 6.2% belong to other Christian denominations (Department of Census and Statistics, 2015a).

Both Sinhalese and Sri Lankan Tamil cultures place a high value on education. National statistics indicate that secondary school enrolment (calculated as the percentage of children 10 years old who are in school) is high (97.7%, 2016). Adult literacy was high at 91.3% for males and 82.0% for females in 1981, which increased to 92.9% for males and 90.9% for females in 2017 (World Bank, 2020). In 2018, Sri Lanka was placed seventy-sixth globally on the Human Development Index (HDI) (0.770). It is noted that between 1990 and 2018, Sri Lanka’s HDI value increased from 0.625 to 0.770, an increase of 23.2% (United Nations Development Programme, 2016).

The population of Sri Lanka is ageing progressively. The population of those 65 years and over has increased from 3.7% in 1970 to 10.8% in 2019, while those 80 years and over has increased from 0.5% to 1.6% during the same period (World Bank, 2020). An important feature of this process is its feminization, as seen in Figure 1.2, and indicated by the higher LE at birth for females (78.6 years) compared to males (71.9 years). Population projections (standard) suggest that the share of the population 60 years and over will reach 16.3% by 2022 and 23% by 2024. By the year 2052, one in every four persons will be 60 years or over. This amounts to an addition of 4 million old-age persons during the period 2012–2052 (De Silva and De Silva, 2015).

<table>
<thead>
<tr>
<th>Table 1.3</th>
<th>Trends in ageing and dependency in Sri Lanka, 1970–2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population aged 0–14 years (% of total)</td>
<td>40.3</td>
</tr>
<tr>
<td>Population aged 65 years and above (% of total)</td>
<td>3.7</td>
</tr>
<tr>
<td>Population aged 80 years and above of both sexes (% of total)</td>
<td>0.49</td>
</tr>
<tr>
<td>Child (0–14 years) dependency ratio</td>
<td>71.9</td>
</tr>
<tr>
<td>Elder (65+ years) dependency ratio</td>
<td>6.6</td>
</tr>
<tr>
<td>Age dependency ratio* (population 0-14 and 65+ years / population 15-64 years)</td>
<td>78.5</td>
</tr>
</tbody>
</table>

* The age dependency ratio is an age – population ratio of those typically not in the labour force (the dependent part, ages 0–14 and 65+ years) and those typically in the labour force (the productive part ages, 15–64 years). The total dependency ratio can be broken down into the child dependency ratio (0–14 years) and the aged dependency ratio (65 years and above).

Source: World Bank, 2020
The dependency ratio for older persons has increased from 6.6 to 16.6 during the period 1970 to 2019, although there has been a decline in the total dependency ratio from 78.5 to 53.4. A feature of the decline in total dependency has been a lowering of the child dependency ratio (71.9 to 36.0) (Figure 1.3) due to the declining birth rate (Table 1.1). The ratio of 0–14 years to those 65 years and over declined from 10.9 to 1 in 1970 to 2.2 to 1 in 2019 (Table 1.3).

Source: UN DESA, 2019

Source: World Bank, 2020
The parental support ratio is 8, measured as the number of persons aged 80 years and over per 100 persons aged 50–64 years based on the 2012 Census. This is due to the fact that there are a large number of persons in the 50–64 years age cohort born during the baby boom during 1948–1962. In the current demographic scenario of families having fewer children and the older cohorts expected to live longer, this is very likely to change (United Nations Population Fund, 2017).

Like the population itself, ageing is also not distributed evenly across the nine provinces in the country. In the Northern Province (5.2% of the total population, 11.8% of the population is 60 years and over), North Central (6.3% of the total population, 9.4% of the population is 60 years and over), Uva (6.3% of the total population, 10.8% of the population is 60 years and over), Sabaragamuwa (9.4% of the total population, 13.8% of the population is 60 years and over) and Southern Province (12.2% of the total population, 14.0% of the population is 60 years and over), the proportion of those 60 years of age and over are more than its population proportion, suggesting provincial variations in the pace of the demographic transition (United Nations Population Fund, 2017).

It is noted that more than half of older people have some physical and/or mental impairment. Nearly 22% of the older people have visual difficulties, 11.3% have hearing difficulties, 19.4% have walking problems while nearly 8% have cognitive dysfunction. Among those aged 80 years and over, 19% were unable to care for themselves and 10% had communication difficulties. About 60% of persons 80 years and over had experienced at least one disability and 30% had experienced three or more (United Nations Population Fund, 2017).

It was also noted that 45% of those 60 years and over have at least one NCD; those mostly associated with ageing being cardiovascular disease (CVD), cancer, diabetes mellitus (DM), arthritis, depression, dementia and Alzheimer disease (United Nations Population Fund, 2017). Prevention and early detection of these diseases and adequate service provision for managing them, as well as disability and long-term care and ensuring economic security for older people remain priorities, especially in the provinces and districts with a large number of such persons.

At present, the country does not have a comprehensive social protection mechanism for the older population and, as such, it is important to examine the status of economic activity as an indicator of economic well-being of this group. The 2012 Census showed that 75% of those over 60 years of age were economically inactive; 43% of the men and 11% of the women were employed. Among those employed, 38% of the women were in elementary occupations while 31% of the men were skilled workers in agriculture, forestry and
fisheries. It was also recorded that one in every three women over 60 years of age was widowed, which increased to 50% among those 80 years and older.

Extended families play a vital role in the care of older persons. The majority, especially women, are also economically dependent. Although increasing longevity should be looked upon as an achievement to be proud of, the older population is a resource that is not fully utilized. Thus, the creation of opportunities for older persons to engage in productive and healthy ageing is a priority (United Nations Population Fund, 2017).

### 1.1.2 Comparison with selected countries

Comparing Sri Lanka with selected countries in the World Health Organization (WHO) South-East Asia and Western Pacific regions (Table 1.4), it is seen that while Sri Lanka is the smallest country in terms of size and total population, its population density is second only to that of the Philippines.

Of the countries selected, Thailand is the only country that has a higher percentage of those 65 years and over (11.4%) compared to Sri Lanka (10.1%), but the population below 14 years of age in Thailand (17.3%) is the lowest of all the countries used in the comparison, resulting in the lowest age dependency ratio.

Life expectancy at birth in Sri Lanka (75.3 years) is on a par with Malaysia and Thailand but is one year less than that of Viet Nam (76.3 years). Adult literacy (91.2%) is the lowest of all the countries used in the comparison; however, the HDI is second to only that of Malaysia.

Among the comparison countries, Sri Lanka is ranked third in respect of the gross domestic product (GDP) per capita, but it is less than half that of Malaysia and around 62% of that of Thailand.

Healthcare Access and Quality Index (HAQI), calculated using 37 of the 50 Sustainable Development Goals (SDGs), is a proxy measure of the overall effectiveness of the health-care system. Sri Lanka’s score of 73 out of hundred is the highest score among the comparison countries (2017a). When the SDG index is considered, Malaysia is ranked higher than Sri Lanka, while all other comparison countries are ranked below Sri Lanka. It is noted that in respect of the SDG score, the country has shown progress from 38 in 1990 to the current score of 62 (GBD 2016 SDG Collaborators, 2017). Among the comparison countries, Sri Lanka is ranked fourth in service coverage, despite having universal coverage for indicators such as bed availability, immunization and pregnancy care. The low value of this indicator for Sri Lanka is mainly due to the reported poor coverage for indicators such as care-seeking behaviour.
for pneumonia (52%),\(^\text{1}\) antiretroviral therapy (ART) for HIV (27%) and cervical cancer screening (25%).

<table>
<thead>
<tr>
<th>Table 1.4</th>
<th>Comparison of Sri Lanka with selected countries in the WHO South-East Asia and Western Pacific regions, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sri Lanka</td>
</tr>
<tr>
<td>Population, total (millions)</td>
<td>21.44</td>
</tr>
<tr>
<td>Land area in sq.km</td>
<td>62.710</td>
</tr>
<tr>
<td>Population density/sq.km</td>
<td>342.0</td>
</tr>
<tr>
<td>Population ages 0–14 years (% of total)</td>
<td>24.0</td>
</tr>
<tr>
<td>Population ages 65 years and above (% of total)</td>
<td>10.1</td>
</tr>
<tr>
<td>Age dependency ratio (% of working-age population)</td>
<td>51.7</td>
</tr>
<tr>
<td>Age dependency ratio, old (% of working-age population)</td>
<td>15.3</td>
</tr>
<tr>
<td>Age dependency ratio, young (% of working-age population)</td>
<td>36.4</td>
</tr>
<tr>
<td>Life expectancy at birth (2016)</td>
<td>75.3</td>
</tr>
<tr>
<td>Total adult literacy rate % (2008–2012) *</td>
<td>91.2</td>
</tr>
<tr>
<td>HDI **</td>
<td>0.77</td>
</tr>
<tr>
<td>GDP per capita (current US$)</td>
<td>4065.2</td>
</tr>
<tr>
<td>SDG – UHC indicator (3.8.1) Service coverage indicator</td>
<td>62</td>
</tr>
</tbody>
</table>

GBD: global burden of disease; GDP: gross domestic product; HDI: human development index; SDG: Sustainable Development Goal; UHC: universal health coverage

Sources: World Bank, 2020; *UNICEF, 2018; ** United Nations Development Programme, 2019

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\(^{1}\) The data for the indicator on care-seeking behaviour for pneumonia is from the Demographic and Health Survey (DHS) 2016. The information sought in the survey is on “Treatment for acute respiratory infections in children under 5 years of age”. The percentage represents children who had been taken to a health facility for advice or treatment. In the absence of information on health-seeking behaviour specific to pneumonia, this percentage has been used in the compilation of the index and 52% may be an underestimate.
1.2 Economic context

The economy that evolved under British rule was oriented towards plantation agriculture. As such, at Independence, Sri Lanka inherited an agriculture-based export economy, deriving more than a third of its income from the export of tea, rubber and coconut. Favourable export incomes supported the pursuit of a welfare economy focused on equity, which paid dividends in the form of significant improvements in the area of human development. The high consumption, low investment in economic development, declining commodity prices and failure to diversify led to a decline in the economy. Plantations, the petroleum industry, the port and omnibus companies were nationalized by a socialist regime. The change of government in 1977 brought a change in policies that introduced a free-market economy, which promoted privatization, deregulation and promotion of private enterprise (Indraratna, 1998) (Table 1.5).

### Table 1.5  Macroeconomic indicators, 1970–2018

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<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (local current US$) in billions</td>
<td>2.3</td>
<td>4.0</td>
<td>8.0</td>
<td>16.6</td>
<td>56.7</td>
<td>82.4</td>
<td>88.0</td>
<td>88.9</td>
</tr>
<tr>
<td>GDP, PPP (current US$) in billions</td>
<td>..</td>
<td>..</td>
<td>40.5</td>
<td>82.5</td>
<td>168.8</td>
<td>261.7</td>
<td>276.2</td>
<td>291.5</td>
</tr>
<tr>
<td>GDP per capita (current US$) in thousands</td>
<td>183.9</td>
<td>267.7</td>
<td>463.5</td>
<td>869.5</td>
<td>2808.4</td>
<td>3886.3</td>
<td>4104.6</td>
<td>4102.5</td>
</tr>
<tr>
<td>GDP average annual growth rate for the past 10 years (%)</td>
<td>3.8</td>
<td>5.8</td>
<td>6.4</td>
<td>6.0</td>
<td>8.0</td>
<td>4.5</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Public expenditure (% of GDP)/ gross national expenditure (% of GDP)</td>
<td>103.1</td>
<td>122.6</td>
<td>107.9</td>
<td>110.6</td>
<td>107.3</td>
<td>107.3</td>
<td>107.2</td>
<td>107.3</td>
</tr>
<tr>
<td>Current account balance (% of GDP)</td>
<td>..</td>
<td>-16.3</td>
<td>-3.7</td>
<td>-6.4</td>
<td>-1.9</td>
<td>-2.1</td>
<td>-2.6</td>
<td>-3.2</td>
</tr>
<tr>
<td>Tax burden (% of GDP)–tax revenue (% of GDP)</td>
<td>..</td>
<td>..</td>
<td>19.0</td>
<td>14.5</td>
<td>11.3</td>
<td>12.2</td>
<td>12.4</td>
<td>..</td>
</tr>
<tr>
<td>Public debt (% of GDP)–Central Government debt</td>
<td>..</td>
<td>..</td>
<td>96.6</td>
<td>96.9</td>
<td>71.6</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Value added in industry (% of GDP)</td>
<td>24.2</td>
<td>29.9</td>
<td>26.3</td>
<td>27.3</td>
<td>26.6</td>
<td>27.3</td>
<td>27.3</td>
<td>27.0</td>
</tr>
<tr>
<td>Value added in agriculture (% of GDP)</td>
<td>28.8</td>
<td>27.8</td>
<td>26.7</td>
<td>19.9</td>
<td>8.5</td>
<td>7.5</td>
<td>7.8</td>
<td>7.9</td>
</tr>
<tr>
<td>Value added in services (% of GDP)</td>
<td>47.1</td>
<td>42.3</td>
<td>47.0</td>
<td>52.8</td>
<td>54.6</td>
<td>56.9</td>
<td>55.7</td>
<td>56.8</td>
</tr>
<tr>
<td>Labour force (total) in millions</td>
<td>..</td>
<td>..</td>
<td>7.4</td>
<td>7.8</td>
<td>8.2</td>
<td>8.5</td>
<td>8.5</td>
<td>8.6</td>
</tr>
<tr>
<td>Unemployment, total (% of labour force)</td>
<td>..</td>
<td>..</td>
<td>15.9</td>
<td>7.7</td>
<td>4.9</td>
<td>4.4</td>
<td>4.2</td>
<td>4.4</td>
</tr>
<tr>
<td>Poverty rate (poverty headcount ratio %)</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>4.1</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Income or wealth inequality (income share held by lowest 20%)</td>
<td>..</td>
<td>..</td>
<td>8.7</td>
<td>..</td>
<td>..</td>
<td>7.0</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Real interest rate</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>-10.2</td>
<td>6.2</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Official exchange rate (US$)</td>
<td>6.0</td>
<td>16.5</td>
<td>40.1</td>
<td>77.0</td>
<td>113.1</td>
<td>146.5</td>
<td>152.4</td>
<td>162.5</td>
</tr>
</tbody>
</table>

GDP: gross domestic product; PPP: purchasing power parity

Source: World Bank, 2020
In 2018, Sri Lanka transited to an upper-middle-income country according to the World Bank definition, with a per capita GDP of US$ 4102.5 (however, in July 2020, World Bank downgraded Sri Lanka to lower-middle-income status). This led to a change in the beneficiary status for foreign aid and a limiting of the developmental assistance to the country. The economy grew markedly in the post-conflict period (8.0% in 2010) but has shown a declining trend at 4.5% in 2016 and 3.2% in 2018.

The poverty headcount ratio was reported as 4.1 in 2016 (World Bank, 2020) and the income share held by the lowest 20% at 7.0, a decline from 8.7 in 1990 (World Bank, 2020). The main sectors of the economy are tourism, and tea, apparel and textile export while overseas employment contributes substantially towards foreign exchange earnings (Ministry of Finance, 2019).

1.3 Political context

The documented history of the country begins with the arrival of the first Indo – Aryan immigrants from the north-western region of India, in the fifth century BC. The island was ruled by kings from then on, until the last kingdom, the kingdom of Kandy, was ceded to the British in 1815 (De Silva, 2005). The more recent political history of the country has been greatly influenced by its history as a British colony.

In 1948, the country received autonomy within the British Commonwealth as the Dominion of Ceylon and continued to be governed as a parliamentary democracy. A new constitution adopted in 1978 provided for an elected executive president and a unicameral parliament. The President is the head of State, head of government and the commander in chief. The President heads the cabinet and appoints ministers from among the members of parliament. The Parliament of Sri Lanka is a 225-member legislature with 196 members elected from 22 multi-seat electoral districts and 29 elected from the national list allocated to the parties and independent groups in proportion to their share of the national vote (Parliament of the Democratic Socialist Republic of Sri Lanka, 1978).

With the Thirteenth amendment to the Constitution in 1987, the administration was decentralized, and nine provincial councils were created. Provincial councils are directly elected for a 5-year term. The leader of the council’s majority party serves as the chief minister and is assisted by a board of provincial ministers. A provincial governor and a provincial secretary, who is the head of the provincial administration, are appointed by the President. Below the provincial level are several elected bodies. Municipal councils and urban councils are responsible for the administration of municipalities
and cities, respectively, while the *pradeshiya sabhas* administer demarcated clusters of villages (Parliament of the Democratic Socialist Republic of Sri Lanka, 1987). The country has been able to maintain its democratic traditions despite periods of political unrest, the insurrections of 1971, 1987–1989 and a three decade-long civil conflict, which was successfully settled in 2009.

Sri Lanka’s judiciary consists of a supreme court – the highest and final superior court, a court of appeal, high courts and a number of subordinate magistrate courts. Roman Dutch law is called the “common law” of the country. Criminal law is based predominantly on British law. The civil procedure code, which governs civil matters, is influenced by the Indian, British and American rules of procedure. The constitutional and administrative law has been derived from the Anglo-American systems while the Roman Dutch law is the basis for private legal matters. Kandyan Law, Muslim Law and Thesawalami are laws applicable to certain aspects of life and to defined sections of the population (Ranasinghe et al., 2007).

Since Independence, Sri Lanka has experienced three armed conflicts. There were two insurrections in the south, which mainly involved the Sinhalese youth. These were led by the Janatha Vimukthi Peramuna (JVP), currently a leftist political party in the mainstream politics of the country, the first being in 1971 while the second was a more protracted conflict from 1987 to 1990. These conflicts did not trigger major mass movements of the population, though many individuals and families were temporarily displaced from their homes.

The most severe conflict the country has faced was the 30-year armed conflict waged by the Liberation Tigers of Tamil Eelam (LTTE), aiming to create an autonomous Tamil state encompassing the Northern and Eastern provinces of the country. This was decisively ended when the Sri Lankan army overcame the LTTE in 2009 (Siriwardhana and Wickramage, 2014).

### 1.4 Health status

Sri Lanka has been able to achieve a relatively high level of health while still being a low-middle-income country. The country has been able to eliminate malaria, filariasis, leprosy, polio and neonatal tetanus and achieve near elimination of most other vaccine-preventable diseases (VPDs) targeted by the EPI. Hospital data show declining trends in admissions for gastrointestinal infections and parasitic diseases. However, emerging new infections such as dengue, epidemic influenza and leptospirosis, and re-emergence of old infections such as tuberculosis pose challenges to health (World Health Organization, 2018a).
Figure 1.4 shows that NCDs form the bulk of the disease burden and contribute the highest number of deaths per 100,000 population, the next highest being injuries, suggesting that the country is in the late stages of the epidemiological transition. A steady decline in deaths and disability-adjusted life years (DALYs) due to all three categories is noted, indicating improvements in health and the social determinants of health.

**Figure 1.4 Deaths and DALYs per 100 000 population for major groups, 2004–2016**

![Graph showing deaths and DALYs per 100,000 population for major groups, 2004–2016.](image)

Group 1—Communicable, maternal, neonatal and nutritional diseases; Group 2—NCDs; Group 3—Injuries, violence, self-harm and accidents  
*Source: Institute for Health Metrics and Evaluation, 2020b*

### 1.4.1 Mortality

Table 1.6 shows that LE at birth has been increasing steadily for both sexes, with women enjoying 6.7 years more of life than men. Healthy life expectancy (HLE) at birth has also shown an increase over the years but at a much slower rate than LE. The difference between the two measures has increased over time, suggesting increasing survival with ill-health. The increase in LE and HLE for men over the period 2000–2016 is 4.4 years and 3.6 years, respectively, which is more as compared to 3.7 and 3.1 years, respectively, for women. The increase in HLE at 60 years of age during the 16-year period 2000–2016 is the same for both sexes (1.7 years). These figures suggest that improvements in mortality have been mainly in those below 60 years of age.
Table 1.6  Life expectancy and healthy life expectancy for Sri Lanka by sex, 2000–2016

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Both sexes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life expectancy (LE)</td>
<td>71.0</td>
<td>73.9</td>
<td>74.4</td>
<td>75.1</td>
<td>75.3</td>
</tr>
<tr>
<td>Healthy LE (HLE)</td>
<td>63.4</td>
<td>65.7</td>
<td>66.1</td>
<td>66.6</td>
<td>66.8</td>
</tr>
<tr>
<td>Healthy LE at 60 years</td>
<td>14.3</td>
<td>15.5</td>
<td>15.5</td>
<td>15.9</td>
<td>16.1</td>
</tr>
<tr>
<td>Difference between LE and HLE</td>
<td>7.6</td>
<td>8.2</td>
<td>8.3</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LE</td>
<td>67.5</td>
<td>70.4</td>
<td>70.9</td>
<td>71.7</td>
<td>71.9</td>
</tr>
<tr>
<td>HLE</td>
<td>60.8</td>
<td>63.1</td>
<td>63.5</td>
<td>64.2</td>
<td>64.4</td>
</tr>
<tr>
<td>HLE at 60 years</td>
<td>13.4</td>
<td>14.2</td>
<td>14.3</td>
<td>15.0</td>
<td>15.1</td>
</tr>
<tr>
<td>Difference between LE and HLE</td>
<td>6.7</td>
<td>7.3</td>
<td>7.4</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LE</td>
<td>74.9</td>
<td>77.7</td>
<td>77.9</td>
<td>78.4</td>
<td>78.6</td>
</tr>
<tr>
<td>HLE</td>
<td>66.2</td>
<td>68.5</td>
<td>68.6</td>
<td>69.0</td>
<td>69.3</td>
</tr>
<tr>
<td>HLE at 60 years</td>
<td>15.2</td>
<td>16.8</td>
<td>16.6</td>
<td>16.8</td>
<td>16.9</td>
</tr>
<tr>
<td>Difference between LE and HLE</td>
<td>8.7</td>
<td>9.2</td>
<td>9.3</td>
<td>9.4</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Sources: LE: World Bank, 2020; HLE: World Health organization, 2019a

A gradual decline in crude death rates is noted in both sexes. The crude death rate in males (195.7 per 1000 adult males) is 2.7 times that of females (72.9 per 1000 adult females) and is a cause for concern. The country has an effective MCH care system dating back to 1926, which has produced significant gains in terms of IMR (8), NMR (5.8), U5MR (9.4) and MMR (26.8). However, the rate of decline of these indicators has slowed down in the past decade (Table 1.7). It is important to note that both infant and child mortality rates are marginally more in girl children compared to boys.

The bulk of childhood mortality is due to neonatal deaths (71%) and, of the neonatal deaths, the majority (71%) are early neonatal deaths\(^2\) (Ministry of Health and Indigenous Medical Services, 2019)\(^3\). The most significant causes

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2. The death of a live newborn during the first 28 days of life. An early neonatal death is considered by WHO to be death within the first 7 days of life.

3. The Ministry of Health of Sri Lanka has undergone numerous name changes over the past 20 years. In the text of this document, we use “Ministry of Health”, which is the current iteration. However, when referencing ministry publications, we use the name that was used by the Ministry at the time of publication.
of newborn deaths in Sri Lanka are congenital anomalies, prematurity, birth asphyxia and neonatal sepsis (Ministry of Health and Indigenous Medical Services, 2019). Accidents and congenital abnormalities account for about 58% of deaths among 1–5 year olds (Ministry of Health and Indigenous Medical Services, 2019).

The decline in MMR in the country has received many accolades. However, over the past decade, it has been fluctuating between 40.2 and 31.1 per 100,000 live births. It is noted that 65% of deaths in 2017 were due to indirect causes. The most common causes of deaths were dengue haemorrhagic fever (21), heart disease complicating pregnancy (20), respiratory disease (17) and obstetric haemorrhage (11), accounting for 54% of deaths in 2017 (Ministry of Health and Indigenous Medical Services, 2019).

Table 1.7  Trends in mortality rate, 1970–2018

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality rate (male) per 1000 adult males</td>
<td>248.3</td>
<td>224.1</td>
<td>258.9</td>
<td>244.8</td>
<td>202.1</td>
<td>198.0</td>
<td>195.7</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Mortality rate (female) per 1000 adult females</td>
<td>171.4</td>
<td>138.2</td>
<td>120.8</td>
<td>99.9</td>
<td>78.8</td>
<td>74.1</td>
<td>72.9</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>MMR (modelled estimates)</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>56.0</td>
<td>38.0</td>
<td>36.0</td>
<td>36.0</td>
<td>36.0</td>
<td>..</td>
</tr>
<tr>
<td>Neonatal mortality rate (NNMR)</td>
<td>32.1</td>
<td>20.4</td>
<td>12.7</td>
<td>9.6</td>
<td>5.9</td>
<td>5.5</td>
<td>5.3</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>IMR</td>
<td>54.4</td>
<td>39.6</td>
<td>18.1</td>
<td>14.2</td>
<td>10.0</td>
<td>8.2</td>
<td>7.8</td>
<td>7.5</td>
<td>6.4</td>
</tr>
<tr>
<td>IMR – male</td>
<td>..</td>
<td>..</td>
<td>16.3</td>
<td>12.8</td>
<td>9.0</td>
<td>7.4</td>
<td>..</td>
<td>6.8</td>
<td>6.9</td>
</tr>
<tr>
<td>IMR – female</td>
<td>..</td>
<td>..</td>
<td>19.9</td>
<td>15.5</td>
<td>10.8</td>
<td>8.9</td>
<td>..</td>
<td>8.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Under 5 mortality rate (U5MR)</td>
<td>71.7</td>
<td>50.1</td>
<td>21.3</td>
<td>16.5</td>
<td>11.6</td>
<td>9.5</td>
<td>9.1</td>
<td>8.8</td>
<td>7.4</td>
</tr>
<tr>
<td>U5MR – male</td>
<td>..</td>
<td>..</td>
<td>19.4</td>
<td>15.1</td>
<td>10.6</td>
<td>8.7</td>
<td>..</td>
<td>8.0</td>
<td>8.1</td>
</tr>
<tr>
<td>U5MR – female</td>
<td>..</td>
<td>..</td>
<td>23.1</td>
<td>17.9</td>
<td>12.6</td>
<td>10.4</td>
<td>..</td>
<td>9.6</td>
<td>6.8</td>
</tr>
</tbody>
</table>

Note: No data were available for perinatal mortality rate and post neonatal mortality rate.

Source: World Bank, 2020

It is estimated that NCDs account for 81% of all deaths. The three leading causes of death in the country are ischaemic heart disease (IHD), CVDs and diabetes. All three show increases since 2007, the highest increase being in diabetes (43.4%). Death due to asthma is ranked fourth, with Alzheimer disease and lower respiratory tract infections following. Death due to Alzheimer disease has increased by 50.9% while asthma shows a very small
increase of 1.5% and lower respiratory tract infections an increase of 17.2%. The highest decrease in deaths is seen for self-harm (10.2%) (Institute for Health Metrics and Evaluation, 2020b).

IHD and neoplasms have been the leading causes of deaths in government hospitals, both in 2010 (23.9%) and 2016 (26.1%) (Ministry of Health, Nutrition and Indigenous Medicine, 2018a). The increased caseload of dengue and leptospirosis had increased the rank of zoonotic and other bacterial diseases (Table 1.8).

Table 1.8 Leading causes of deaths in government hospitals in Sri Lanka, 2010 and 2016

<table>
<thead>
<tr>
<th>Rank</th>
<th>Condition</th>
<th>2010 (%)</th>
<th>Condition</th>
<th>2016 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ischaemic heart disease</td>
<td>12.8</td>
<td>Ischaemic heart disease</td>
<td>14.1</td>
</tr>
<tr>
<td>2</td>
<td>Neoplasms</td>
<td>11.1</td>
<td>Neoplasms</td>
<td>12.0</td>
</tr>
<tr>
<td>3</td>
<td>Pulmonary heart disease and diseases of the pulmonary circulation</td>
<td>8.7</td>
<td>Zoonotic and other bacterial diseases</td>
<td>11.6</td>
</tr>
<tr>
<td>4</td>
<td>Cerebrovascular diseases</td>
<td>8.7</td>
<td>Pulmonary heart disease and diseases of the pulmonary circulation</td>
<td>8.7</td>
</tr>
<tr>
<td>5</td>
<td>Disease of the respiratory system excluding upper respiratory tract infection (URTI)</td>
<td>7.0</td>
<td>Disease of the respiratory system excluding URTI</td>
<td>8.3</td>
</tr>
<tr>
<td>6</td>
<td>Zoonotic and other bacterial diseases</td>
<td>6.6</td>
<td>Cerebrovascular diseases</td>
<td>8.2</td>
</tr>
<tr>
<td>7</td>
<td>Diseases of the gastrointestinal tract</td>
<td>6.2</td>
<td>Pneumonia</td>
<td>6.4</td>
</tr>
<tr>
<td>8</td>
<td>Diseases of the urinary system</td>
<td>5.7</td>
<td>Diseases of the urinary system</td>
<td>6.2</td>
</tr>
<tr>
<td>9</td>
<td>Pneumonia</td>
<td>5.2</td>
<td>Diseases of the gastrointestinal tract</td>
<td>5.5</td>
</tr>
<tr>
<td>10</td>
<td>Symptoms, signs &amp; abnormal clinical and laboratory findings</td>
<td>5.0</td>
<td>Traumatic injuries</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018a

1.4.2 Burden of disease

The disease burden in terms of death and disability due to NCDs is estimated to be substantial and has been increasing over the years. From 2007 to 2017, CVD has remained the leading cause of DALYs while diabetes and
kidney disease have gained in importance. This is likely to be due to the increasing problem of chronic kidney disease of unknown aetiology (CKDu) seen in agricultural communities in parts of the dry zone of the country (Ruwanpathirana et al., 2019). In 2017, chronic respiratory diseases showed increased importance, while self-harm and interpersonal violence had a lower ranking in 2017 as compared to 2007 (Table 1.9).

Table 1.9  Top 10 leading causes of DALYs for Sri Lanka, 2007–2017

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>2007</th>
<th>2012 (%)</th>
<th>2017 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CVDs</td>
<td>CVDs (2.4%)</td>
<td>CVDs (4.8%)</td>
</tr>
<tr>
<td>2</td>
<td>Self-harm and interpersonal violence</td>
<td>Diabetes and kidney diseases (18.9%)</td>
<td>Diabetes and kidney diseases (28.6%)</td>
</tr>
<tr>
<td>3</td>
<td>Diabetes and kidney diseases</td>
<td>Neoplasms (10.2%)</td>
<td>Neoplasms (18.4%)</td>
</tr>
<tr>
<td>4</td>
<td>Neoplasms</td>
<td>Musculoskeletal disorders (10.8%)</td>
<td>Musculoskeletal disorders (21.4%)</td>
</tr>
<tr>
<td>5</td>
<td>Musculoskeletal disorders</td>
<td>Mental disorders (4.3%)</td>
<td>Mental disorders (9.3%)</td>
</tr>
<tr>
<td>6</td>
<td>Mental disorders</td>
<td>Chronic respiratory diseases (2.7%)</td>
<td>Chronic respiratory diseases (7.6%)</td>
</tr>
<tr>
<td>7</td>
<td>Chronic respiratory diseases</td>
<td>Self-harm and interpersonal violence (–41.9%)</td>
<td>Neurological disorders (17.9%)</td>
</tr>
<tr>
<td>8</td>
<td>Neurological disorders</td>
<td>Neurological disorders (8.3%)</td>
<td>Self-harm and interpersonal violence (–44.5%)</td>
</tr>
<tr>
<td>9</td>
<td>Other NCDs</td>
<td>Other NCDs (2.7%)</td>
<td>Other NCDs (–5.8%)</td>
</tr>
<tr>
<td>10</td>
<td>Unintentional injuries</td>
<td>Unintentional injuries (–11.8%)</td>
<td>Sense organ diseases (24.3%)</td>
</tr>
</tbody>
</table>

Note: Percentage change given in parenthesis
CVD: cardiovascular disease; DALYs: disability-adjusted life years; NCD: noncommunicable disease
Source: Institute for Health Metrics and Evaluation, 2020b

Table 1.10 shows that the largest contributor to the burden of disease in men is ischaemic heart disease, followed by DM, self-harm and stroke, in that order. In women, the biggest contributor to burden of disease is DM followed by IHD and stroke. It is noted that in IHD and stroke, the years of life lost (YLL) form a very high proportion of the DALYs, ranging from 73% to 97%. In men, self-harm and road injuries also show a similar picture, the percentage contribution of YLL to DALYs from these two conditions being 99.6% and 84.5%, respectively.
An important feature that contributes to the burden of disease is the fact that both DM and CVD in Sri Lanka are characterized by early onset and severe course of the disease, leading to disabling complications and premature death (Ministry of Health, Nutrition and Indigenous Medicine and World Health Organization, 2019). These conditions have the potential to produce a sizeable impact on the economic productivity of the country. The need for primary prevention using multidisciplinary approaches is recognized.

Table 1.10 Top five causes of DALYs lost and YLL as a proportion of DALYs by sex, 2017

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Causes</th>
<th>YLL (x 1000)</th>
<th>YLD (x 1000)</th>
<th>DALYs (x 1000)</th>
<th>Proportion of YLL/DALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Ischaemic heart disease</td>
<td>296.8</td>
<td>10.0</td>
<td>306.8</td>
<td>96.7</td>
</tr>
<tr>
<td>2</td>
<td>Diabetes mellitus</td>
<td>118.3</td>
<td>82.6</td>
<td>200.9</td>
<td>58.9</td>
</tr>
<tr>
<td>3</td>
<td>Self-harm</td>
<td>147.5</td>
<td>0.6</td>
<td>148.1</td>
<td>99.6</td>
</tr>
<tr>
<td>4</td>
<td>Stroke</td>
<td>112.8</td>
<td>21.5</td>
<td>134.4</td>
<td>83.9</td>
</tr>
<tr>
<td>5</td>
<td>Road injuries</td>
<td>83.4</td>
<td>15.3</td>
<td>98.7</td>
<td>84.5</td>
</tr>
<tr>
<td>Female</td>
<td>Diabetes mellitus</td>
<td>101.7</td>
<td>89.7</td>
<td>191.4</td>
<td>53.1</td>
</tr>
<tr>
<td>2</td>
<td>Ischaemic heart disease</td>
<td>151.6</td>
<td>7.6</td>
<td>159.2</td>
<td>95.2</td>
</tr>
<tr>
<td>3</td>
<td>Stroke</td>
<td>79.4</td>
<td>29.5</td>
<td>108.9</td>
<td>72.9</td>
</tr>
<tr>
<td>4</td>
<td>Low back pain</td>
<td>0</td>
<td>88.5</td>
<td>88.5</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Headache disorders</td>
<td>0</td>
<td>84.8</td>
<td>84.8</td>
<td>0</td>
</tr>
</tbody>
</table>

YLL: years of life lost; YLD: years lived with disability; DALY: disability-adjusted life year
Source: Institute for Health Metrics and Evaluation, 2020b

Figure 1.5 shows the top 10 leading causes of YLL and the changes over the 10-year period from 2007 to 2017. The highest increases are noted in diabetes, chronic kidney disease and IHD.
Figure 1.5  Top 10 leading causes of YLL for Sri Lanka in 2017 and percentage change during 2007–2017

<table>
<thead>
<tr>
<th>Cause</th>
<th>2007-2017 Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic heart disease</td>
<td>4.1%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>34.3%</td>
</tr>
<tr>
<td>Stroke</td>
<td>-9.5%</td>
</tr>
<tr>
<td>Self harm</td>
<td>-16.6%</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>-8.8%</td>
</tr>
<tr>
<td>Neonatal disorders</td>
<td>-31.8%</td>
</tr>
<tr>
<td>Lower respiratory infections</td>
<td>-4.6%</td>
</tr>
<tr>
<td>Asthma</td>
<td>-13.0%</td>
</tr>
<tr>
<td>Road injuries</td>
<td>8.1%</td>
</tr>
<tr>
<td>Chronic kidney diseases</td>
<td></td>
</tr>
</tbody>
</table>

Source: Institute for Health Metrics and Evaluation, 2020a

Morbidity

Data on admissions to government hospitals show that admissions due to IHD have steadily increased over the past decade, the rate being 547 admissions per 100 000 population in 2017. Hospital admissions for DM have shown a parallel trend, but at a lower level compared to IHD (Ministry of Health, Nutrition and Indigenous Medicine and World Health Organization, 2019). Declining trends are observed in admissions for gastrointestinal infections and parasitic diseases, while emerging new infections such as dengue, epidemic influenza and leptospirosis and re-emergence of old infections such as tuberculosis pose challenges to health (World Health Organization, 2018a). However, it must be noted that hospital admissions may not reflect a true prevalence of the condition; they identify health service utilization and the burden to the health-care system.

YLD indicate conditions that people live with and for which services need to be provided (Figure 1.6). DM, age-related hearing loss, blindness and impaired vision, chronic obstructive pulmonary disease and low back pain make a significant contribution to YLD.
Figure 1.6 Top 11 leading causes of YLD for Sri Lanka in 2017 and percentage change during 2007–2017

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower back pain</td>
<td>19.0%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>36.6%</td>
</tr>
<tr>
<td>Headache disorders</td>
<td>9.3%</td>
</tr>
<tr>
<td>Age related hearing loss</td>
<td>24.4%</td>
</tr>
<tr>
<td>Depressive disorders</td>
<td>10.0%</td>
</tr>
<tr>
<td>Blindness and vision impairments</td>
<td>23.9%</td>
</tr>
<tr>
<td>Other musculoskeletal problems</td>
<td>20.9%</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>21.9%</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>11.7%</td>
</tr>
<tr>
<td>Neck pain</td>
<td>19.8%</td>
</tr>
<tr>
<td>Dietary iron deficiency</td>
<td>-21.0%</td>
</tr>
</tbody>
</table>

Source: Institute for Health Metrics and Evaluation, 2020a

1.4.3 Risk factors

Figure 1.7 shows the top 10 risk factors driving death and disability in 2017 in order of importance and the percentage change from 2007. It is seen that high fasting plasma glucose level has overtaken dietary risk as the leading risk factor during this period, and alcohol use and high body mass index (BMI) have shown an increase of 39.7% and 35.5%, respectively. Malnutrition shows the highest decrease (26.9%).
The WHO NCD STEPwise approach to surveillance (STEPS) for Sri Lanka (WHO STEPS, 2015) estimated that 90% of Sri Lankan adults (18–69 years) have at least one NCD risk factor, 73.5% have 1–2 risk factors and 18.3% have 3–5 risk factors, the prevalence being similar in males and females.

The STEPS survey 2015 also estimated that nearly 46% of men and 5.3% of women were current users of a tobacco product and that most were daily users. The current prevalence of smoking tobacco was 29.4% in men, more than two thirds being daily smokers. A little over a third (34.8%) of men were current alcohol users and nearly half of them (17%) reported heavy episodic drinking during the 30 days preceding the survey (World Health Organization, 2015) [Table 1.11].

The cost of alcohol and tobacco-related illness is high. It is estimated that tobacco is responsible for about 20 000 deaths annually, constituting 16% of all deaths (Ministry of Health, 2009b). Direct and indirect costs of alcohol and tobacco in Sri Lanka for the year 2015 was estimated to be SLR. 209.03 billion (alcohol SLR 119.66 Billion, tobacco SLR 89.37 Billion) accounting for 1.95% of the GDP for that year (National Authority on Tobacco and Alcohol, 2017).
Table 1.11 Summary of combined risk based on STEPS 2015

<table>
<thead>
<tr>
<th>Summary of combined risk</th>
<th>All</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage with no known* risk factors</td>
<td>8.2</td>
<td>7.6</td>
<td>8.8</td>
</tr>
<tr>
<td>Percentage with three or more of the above risk factors, aged 18–44 years</td>
<td>12.5</td>
<td>12.1</td>
<td>13.0</td>
</tr>
<tr>
<td>Percentage with three or more of the above risk factors, aged 45–69 years</td>
<td>27.8</td>
<td>24.0</td>
<td>31.4</td>
</tr>
<tr>
<td>Percentage with three or more of the above risk factors, aged 18–69 years</td>
<td>18.3</td>
<td>16.4</td>
<td>20.2</td>
</tr>
</tbody>
</table>

*Based on current daily smokers, overweight (BMI >25 kg/m3), less than five servings of fruits and vegetables, raised BP (SBP >140 and/or DBP >90 mmHg or currently on medication for raised BP) and insufficient physical activity


Both routine data and surveys (WHO STEPS 2015; DHS survey of 2016) highlight the increasing problem of overweight and obesity in the country. Routine data from the Reproductive Health Management Information System (RHMIS) (Ministry of Health, nutrition and Indigenous Medicine, 2018b) report that 21.3% of women who registered for antenatal care before 12 weeks of pregnancy had a BMI of over 25. The NCD risk factor survey of 2015 identified that nearly one fourth of males (24.6%) and one third of females (34.3%) in the age group of 18–69 years were either overweight (BMI 25.0–29.9) or obese (BMI 30 or more) (World Health Organization, 2015). The Demographic and Health Survey (DHS) 2015 reports that among non-pregnant women aged 15–49 years who have not given birth in the 2 months prior to the survey, 32% were overweight while 13% were obese.

It is well recognized that low birth-weight (LBW) babies are at increased risk for NCDs in later life (Barker, 2007). The prevalence of LBW has been fluctuating between 13.3% and 11.4% in the years 2007–2015 (Ministry of Health, nutrition and Indigenous Medicine, 2018b). The DHS 2016 reported a higher rate of 16.7% among live births in the 5 years preceding the survey, based on the Child Health and Development Record.

LBW is also the most important modifiable risk factor for malnutrition during the first 2 years of life. Maternal BMI being a major determinant of LBW, it is important to note that undernutrition is also seen among women in the reproductive age group. The RHMIS reports that in the period 2009–2015, a fifth to a quarter of women who registered for antenatal care before 12 weeks had a BMI less than 18.5.
Linear growth retardation in the first 2 years of life and subsequent obesity are known risk factors for NCDs, especially CVD (Black et al., 2013). Table 1.12 shows that the rates of childhood undernutrition remain unacceptably high. There are interdistrict and intersectoral disparities. There has been little change between 2006 and 2016, except in the prevalence of stunting in the estate sector, probably a result of many nutrition-specific and nutrition-related programmes carried out especially in this sector.

Table 1.12 Prevalence of stunting and wasting, 2006 and 2016

<table>
<thead>
<tr>
<th>Source</th>
<th>Prevalence of stunting %</th>
<th>Prevalence of wasting %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>Urban</td>
</tr>
<tr>
<td>DHS (2006)</td>
<td>17.3</td>
<td>13.8 (2.8)</td>
</tr>
<tr>
<td>DHS (2016)</td>
<td>17.3</td>
<td>14.7 (3.6)</td>
</tr>
</tbody>
</table>

DHS: Demographic and Health Survey
Sources: Department of Census and Statistics, 2009; Department of Census and Statistics, 2017

1.5 Human-induced and natural disasters

Sri Lanka experiences many natural hazards such as drought, floods, landslides, cyclones and coastal erosion. Some of these events have impacted life and infrastructure to an extent that can be called a disaster. The vulnerability of the country to natural disasters is noted to have increased in recent times and is attributed to increasing population pressure, land degradation and climate change.

The tsunami of 26 December 2004 was the most devastating natural disaster in the recorded history of the country, resulting in nearly 31 000 deaths and causing extensive damage to property (Galappathi and Karunanayake, 2007). The tsunami reached the east coast of the island within 2 hours of the earthquake, wrapped round the island affecting the south-east, southern, south-western and parts of the western coastline (Galappathi and Karunanayake, 2007).

Since Independence, Sri Lanka has experienced three armed conflicts, which impacted the whole country. Two insurgencies originated in the south of the

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4 Urban sector: all areas administered by municipal and urban councils constitute the urban sector. Estate sector: estate sector consists of all plantations that are 20 acres or more in extent and with 10 or more resident labourers. Rural sector: all areas other than urban and estate sectors comprise the rural sector. Source: Department of Census and Statistics, 2011a
country led by the JVP, a leftist party currently in mainstream politics. Many lost their lives and a considerable number were injured and displaced from their homes. However, these did not result in a major population migration (Siriwardhana and Wickramage, 2014).

The third was the more severe and protracted conflict with the LTTE. It is estimated that this resulted in the death of 61,878 people of all ethnicities during the period 1989–2009, and many more injured (Uppsala Conflict Data Program, 2020). This also resulted in the largest internal and external displacement experienced in Sri Lankan history. Studies have provided evidence of increased mortality, morbidity and disease burden, and increased prevalence of maternal and neonatal mortality, LBW, stillbirths and a decline in the use of antenatal care during the period of conflict and its immediate aftermath. Malnutrition, infectious diseases such as hepatitis A and leishmaniasis were prevalent among displaced persons. The conflict also had an enormous impact on the mental health of the population, particularly among those in the northern and eastern provinces. It is also important to recognize that health services in the conflict-affected areas continued to be funded, supplied and staffed at government expense throughout the conflict years, honouring the right to free care for all its citizens, including the rebels (Rannan-Eliya and Sikurajapathy, 2009). The resilience of the country’s health system enabled this continued service coverage and function within the conflict-affected areas in the face of many resource limitations and threats to individual safety. In the years since the cessation of the conflict, there has been a comprehensive restructuring of the health services in the affected areas with special attention to the needs of the population (Siriwardhana and Wickramage, 2014).
2. Organization and governance

Chapter summary

The Sri Lankan health system comprises western allopathic and other traditional systems, with the former serving the majority of the population.

Government health services commenced with the initiation of a civil medical department in 1858. In 1926, the preventive services were reorganized with the creation of the health unit system. Curative services are provided by a network of tertiary- and secondary-care institutions, divisional hospitals (outpatient and inward care) and primary medical care units offering outpatient care. The medical officer of health (MOH) and his team provide preventive services through health units that cover the whole island. All state sector services, both curative and preventive, are free of charge at the point of delivery. In addition, separate service facilities are available for the armed forces, police and prisons.

The public sector provides nearly 95% of inpatient care and around 50% of outpatient care. Although the private sector is becoming a growing presence, their services are available to only a fraction of the population due to the high costs involved. Furthermore, patient-related statistics from the private sector are limited since the national Health Information System (HIS) includes only the state sector. The state health services function under a cabinet minister. Following the Thirteenth amendment to the Constitution, health became a partially devolved subject. The Ministry of Health (MoH) is responsible for stewardship functions such as policy formulation and health legislation, programme monitoring and technical oversight, management of health technologies, human resources, and tertiary and other selected hospitals. The primary and secondary levels of curative care and preventive services function under the nine provincial ministries.

The first comprehensive national health policy based on primary health care (PHC) was prepared in 1992 and later revised with a focus on universal health coverage (UHC) (2014–2016). The current policy (2016–2025) addresses emerging health issues, quality and safety, and the expectations of the people.

2.1 Historical background

From the time of the ancient kings, the State has assumed responsibility for the protection and promotion of the health of the people. There is archaeological and literary evidence that the State provided hospitals, “houses of delivery”, convalescent homes, institutions for the crippled and hospitals for the blind (Uragoda, 1987). The indigenous system of medicine is called deshiya chikithsa. Legend suggests that Ravana, the prehistoric king of Lanka, was a physician. The authorship of several books on medicine, namely Arkaprakasaya, Kumarathanthraya and Udishasasthraya, is attributed to him (Uragoda, 1987).

The indigenous system of medicine of the country is a confluence of the Ayurvedic system of medicine from north India, the Siddha system from southern India, the Arabic Unani system and the traditional deshiya chikitsa.\(^5\) The western allopathic system of medicine that predominates current service provision was introduced in the country by the Portuguese and the Dutch, but they provided services mainly for their military units and colonial staff. The foundations of the present health-care system were laid down during the British colonial period with the creation of a civil medical department in 1858 and a sanitary branch in 1913 (Medcalf A et al., 2015). The civil medical department and its sanitary branch functioned independently (although the sanitary branch was organizationally placed within the civil medical department) until they were brought under one office, that of the Director of Medical and Sanitary services. To date, the government health service displays this dichotomy as two functional arms, preventive and curative, albeit with different nomenclature and few cross-links, under a single Director General of Health Services (DGHS) and served by two hierarchical structures.

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5 Sri Lanka has its own indigenous scheme of traditional medicine, which is called "Hela wedakama of Deshiya Chikitsa". It is a traditional system of medicine mainly in the form of manuscripts. Hela wedakama considers the body as a whole ailment and sees health and disease in holistic terms. It emphasizes on the harmony of mind, body and spirit to cure diseases. This system has been practiced for many centuries.
The Colombo Medical School was founded in 1870 to train doctors to serve in the government health services. The locals trained in allopathic medicine were able to exert pressure on the government for the extension of health services to the general population. The granting of universal franchise in 1931 and election of people’s representatives to the state council led to a demand for health care, education and increased road access. Furthermore, the devastating malaria epidemic of 1934–1935 (with an estimated 80 000–100 000 deaths) was instrumental in extending the health infrastructure to hitherto neglected rural regions. Two principles that have influenced the health system of the country to date, i.e. the emphasis on well-dispersed services and the need to provide protection from financial impoverishment following illness, emerged from this calamity (Ranan Eliya and Sikurajapathy, 2009).

An important development in the preventive services of the country was the establishment of the first health unit in Kalutara in 1926. A health unit is headed by an MOH and a team of professionals who serve the population of an identified geographical area. This system of provision of care spread gradually to cover the whole island.

The World Health Organization (WHO)’s concept of health as a fundamental human right was accepted by the very first government of independent Sri Lanka in 1949 and all subsequent governments have maintained this commitment.

2.2 Overview of the health system

The Sri Lankan health system comprises western allopathic and other systems, namely Ayurveda, Siddha, Unani, acupuncture and deshiya chikitsa, which derives from ancient Sri Lankan traditional knowledge. Almost all preventive care and most of the curative care needs of the country are provided by the government health system free of charge at the point of delivery.

In both systems, i.e. allopathic and indigenous, health care is provided by the government and the private sector, with very limited services being provided by non-profit organizations. Although both allopathic and traditional systems come under the purview of the MoH, the allopathic system caters to the needs of the majority (Ministry of Health, Nutrition and Indeginous Medical Services, 2019). In 2017, the government allopathic system provided care for 6 910 249 inpatients and 55 339 335 outpatients (Ministry of Health, Nutrition and Indeginous Medical Services, 2019), while the government indigenous system served only 36 088 inpatients (0.5% of the allopathic case
load) and 4,339,302 outpatients (7.8%) of the allopathic case load (Health Statistics Unit, MoH). Furthermore, information on the types of morbidities and characteristics of patients seen in the traditional systems is not routinely available (Ministry of Health, Nutrition and Indigenous Medicine, 2016a). Hence, the information presented in this publication is mainly on the allopathic system.

Allopathic medical care is provided through both the public and private sectors. The public sector provides 95% of inpatient care and 50% of outpatient care services (Ministry of Health, Nutrition and Indigenous Medicine, 2016a). In addition to the MoH, the Ministry of Defence and the Police Department provide curative health-care services to their personnel and their families through their own hospitals. The prison hospitals provide curative care to prisoners. The Department of Motor Traffic provides a service limited to medical examinations for those who apply for new or renewal of vehicle licenses. A few local government authorities, such as selected municipal councils, are responsible for providing preventive and curative care services to their taxpayers.

The Sri Lankan health system is recognized internationally as a high-impact, low-cost model (Perera et al., 2019). This achievement was built on the foundations of a health-care system that has been free at the point of delivery since 1951; adopting key primary health-care principles since 1926 (significantly in advance of the Declaration of Alma-Ata in 1978); and establishment of a wide network of close-to-client primary health-care services. Sri Lanka therefore seems well positioned to achieve UHC, although current demographic, epidemiological, social and economic transitions are challenges that need to be overcome to ensure universal and equitable provision of health financing and care (De Silva, Ranasinghe and Abeykoon, 2016).

2.3 Organization

The MoH provides overall stewardship and monitoring of government health services throughout the country. The Ministry is headed by a minister and a secretary, and the latter is usually a senior administrator from the Sri Lanka Administrative Service or sometimes a senior doctor who is a specialist administrator. Figure 2.1 depicts the organizational structure of the Ministry.
Figure 2.1 Organizational chart of the Ministry of Health, Nutrition and Indigenous Medicine (2017)

Source: Management Development and Planning Unit- Ministry of Health
The Director-General of Health Services (DGHS) is the technical head of the Ministry and is supported by a number of deputy directors-general (DDGs). These positions are usually held by senior specialist administrators or specialist community physicians with wide first-hand experience of the services from the ground level up. In addition, key national programmes have separate units headed by directors. Both curative and public health services are supported by such directorates, each of which serves as the national focal point responsible for reviewing the policies, system strategies, training curricula, programme implementation and other organizational and managerial inputs to meet emerging issues and challenges. They make recommendations to the DDGs and DGHS and thereby to the Health Secretary and the Minister. In addition to these, there are several agencies such as the National Authority on Tobacco and Alcohol, National Medicinal Regulatory Authority and Human Resources for Health Coordination Division, which are placed under the overall administrative purview of the Secretary Health.

Provincial health services are the responsibility of a Provincial Ministry of Health (PMoH) under the leadership of a Provincial Minister of Health. Provincial councils are vested with powers to formulate their own statutes pertaining to the subjects devolved to them. Thus, health is a devolved subject and PMoHs are able to function within the boundaries of overall national health policies. At the provincial ministry level, the minister and the secretary may have multiple portfolios, which may result in health having to compete with other services for priority and resources. Details of the funding of provincial services are described in section 3.2 of Chapter 3.

Vertical programmes, which are mainly promotive and preventive in nature, are coordinated by the special campaigns and directorates of the MoH. District-level focal points for such programmes are medical officers responsible for maternal and child health (MOMCH), noncommunicable diseases (MONCD) and mental health (MOMH), and the regional epidemiologist (RE). These MOs are answerable to the relevant campaigns or Ministry directorate heads as well as the regional directors of health services (RDHSs). The MOs are also answerable to the relevant RDHS.

Technical units and campaigns under the MoH such as the Family Health Bureau, Epidemiology Unit, NCD Unit and Anti-Malaria Campaign (AMC) provide technical guidance to the RDHSs in programme implementation in the respective districts.

There are 354 MOH areas in Sri Lanka and each is headed by an MO responsible for a defined population, which on average is around 40 000–80 000. The MOH is supported by a team of trained field public health staff.
2.3.1 The private sector

The private sector mainly provides ambulatory care, limited inpatient care and rehabilitative care of varying degrees of sophistication. Private services are financed mainly through out of pocket (OOP) payments by households/individuals and, on a limited scale, through private health insurance schemes. OOP expenses have been increasing over time and currently stand at 51% of current health expenditure (CHE) (Table 3.1, Chapter 3). A private health sector review carried out in 2015 reported that there were 424 full-time and 4845 part-time MOs (Amarasinghe et al., 2015b). The part-time practitioners are government MOs engaged in private practice in their off-duty hours who provide the bulk of private primary outpatient care. Most of these private clinics are operated on a solo practitioner basis and most also dispense medicines. Full-time private practitioners are a gradually dwindling group, because only a very limited number venture into taking up private practice as a full-time vocation.

The private hospitals provide outpatient and inpatient services and specialist consultations, the latter being mostly by specialists in government service practising in their off-duty hours. In addition, private pharmacies and investigative services have also expanded significantly both within private hospitals and as independent entities.

The private sector claims to bring certain advantages to their clients, the main ones being the availability of services at convenient times and absence of waiting lists. In addition, the ability to select the specialist of one’s choice and continuity of care under the same doctor are also considered important reasons for seeking private sector services. Greater confidentiality in private settings as compared to public facilities was also identified to be an important factor in patients choosing private sector services (Govindaraj et al., 2014).

2.4 Decentralization and centralization

The MoH is responsible for managing the health services of the country and is the lead agency providing stewardship to health service development and delivery. Its main function is formulating government health policy, health legislation and regulating services provided by both the government and private sectors. It is also responsible for directly managing several large specialized hospitals (National Hospital of Sri Lanka, teaching hospitals, specialized hospitals, provincial general hospitals and selected
district general hospitals), while the nine provincial health ministries are responsible for effective implementation of services in their respective provinces, especially in the areas of primary care, secondary care and preventive services.

Central and provincial links in health care are maintained and strengthened through the National Health Development Committee and regular meetings of the directors of institutions under the Ministry of Health. Provincial health administrators meet regularly with the Ministry authorities and discuss problems and, to some extent, monitor activities at provincial and district levels.

Although decentralization has given the provinces the power to formulate their own statutes, decentralized decision-making is not common and is affected by the control imposed by the central level over functioning at the provincial level and the high degree of financial dependence of the provinces on the Central Government. Certain processes are affected by the additional administrative layers and administrative costs. Thus, it is generally surmised that most provincial councils have not been as efficient and effective in service delivery as the line ministry.

The administrative head of the PMoH is the Secretary Health. The Provincial Director of Health Services (PDHS) is the technical lead of the provincial health department. He is also accountable to the Secretary and DGHS on technical matters. Each health district of a province has an RDHS who is answerable to the PDHS as well as to the MoH administrative officials (Figure 2.2).
2.5. Policy formulation and health planning

2.5.1 Policy formulation

Policy formulation in health is a function of the line ministry. The initial impetus for most policy initiatives comes from health-care professionals, while the actual policy formulation occurs after extensive consultation with experts and other stakeholders, including development partners. The draft policy is then submitted for the approval of the Cabinet of Ministers, followed by presentation as an Act to the Parliament for adoption. Policy formulation is normally followed by a strategic action plan for implementation, monitoring and evaluation. Recent policies such as the National Health Policy 2016–2025 and policy on health-care delivery for Universal Health Coverage–2018 were all formulated in this manner.
2.5.2 Health planning

Planning and development of the MoH is coordinated by the Management Development and Planning Unit (MDPU) within the Ministry. Development of long-term, medium-term and annual plans for the government health-care delivery system is a core function of this unit. The medium-term and annual health plans for districts, and thereby provinces, are based on the broad strategic directions of the National Health Policy 2016–2025. The district annual plans are formulated based on the district health priorities and the provincial annual plans are formulated by consolidating the district plans. These, and the plans of line ministry directorates, institutes and special programmes are compiled to derive the annual plan of the Ministry of Health.

2.5.3 Role of development partners in policy and planning

Development partners (DPs) refers to the lead technical agencies, donor agencies and international cooperation agencies based in a specific country. The influence of DPs on the policy and planning process is based on financial resources, technical expertise, and indirect financial and political incentives. Considering the policy formulation process in Sri Lanka to be principally nationally driven, the DPs, especially the lead technical agencies such as WHO, United Nations Children’s Fund (UNICEF), United Nations Population Fund (UNFPA) and, to a lesser extent, the International Organization for Migration (IOM), bring in best evidence, comparative information and standards on health from across the globe. For example, in the early stages of devolution of power in Sri Lanka when planning expertise at the provincial level was relatively weak, the DPs played a critical role in helping the government improve the planning capabilities of the provinces and districts. Further, these agencies may influence the policy and planning process through international conventions such as the Framework Convention on Tobacco Control (FCTC) and Sustainable Development Goals (SDGs). There are also instances where the policy and planning process, especially that of financial direction and fund allocation, is influenced by donor agencies. For example, the current PHC reorganization and the introduction of an essential services package have been facilitated by the World Bank and WHO.

2.6 Intersectorality

All major policy decisions on health are made collectively by the Cabinet of Ministers and cooperation is often sought between ministries and sectors on an ad hoc basis to deliver services. There is a parliamentary Sectoral Oversight Committee on Health to ensure “health in all policies”. A key strategy for intersectoral action and coordination at all levels is the establishment of the National Health Development Network, consisting of
the Health Development Committee (HDC) at the sectoral level, the National Health Development Committee (NHDC) and the ministerial National Health Council, viewed as the apex body.

The NHDC is established to ensure intersectoral coordination for health development activities. It is chaired by the Secretary Health, has relevant secretaries as members and is composed of technical focal points in ministries. The NHDC functions as a good platform to facilitate the coordination of health development efforts between the Ministry of Health, the provincial ministries and other health-related sectors and agencies.

National-level intersectoral committees have been set up under the DGHS to address major issues in communicable and noncommunicable disease control, prevention of injuries, school health, nutrition and other programmes. These committees, comprising relevant government and nongovernment agencies and development partners, meet on a regular basis to ensure intersectoral collaboration and policy harmonization.

Being the implementors of all national-level policy directives, many intersectoral communications take place at the provincial level. The Planning Division of the Province, headed by the Deputy Chief Secretary – Planning, convenes several meetings a year for planning and monitoring of activities within a holistic developmental approach. The Provincial Director and team represent the health sector.

The District Development Committee (DDC), operating at the district level under the political leadership of and coordinated by the District Secretary (government agent), is a forum for discussion involving many sectors. The health sector is represented by the Regional Director of Health Services.

The DDC operates at the divisional level under the political leadership of the division and is coordinated by the Divisional Secretary. The health sector is represented by the MOH of the area. The DDC carries out divisional-level multisectoral coordination.

The 17 SDGs highlight the interconnectedness and the importance of health in all goals and that achieving SDG 3 (ensure healthy lives and promote wellbeing for all at all ages) is the key to achieving many other SDGs, as it is essential to have a healthy population for economic productivity and national development.
2.7 Health information management

2.7.1 Information systems

The current national HIS consists mainly of the information inputs obtained from the state health service, supplemented by other government sources. The present sub-systems of HIS include curative/hospital information systems, preventive health information systems, administrative and operational information systems, population census, civil registration and vital statistics system, and periodic population-based health and other surveys, e.g. Demographic and Health Survey (DHS), STEPwise approach to surveillance (STEPS) and Household Income and Expenditure Survey (HIES).\(^6\)

Taken together, these sources provide information on population growth, births, marriages, morbidity and mortality, health-care access, health-care coverage, utilization, human resources for health and their distribution, health financing and other health-related data.

2.7.1.1 Population-based health information systems

Sri Lanka has a history of census-taking dating back to 1871 and there have been decennial censuses except during times of war and armed conflict within the country. The most recent was in 2011–2012. These provide accurate geographically referenced health and health-related data and other social determinants of health.

In addition, the Department of Census and Statistics (DCS) carries out health and health-related surveys such as the DHS, the first of which was held in 1987. This is repeated every four to six years, the last being in 2016. The HIES conducted every three years provides health-related costing information. All these surveys are sampled to provide disaggregated district-level data. In 2014, a National Survey on Self-reported Health in Sri Lanka was conducted by the DCS, which provided information related to chronic illnesses.

Health data related to services provided by the MOH and team are available through the Reproductive Health Information Management System (RHIMS). The majority of the MOH areas are congruent with administrative boundaries at the divisional level. This information is linked to the services offered by the MOH and is fairly robust, with vaccination, antenatal care (ANC) and institutional deliveries being near-universal in Sri Lanka. The planned primary curative care reform\(^7\) and information system will provide community-based, geographically referenced morbidity and mortality data.

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\(^6\) Health information systems are detailed in Chapter 4.

\(^7\) Detailed in Chapter 6.
2.7.1.2 Civil registration

Sri Lanka has had a long history of registration of vital events based on Ordinance No.18 of 1867, which came into operation in June 1868. This was optional at the outset but was made compulsory in 1897. The system covers births, marriages, deaths and stillbirths. Stillbirths are registered only in “proclaimed areas” where a medically qualified person is the registrar of deaths. An assessment of the production, quality and use of vital statistics in Sri Lanka (Gamage et al., 2009) has shown that the coverage of births and deaths is high.

The death registration system of the country provides population-based mortality information. The events are reported by place of occurrence as well as by place of usual residence of the deceased individual. The completeness of the reporting of events has been shown to be high; however, reporting of the cause of death needs considerable improvement. Nearly 50% of deaths take place in hospitals and the notification of death (death declaration) giving the immediate, underlying and related morbidity is reported by MOs. The death declaration is submitted to the registrar of deaths for the issue of a death certificate. Shortcomings are seen in the death declaration as well as in the death registration and coding of causes of death at the level of the registrar general’s office, both regional and central (Gamage et al., 2009). Many initiatives have been undertaken and are continuing to improve the quality of cause of death information, including training regarding medical certification of cause of death based on the International Classification of Diseases, tenth revision (ICD-10) for the relevant officers and the use of verbal autopsy to verify the cause of death. These have resulted in improvements in the certification of the cause of death (Hart et al., 2020).

2.7.1.3 Institution-based health information

Morbidity and mortality data from patients seeking treatment as inpatients in government allopathic medical-care institutions are available from a paper-based quarterly return sent to the medical statistics unit of the Ministry of Health. The degree of accuracy and coverage of the data is variable. Although the diagnosis should be based on the ICD-10 classification of disease, the quality of the information is variable. In spite of efforts taken to improve the quality of diagnosis given in the patient records, there is still a large group of patients for whom the medical statistician reports symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified.

Information from most of the outpatient services of government institutions is limited to attendance numbers only. Information from the private sector, including private hospitals, general practitioners, hospitals under the armed
forces and police, prison hospitals and indigenous treatment centres, are not included. As an initial step to overcome these inadequacies in the current system, a web-based electronic Indoor Morbidity and Mortality Reporting (e-IMMR) system has been introduced, limited at present to selected large hospitals in the government sector.

For MCH activities, the country has a well-established information system extending from the grass-roots level to the central level, which has evolved over nearly a century. The current RHIMS was initiated in 1986 by the Family Health Bureau under the MoH for monitoring, evaluating and planning of MCH services in Sri Lanka. Some of the core indicators that are used by the MoH are based on this information system. To improve the quality of this system, the MoH is currently developing a web-based electronic reproductive health information management system (eRHIMS) to complement and gradually replace the existing paper-based system.

Sri Lanka is reputed as a country having a very strong immunization programme. The Epidemiology Unit of the MoH is responsible for EPI surveillance. The information is collected through the web-based immunization information system. With near-universal coverage of EPI, the information system is robust and covers the entire country. In addition to this, the Epidemiology Unit is responsible for the surveillance of communicable diseases and gets its information through the notification system of communicable diseases, which currently tracks data on some 28 conditions (Epidemiology Unit, 2008). This information is collected through the network of MOH offices covering the country. A tested and proven system is in place to monitor these disease conditions at the level of MOHs, districts, provinces and at the national level. In addition to these notifiable conditions, the Epidemiology Unit gets regular information through the severe acute respiratory illness (SARI) surveillance for influenza-like conditions through some 34 sentinel sites across the country. Some conditions that have not been included in the list of notifiable diseases are collected through the respective public health campaigns maintaining specific information systems through registries and databases.

There are several other information systems maintained by national focal agencies for administrative and operational purposes. The MoH maintains the Human Resources Management Information System (HRMIS), Health Facility Survey (HFS), Medical Supplies Information System and a Blood Transfusion Management System for operational support purposes. Both the HRMIS and the HFS do not have the latest and most updated

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8 Detailed in Chapter 5.
figures as updating of information is yet to be made mandatory and fully institutionalized. The HRMIS is yet to be linked with the information systems of the professional councils and the university system in Sri Lanka or the other training facilities within the MoH. The Medical Supplies Information System is fully functional, down to the level of specialized hospitals.

Information is compiled through several registries, such as the Sri Lanka Cancer Registry [Ministry of Health, 2020], Sri Lanka Stroke Clinical Registry (launched in 2015 with web-based data collection at the hospital level) and the National Road Traffic Trauma Registry, which compile and maintain disease-specific data. These are maintained by the respective programmes and are regularly updated.

2.7.2 Information management system for emergencies

A disaster surveillance system has been established for the surveillance of health-related emergencies and disasters by the Disaster Preparedness and Response Division of the MoH. The sources of surveillance data include local and international radio channels, newspapers and weather forecasts. The Ministry has further strengthened the Disaster Health Information Communication Management system through the development of a disaster health information dashboard, website and through providing satellite communication facilities to the unit.

2.8 Regulation

The legal framework for health services in independent Sri Lanka was the Health Services Act 12 of 1952, which was based on the recommendations of the Cumpston Report (1950). The Act provides the Constitution and outlines the responsibilities of the department of health and provides for the establishment of regional hospital boards and hospital committees “to secure more efficient administration”. The Act was later revised as Act Nos 10 of 1956, 13 of 1962 and 13 of 1987.

The Thirteenth Amendment to the Constitution of the Socialist Democratic State of Sri Lanka devolved power to the nine provincial councils, with “health” being a partially devolved subject. A Finance Commission, which is an independent body, was established under Article 154 R (4) of the Thirteenth Amendment to the Constitution. The main responsibility of the Commission is to make recommendations to the President and formulate principles, policies and guidelines on the apportioning of funds between the nine provinces with the objective of achieving balanced regional development in the country.
2.8.1 Regulation of private medical institutions

The Private Medical Institutions Regulatory Act (PMIRA) requires all persons establishing or maintaining a private medical institution to obtain a Certificate of Registration from the MoH. The Private Health Services Regulatory Council (PHSRC), which includes representation from professional bodies such as the Sri Lanka Medical Council (SLMC), Independent Medical Practitioners Association and Dental Association and is headed by the DGHS, performs and discharges its powers, duties and functions under the PMIRA. The PHSRC manages the development and monitoring of standards to be maintained by the registered private medical institutions and acts as a structure to evaluate the standards maintained by such private medical institutions. It further aims to ensure that the minimum qualifications for recruitment and minimum standards for training of personnel are adopted by all private medical institutions and ensures the quality of patient care services provided by such private medical institutions (Ministry of Health, Nutrition and Indigenous Medicine, 2018c).

It is mandatory for every private hospital to register with the PHSRC and to meet minimum regulations prior to setting up operations. As per the regulations, registered staff, equipment, laboratory, X-ray and other diagnostics, operating theatres and other facilities have to be registered prior to start up. Subsequently, an application addressed to the Provincial Director of Health Services is required in order to obtain approval to start the operation. Thereafter, the PHSRC will monitor the hospital after operations commence to ensure that the stipulated conditions are met.

2.8.2 Regulation and governance of third-party payers

The contribution made by third party payers in Sri Lanka is very limited because the main contribution for the Sri Lankan health sector comes from general taxation and OOP payments from households and individuals. The health insurance scheme for public servants (Agrahara) and the scheme for schoolchildren (Suraksha) remain the major contributors of third-party payments for health. In addition, voluntary insurance schemes exist that are contributed to by individuals and employers.

The National Insurance Trust Fund was established in 2006 as a statutory body to offer Agrahara Insurance for the public sector through the National Insurance Trust Fund Act No. 28 of 2006 and subsequently, by the National Insurance Trust Fund (Amendment) Act No. 28 of 2007. The Agrahara insurance scheme provides coverage in the form of reimbursements up to a capped amount mostly for inpatient admissions in government or private sector hospitals. Outpatient coverage was provided only for purchasing
spectacles and hearing aids. The governance document for the insurance scheme for children (Suraksha) is the General Circular No. 24/2019 issued by the Ministry of Education under which all schoolchildren in the state sector are insured up to a certain amount to receive any required health care.

2.8.3 Regulation and governance of providers

The Medical Service Minute of Sri Lanka, which was published under the Special Gazette notification of Socialist Republic of Sri Lanka Number 662/11 in 1991 and subsequently amended in 2001 and 2014, applies to medical personnel in the health services of the country.

2.8.3.1 Registration of human resources

The SLMC is a statutory body established for the purpose of protecting health-care seekers by ensuring the maintenance of academic and professional standards, discipline and ethical practice by health professionals who are registered with it. The SLMC was established by the Medical (Amendment) Act No. 40 of 1998 when the title was substituted for the Ceylon Medical Council. The Ceylon Medical Council (CMC) had been established by the Medical Council Ordinance No. 24 of 1924. The general duty of the Council is to protect the public and uphold the reputation of the profession. The Council does this by maintaining and publishing registers of qualified persons in different categories, by prescribing and overseeing the standard of medical education, providing advice on professional conduct and medical ethics and taking action against those who are registered with the Council if they are deemed to be unfit to practise and exercise the privileges of registration. The Medical (Amendment) Act No. 30 of 1987 makes provision for the Council to ascertain whether the courses of study, qualifications and staff, adequacy of equipment and facilities at such universities and institutions conform to prescribed standards. If they fail to conform to the prescribed standards, the Council may recommend the withdrawal of recognition of such institutions.

There is a Nursing Council established under the Sri Lanka Nurses Council Act No. 19 of 1988, which has similar functions as the Medical Council with regard to the nursing profession. There is no separate council for pharmacists, physiotherapists or other allied health professionals. They are awarded certificates of proficiency by the Ceylon Medical College Council and are eligible for registration in a separate register in the SLMC.

The Public Service Commission (PSC) was established under the Ceylon (Constitution) Order in Council dated 15 May 1946 with the main objective of promoting an efficient, disciplined and contented public service to serve the public with fairness and to carry out the task of appointing officers
for public service. Accordingly, the executive powers in respect of the appointments, promotions, transfers, disciplinary control and dismissal of senior-level staff of the MoH are vested in the PSC. This has been amended several times and the last amendment was made following the Eighteenth amendment to the Constitution in 2010. According to the Amendment, the PSC consists of nine members appointed by the President. The President appoints one of these members as its Chairman. They hold office for a term of 3 years and are eligible to be reappointed for another term.

2.8.3.2 Regulation and governance of pharmaceuticals and medical devices

Until the year 2015, the legal basis for medicinal drugs in Sri Lanka was provided through the Cosmetic Devices and Drugs (CDD) Act (Act No. 27 of 1980). However, from the 1990s onwards, there were major lobby groups advocating the implementation of a fair pricing mechanism for essential medicines. As a result, the government approved the National Medicinal Drug Policy (NMDP) in 2007. After years of negotiations, the implementing body, which is the National Medicinal Regulatory Authority (NMRA), was finally established by an Act of Parliament in 2015 (Parliament of the Democratic Socialist Republic of Sri Lanka, 2015b).

The new Act introduced changes in governance for the regulation of medicines and medical devices in Sri Lanka. Through the previous CDD Act, the Drug Regulatory Authority functioned under the DGHS, MoH but under the new NMRA Act, the new NMRA functions as an independent authority. This Act stipulates the appointment of 13 members to the NMRA by the Minister of Health for a term of 3 years. The NMRA has undertaken a number of key activities to improve the availability and quality of medicines and devices. The major remaining challenges seen in implementation of the policy include the recruitment of required human resources for the NMRA and improvements to the National Drug and Quality Assurance Laboratory.

The State Pharmaceutical Corporation (SPC) is the procurement agency for drugs and medical supplies for the Ministry. It follows the national procurement guidelines and other stringent procedures for evaluation and selection as laid down by the Ministry. It was established in 1971 under the State Industrial Corporations Act No. 49 of 1957. The State Pharmaceuticals Manufacturing Corporation (SPMC), which was a grant-in-aid from the Japanese Government through the Japanese International Cooperation Agency (JICA), was incorporated in June 1987 under the State Industrial Corporation Act No. 49 of 1957 with the commitment to manufacture quality, effective and safe medicinal drugs at affordable prices for the public of Sri Lanka. The share of the local pharma market held by the SPMC is still
modest (around 17%) but it is envisaged that in the next 5 years it will be able to produce a significant proportion of the medicines needed by the country, especially for the state sector.

Public–private partnerships too have been incorporated and have helped to expand the production capacities and range of medicines subject to regulation by the NMRA.

2.8.4 Health technology assessment

There is no specific unit undertaking health technology assessment (HTA) as its primary function. Despite the non-availability of a dedicated unit for HTA, the basic principles are taken into consideration when developing the Essential Drugs List for the country and also in the functions of the Medical Supplies Department for procurement of medicines and vaccines for the country. The MoH and National Authority on Tobacco and Alcohol (NATA) undertook an HTA to make recommendations for increasing the taxes imposed on cigarettes in 2016–2017. There have been a number of proposals to establish an HTA unit under the MoH, but this has not been realized as yet.

2.8.5 Regulation of capital investment

There is no formal mechanism for the regulation of capital investments in the state sector. Health development projects are prioritized according to set criteria, though political considerations can also influence these decisions. The resources for capital investments are made available within the annual or longer-term budgetary allocations for the MoH. For private sector investments from sources within the country, there is no formal approval required, while for investments from outside Sri Lanka, the approval of the Board of Investment of Sri Lanka is mandatory.

2.9 Patient empowerment

Patient empowerment has emerged as a relatively new paradigm that can help to improve patient health outcomes while lowering the costs of care. The concept seems particularly promising for the management of chronic diseases, because empowering patients can be instrumental in achieving success in managing these conditions. At a time when much medical information can be accessed via the Internet and easily communicated to health-care providers, patients and other experts, empowering patients would enable them to make use of the information and knowledge to achieve better outcomes.
The desires of our patients regarding doctor–patient communication point towards the need to minimize the predominantly doctor-centred attitudes, as has been demonstrated in a study (Mudiyanse et al., 2015).

In Sri Lanka with its current literacy rate of 95.7% (Department of Census and Statistics, 2015a), a demand for more and more patient-centred attitudes can be expected, such as sharing of information with patients and developing partnerships between doctors and patients. The inclination for this has been expressed in different ways but has been slow to develop due to the long-standing culture of expecting doctors to make the decisions.

### 2.9.1 Patients’ choice

The people’s health-seeking behaviour is explained with reference to their belief systems and explanatory models that include what they believe to be the cause of the illness, what explains the symptoms they suffer and what they believe to be the most appropriate treatment for a particular illness episode (Arseculeratne, 2002). A greater weight of evidence from a user perspective suggests that treatment-seeking behaviour is not governed deterministically by the beliefs in a given medical system, the choice of therapy being determined by more pragmatic factors such as financial cost, distance and time, previous experience of effectiveness, familiarity with the practitioner, social network of patients and the wishes of the family (Liyanage and Ekanayake, 2018). It has been seen that Sri Lankans use both western and traditional systems interchangeably and also in tandem.

A study showed that health facilities of all types were available in close proximity to households. In addition, householders were aware of these facilities. Although the physical proximity to health facilities was viewed as satisfactory, the utilization pattern raised several concerns. The findings of the study suggested that the phenomenon of bypassing the closest health facility occurs in outpatient services, a phenomenon that was common to all types of health-care facilities. Hence, it was evident that providing health-care facilities closer to households alone would not improve the utilization of such facilities, unless the issue of bypassing is adequately addressed. The phenomenon of bypassing a closer facility to attend a more distant one could further increase the demand in certain facilities, leading to a rationing and a deterioration in the quality of services (Weerasinghe and Fernando, 2011).

### 2.9.2 Patients’ rights

A charter of patients’ rights is one of the means of improving and strengthening the health system. The current National Health Policy of the MoH for the period 2016–2025 has as its guiding principle, “to direct the health system to be people centred, while ensuring the concept of universal
health coverage (equitable access to quality services, and financial protection for all patients), assuring patients’ rights and social justice” (Ministry of Health, Nutrition and Indigenous Medicine, 2017a).

Further, the Sri Lanka National Action Plan for the protection and promotion of Human Rights (2011–2016) recognized two goals under the topic “health”, these being awareness of rights with regard to health care and respect for patients’ rights (Ministry of Disaster Management and Human Rights, 2012).

The Organization of Professional Associations of Sri Lanka (OPA) grouped themselves as an informal voluntary group to address patients’ rights. They drafted a charter of patient rights following public submissions, which was reviewed and finalized by the representatives of the Law and Society Trust (LST). Peoples Movement for Rights of Patients (PMRP) reviewed and finalized the draft, which was published in the LST Review (Balasubramaniam, 2006).

2.9.3 Complaint procedures

The number of medical negligence cases against medical practitioners has been on the rise in the recent past, probably due to increasing awareness and motivation among the general public. A victim seeking redress for a medical injury or a perceived misadventure can make a complaint to the health authorities, forward an affidavit to the SLMC or Human Rights Commission, lodge a complaint at the police station or file a civil case in the District Court (Ruwanpura, 2009).

2.9.4 Public (community) participation

Patient and public involvement and engagement (PPIE) is the process of involving patients and the public in health-care service provision and research to ensure public accountability for decision-making and finances (Hanley, Morris and Staley, 2009). PPIE in health-care institutions in the government sector is addressed through hospital committees, while in medical research this is addressed through public involvement in the research ethics committees.

For example, dengue is one of the most critical public health hazards, which has had a severe impact in the recent past in Sri Lanka. The Government of Sri Lanka has been implementing many programmes and policies to control and prevent dengue. Community participation is one of the key strategies that is keenly followed by the government in implementing successful dengue prevention activities (Riswan, 2015).
2.9.5 Patients and cross-border health care

The Sri Lanka National Migration Health Policy has been developed by the MoH in recognition and promotion of the right to health for internal, inbound and outbound migrants and their families left behind in Sri Lanka. Identifying the multifaceted nature of migration health, the Ministry adopted a multi-stakeholder and evidence-based approach involving 13 key government ministries with technical assistance from the IOM in developing the National Migration Health Policy (Ministry of Health, Nutrition and Indigenous Medicine, 2013).

In line with the National Migration Health Policy, IOM conducts migration health assessments and gives technical assistance to the MoH in developing standards for pre-departure health assessments. IOM offers direct access to health assessments for inbound and outbound migrants. These migrant-friendly health assessments are conducted at IOM’s dedicated health assessment facility established in 2014 in Colombo. Adhering to international best practices, the Centre currently provides pre-departure health assessment services to Sri Lankans immigrating to the United Kingdom, Australia, Canada, New Zealand and Malaysia. This includes the early detection and management of pulmonary tuberculosis (TB).

One of the priority areas identified in the National Migration Health Policy for early implementation under the key strategic area of inbound migration is the strengthening of core capacities and quarantine activities at Sri Lankan ports of entry. Cross-border migration is increasingly becoming a challenge for the health authorities. With IOM’s assistance to the MoH, a comprehensive border health system was launched in 2013 to minimize the risk of cross-border transmission of disease (International Organization for Migration -Sri Lanka, 2013).

The Government has also studied the implications of the General Agreement on Trade and Services (GATS) for investments in the health sector and for strengthening services for medical tourism, but this is still a work in progress and Sri Lanka does not yet boast of an active medical tourism sector. There has been ongoing activity under Modes 1 (cross-border trade) and 2 (consumption abroad) and limited utilization of Modes 3 (commercial presence) and 4 (presence of natural persons) for investments in the health sector and inviting personnel to highly specialized service areas, but these are still not significant. There is increasing interest in exploring the range of possibilities without any disadvantage to the national health personnel and available services.
3. Health financing

Chapter summary

Government tax revenue and private spending are the two main sources of health financing in Sri Lanka, as there is no significant social health insurance. As the major source of taxation is indirect, it is not considered progressive. External financing for health has been historically low, accounting for around 1% of CHE. Government allocations for health services has increased in monetary terms over the years, although it has remained low as a percentage of GDP at around 1.7% during the period 2013 to 2016. In 2016, the domestic general government health expenditure as a percentage of general government expenditure was 9%. Although the government investment is higher than the private share for capital formation, in totality this has remained low over the period 2000–2016 at 0.4% of GDP. While there is clearly a need to increase public spending on health, there is currently a lack of fiscal space to do so.

The household contribution to CHE is significant and is largely from out-of-pocket expenditure (OOPE). More than 10% of household expenditure spent on health is deemed catastrophic; the percentage of households thus affected is 6.4%.

Demand driven and voluntary utilization of the private sector is observed among the higher-income groups. Supply-side constraints in the state sector may also be pushing persons, including poorer households, to utilize the private sector. However, as the government is the key provider of inpatient care, there has been no significant increase in private inpatient care utilization.

The government has from time to time initiated insurance schemes such as Agrahara for government employees and Suraksha for children, but these schemes are limited and have flaws, resulting in an increase in the state burden. There is lack of demand for private health insurance coverage as reflected by the small private health insurance market in the country.
The need for an increase in fiscal space for health by the government is identified. Efficiency improvements and better health outcomes are being targeted through reorganization and retooling within the budgetary constraints at present. It is envisaged that gradual enhancing of health-care financing and evaluation of alternative health-care financing strategies would support reforms to sustain Sri Lanka’s commendable health status and outcomes and to achieve UHC.

### 3.1 Health expenditure

In Sri Lanka, health-care expenditure is shared almost equally between the government and households. The trends in health expenditure are demonstrated in Table 3.1. The national economy in terms of overall GDP grew rapidly over the period 2000–2012 and thereafter the rate of increase has slowed down (2013–2016). CHE as a percentage of GDP has remained at around 3.8%. With the growth in the national GDP, CHE per capita has increased over time. CHE comprises both government and private contributions. In 2016, approximately 43% of CHE was from government sources, a considerable decrease from 54% in 2000. As government and private households are the two main sources of financing for health care, domestic private expenditure on health has increased from 45% of CHE in 2000 to 56% of CHE in 2016. External contributions to CHE have remained minimal throughout at 1% of CHE (Figure 3.1).

#### Figure 3.1 National health expenditure by financial sources, 2016

![Chart showing health expenditure by financial sources](image)

Note: "Rest of the world" denotes external contributions, i.e. foreign governments and development agencies.

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018d
Voluntary health-care payment schemes contribute 6% of CHE, voluntary health insurance contributes 2%, primary/substitutary health insurance schemes 2%, employer-based insurance (other than enterprises schemes) 1%, and other primary coverage schemes contribute 1%. This differs from the compulsory contributory health insurance scheme known as Agrahara available to government employees and their dependants (0.4% of CHE) (Ministry of Health, Nutrition and Indigenous Medicine, 2018d).

Table 3.1  Trends in health-care expenditure in Sri Lanka – 2000 to 2017

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>CHE (million SLR)*</td>
<td>524</td>
<td>885</td>
<td>1535</td>
<td>2434</td>
<td>2447</td>
<td>-</td>
</tr>
<tr>
<td>CHE per capita at nominal value (US$)</td>
<td>44</td>
<td>57</td>
<td>109</td>
<td>151</td>
<td>153</td>
<td>159</td>
</tr>
<tr>
<td>CHE per capita at PPP</td>
<td>221</td>
<td>265</td>
<td>323</td>
<td>466</td>
<td>490</td>
<td>504</td>
</tr>
<tr>
<td>GDP (million SLR)*</td>
<td>15,940</td>
<td>24,518</td>
<td>56,516</td>
<td>81,780</td>
<td>81,259</td>
<td>-</td>
</tr>
<tr>
<td>CHE as a share (percentage) of GDP</td>
<td>4.25</td>
<td>4.01</td>
<td>3.87</td>
<td>3.89</td>
<td>3.89</td>
<td>3.81</td>
</tr>
<tr>
<td>Nominal growth rate in CHE (percentage)*</td>
<td>17</td>
<td>14</td>
<td>12</td>
<td>15</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Nominal growth rate in GDP (percentage)*</td>
<td>14</td>
<td>17</td>
<td>33</td>
<td>6</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Domestic general government health expenditure as a percentage of CHE</td>
<td>53.63</td>
<td>52.64</td>
<td>40.44</td>
<td>43.96</td>
<td>43.12</td>
<td>42.95</td>
</tr>
<tr>
<td>Domestic private expenditure on health as a percentage of CHE</td>
<td>45.46</td>
<td>46.52</td>
<td>58.40</td>
<td>54.67</td>
<td>56.01</td>
<td>55.71</td>
</tr>
<tr>
<td>External health expenditure as a percentage of CHE</td>
<td>0.91</td>
<td>0.84</td>
<td>1.16</td>
<td>1.37</td>
<td>0.87</td>
<td>1.34</td>
</tr>
<tr>
<td>Domestic general government health expenditure as a percentage of general government expenditure</td>
<td>10.14</td>
<td>10.14</td>
<td>7.83</td>
<td>8.40</td>
<td>8.56</td>
<td>8.47</td>
</tr>
<tr>
<td>Domestic general government health expenditure as a percentage of GDP</td>
<td>2.28</td>
<td>2.11</td>
<td>1.56</td>
<td>1.71</td>
<td>1.68</td>
<td>1.64</td>
</tr>
<tr>
<td>OOPE payments as percentage of CHE</td>
<td>40.04</td>
<td>40.50</td>
<td>53.30</td>
<td>48.93</td>
<td>50.12</td>
<td>49.76</td>
</tr>
</tbody>
</table>

CHE: current health expenditure; SLR: Sri Lanka Rupee; GDP: gross domestic product
3.1.1 Comparison of health expenditure and health outcomes in selected countries of South-East Asia and Western Pacific regions

Table 3.2 compares Sri Lanka with selected countries in the South-East Asia and Western Pacific Regions. The GDP per capita in the selected countries ranges from US$ 3831 in Bangladesh to US$ 27 683 in Malaysia and the CHE per capita (in Int$ purchasing power parity [PPP]) varies from US$ 88.3 in Bangladesh to US$ 1035.78 in Malaysia. Sri Lanka has one of the lowest CHEs as a percentage of GDP with the exception of Bangladesh. Sri Lanka (465.89 $ PPP) has a considerably low CHE compared to Malaysia (1035.78 $ PPP) and Thailand (597.31 $ PPP).

Thailand has the highest percentage of government contribution to health among the countries considered in the comparison. Despite the higher spending on health per capita in Thailand, Sri Lanka shows better health outcomes with respect to life expectancy and child mortality rates. It is noted that the MMR is higher in Sri Lanka as compared to Thailand.

Sri Lanka’s percentage of government contribution to health is comparable with that of Malaysia, which has a per capita GDP more than twice that of Sri Lanka and is ranked higher in terms of Human Development Index (HDI). Despite the much higher health spending per capita of Malaysia, Sri Lanka shows better maternal health outcomes and similar life expectancy and child mortality rates.

Table 3.2 Key socioeconomic and health expenditure, and selected health outcome indicators of selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Sri Lanka</th>
<th>Bangladesh</th>
<th>Malaysia</th>
<th>Thailand</th>
<th>Philippines</th>
<th>Viet Nam</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita in PPP Int$ (2016)</td>
<td>12 624</td>
<td>3831</td>
<td>27 683</td>
<td>17 110</td>
<td>7804</td>
<td>6296</td>
</tr>
<tr>
<td>CHE as a percentage of GDP (2015)</td>
<td>3.89</td>
<td>2.46</td>
<td>3.89</td>
<td>3.67</td>
<td>4.32</td>
<td>5.65</td>
</tr>
<tr>
<td>CHE per capita $ PPP (2015)</td>
<td>465.89</td>
<td>88.30</td>
<td>1035.78</td>
<td>597.31</td>
<td>317.27</td>
<td>335.34</td>
</tr>
<tr>
<td>Domestic general government health expenditure as a percentage of CHE (2015)</td>
<td>43.96</td>
<td>17.63</td>
<td>53.31</td>
<td>74.94</td>
<td>31.49</td>
<td>41.81</td>
</tr>
<tr>
<td>Population in millions (2019)²</td>
<td>21.32</td>
<td>163.05</td>
<td>31.95</td>
<td>69.63</td>
<td>108.12</td>
<td>96.46</td>
</tr>
</tbody>
</table>
Sri Lanka has seen a decrease in CHE as a percentage of GDP from 4.25% in 2000 to 3.89% in 2017. Globally, an increase is seen from 5.4% to 6.3% over the same period. During this period, Sri Lanka prioritized national security, which may explain the inability to increase CHE. Sri Lanka’s budget deficit for the period 2000–2015 averaged around 6% of GDP. Revenue generation and expenditure structures have affected the maintenance of sufficient fiscal space. The need to increase the percentage GDP on health is understood, but an additional barrier has been the present expenditure structure of the budget with its limited manoeuvrability.

Over the years, Sri Lanka has done remarkably well in achieving good health outcomes despite the low CHE as a percentage of GDP and is considered a model for good health at a low cost (Smith, 2018). Most health indicators have continued to improve over the years; communicable diseases show a low prevalence and the MCH indicators are on a par with some of the developed countries. The likely explanation for these health gains despite low health spending may be the continuing investments in social and human development policies of successive governments such as free education and poverty alleviation programmes. These have resulted in improved health-care

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Sri Lanka has seen a decrease in CHE as a percentage of GDP from 4.25% in 2000 to 3.89% in 2017. Globally, an increase is seen from 5.4% to 6.3% over the same period. During this period, Sri Lanka prioritized national security, which may explain the inability to increase CHE. Sri Lanka’s budget deficit for the period 2000–2015 averaged around 6% of GDP. Revenue generation and expenditure structures have affected the maintenance of sufficient fiscal space. The need to increase the percentage GDP on health is understood, but an additional barrier has been the present expenditure structure of the budget with its limited manoeuvrability.

Over the years, Sri Lanka has done remarkably well in achieving good health outcomes despite the low CHE as a percentage of GDP and is considered a model for good health at a low cost (Smith, 2018). Most health indicators have continued to improve over the years; communicable diseases show a low prevalence and the MCH indicators are on a par with some of the developed countries. The likely explanation for these health gains despite low health spending may be the continuing investments in social and human development policies of successive governments such as free education and poverty alleviation programmes. These have resulted in improved health-care
behaviour, while improvements in infrastructure development has resulted in improved health-care access (Smith, 2018).

The health system has, however, to face new challenges due to the demographic, epidemiological and social transitions that the country is undergoing. More financial resources as well as more appropriate models of health-care provision will be needed to address these challenges effectively and to achieve UHC. Figure 3.2 shows the trends in health expenditure as a share of GDP over time across selected countries.

**Figure 3.2 Trends in health expenditure as a share (%) of GDP in selected countries, 2000–2017**

![Graph showing health expenditure as a share of GDP over time across selected countries.](source)

Source: World Health Organization, 2019a

Figure 3.3 shows the domestic general government health expenditure and OOPE as a share of CHE in selected countries over the period 2000–2016. Of all the countries considered, Thailand has the highest government contribution to health. The government health expenditure of Thailand as a percentage of total CHE ranged from 58% in 2000 to 76% in 2015. Thailand and Malaysia are upper middle-income countries. Sri Lanka, Thailand and Malaysia have better health outcomes than the other three countries.
3.1.2 Government health expenditure by service type

Table 3.3 provides information on health expenditures for curative care (outpatient and inpatient), rehabilitative care, preventive care, ancillary services, medical goods and governance. The table uses information available in the routine government financial information system. The curative function consumes 72% of CHE. The bulk of medicinal drugs and commodities purchased through central procurement are included in this expenditure category. Preventive services are allocated a low share of only 3%.

Source: World Health Organization, 2020
Table 3.3  Distribution of CHE by selected health-care functions: 2014 to 2016 (SLR million at current prices)

<table>
<thead>
<tr>
<th>Health-care function</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount (SLR million)</td>
<td>%</td>
<td>Amount (SLR million)</td>
</tr>
<tr>
<td>Curative care</td>
<td>269 767</td>
<td>72%</td>
<td>306 054</td>
</tr>
<tr>
<td>Inpatient care</td>
<td>174 277</td>
<td>47%</td>
<td>196 794</td>
</tr>
<tr>
<td>General inpatient curative care</td>
<td>6196</td>
<td>2%</td>
<td>7165</td>
</tr>
<tr>
<td>Specialized inpatient curative care</td>
<td>168 081</td>
<td>45%</td>
<td>189 629</td>
</tr>
<tr>
<td>Outpatient curative care</td>
<td>95 490</td>
<td>26%</td>
<td>109 261</td>
</tr>
<tr>
<td>General outpatient curative care</td>
<td>84 520</td>
<td>23%</td>
<td>96 692</td>
</tr>
<tr>
<td>Specialized outpatient curative care</td>
<td>10 969</td>
<td>3%</td>
<td>12 569</td>
</tr>
<tr>
<td>Rehabilitative care</td>
<td>219</td>
<td>0.1%</td>
<td>279</td>
</tr>
<tr>
<td>Ancillary services (non-specified by function)</td>
<td>22 000</td>
<td>6%</td>
<td>25 263</td>
</tr>
<tr>
<td>Laboratory services</td>
<td>16 402</td>
<td>4%</td>
<td>18 817</td>
</tr>
<tr>
<td>Imaging services</td>
<td>4775</td>
<td>1%</td>
<td>5471</td>
</tr>
<tr>
<td>Medical goods (non-specified by function)</td>
<td>50 776</td>
<td>14%</td>
<td>58 180</td>
</tr>
<tr>
<td>Preventive care</td>
<td>11 724</td>
<td>3%</td>
<td>13 529</td>
</tr>
<tr>
<td>MCH-FP programme</td>
<td>9678</td>
<td>2.6%</td>
<td>11 009</td>
</tr>
<tr>
<td>Governance, health system and financing administration</td>
<td>4406</td>
<td>1%</td>
<td>4801</td>
</tr>
</tbody>
</table>

MCH-FP: maternal and child health–family planning
Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018d

Figure 3.4 describes the distribution of government CHE for curative care by service provider, of which tertiary-care institutions consume the largest proportion (48%).
Figure 3.4  Distribution of government CHE by categories of health-care providers

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018d

Figure 3.5 shows trends in CHE by function. It should be noted that the share allocated to rehabilitative care is extremely low and that for preventive services is consistently low and declining. Despite the low spending, public health programmes have contributed to good health outcomes, but these programmes must now adapt to address emerging challenges adequately. Also noted is a significant decline in expenditure for outpatient services from the year 1990 and a stagnant trend in most recent years, which can indicate a gap in required outpatient care.

Figure 3.5  Share of CHE by health-care functions over time, 1990–2016

Source: Amarasinghe, Dalpatadu and Rannan-Eliya, 2018
3.2 Sources of revenue and financial flows

The government sector is predominantly financed through general revenue taxation, while the private sector is financed through OOP spending, private insurance, direct employer payments, employer insurance and contributions from non-profit organizations.

External health financing is small in Sri Lanka in general, though there were large inflows after the tsunami in December 2004. Donor financing is largely channelled through the government sector, though in specific instances it is paid out to nongovernmental organizations (NGOs) working in specific areas related to health. Foreign governments and international NGOs contributed a much smaller proportion of revenue in terms of transfers compared to national government contributions.

Table 3.4 gives the various sources of revenue as a percentage of CHE.

<table>
<thead>
<tr>
<th>Source of revenue</th>
<th>US$ (million)</th>
<th>% of CHE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OOPE</td>
<td>1598.5</td>
<td>50.1</td>
</tr>
<tr>
<td>Government domestic revenue</td>
<td>1361.5</td>
<td>42.7</td>
</tr>
<tr>
<td>Employer contribution to the CHE (in the form of health insurance premium and other methods)</td>
<td>116.3</td>
<td>3.6</td>
</tr>
<tr>
<td>Private health insurance</td>
<td>65.2</td>
<td>2.0</td>
</tr>
<tr>
<td>Rest of the world financing schemes</td>
<td>27.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Social health insurance</td>
<td>13.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Nongovernmental organizations</td>
<td>6.3</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total CHE</strong></td>
<td><strong>3189.3</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018d*

Figure 3.6 is a schematic representation of the flow of funds in the health system, illustrating that there are two sets of arrangements in the Sri Lankan context – administration and financial linkages. There are three main funding sources: government, individual citizens and donors. General taxes to the government are disbursed to state health institutions (providers) through a chain of financing agents. The treasury collects tax revenue and disburses the funds to hospitals that are directly managed under the Ministry of Health, i.e. teaching, general and specialized hospitals that provide specialized care as well as PHC services,9 and vertical preventive/disease control units.

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9 In Sri Lanka, institutions are classified as tertiary-, secondary- and primary-level institutions and, in all of these, outpatient services are provided, which fulfils primary care needs.
Hospitals managed by the Ministry of Defence, i.e. Army, Navy, Air Force and police hospitals and Ministry of Justice, i.e. prison hospitals are funded through their respective ministries. Institutions managed by the provincial governments (base hospitals, divisional hospitals, primary care units and MOH units) and local governments (municipal council and pradeshiya sabha health clinics) and other health-related activities by the local government are funded through the Finance Commission. In addition, the MoH directly channels a considerable amount of funds to provincial-level institutions. Local governments are able to generate and use funds for the provision of health services for institutions under their purview in addition to the funds received through the Finance Commission. There is wide variation in the amount generated through local tax and its contribution is very small, except in the Western Province.

Households in Sri Lanka share a considerable burden of health-care financing as OOP spending. A small proportion of individual citizens and employers purchase private health insurance and only a very small proportion of health-care services are funded by external donors, managed by a financial arrangement recognized as external contribution from foreign governments and development agencies (Rest of the World Financing Scheme).
3.2.1 Provincial financing mechanisms

The Finance Commission of Sri Lanka was established by the Thirteenth Amendment to the Constitution of the Democratic Socialist Republic of Sri Lanka in 1987. Its job was to disburse treasury funds under the decentralized
system to achieve balanced regional development throughout the country, recognizing different specific provincial needs.

The Central Government also channels substantial funds to the provinces through the line ministry for both capital and recurring expenditures. Provinces are also benefited through health-specific grants and loans negotiated by the Centre. Procurement of medicines and laboratory products is mainly handled by the Centre.

Each province consists of a health ministry and a department of health services, which is responsible for improving the health of the people in their area. The Finance Commission disburses funds to the province in the form of different types of grant allocation. The functions of the Commission are to assess provincial needs, apportion the annually granted funds among provinces, divide the total amount allocated to each province between recurring and capital needs, distribute capital funds between province-specific development grants (PSDG) and criteria-based grants, and allocate PSDG across identified development sectors, where health is one such sector. Figure 3.7 shows the CHE per capita.

**Figure 3.7 CHE per capita by province, 2000–2015**

Expenditures are allocated provincially taking into consideration the demand and supply of health-care services. As shown, the Central and Northern Provinces had the highest per capita expenditure, while the Sabaragamuwa Province incurred the lowest. The reasons for the different CHE per capita
could be due to the disease profile, number of health-care institutions in the province and the population.

3.3 Overview of the public financing schemes

3.3.1 Coverage

3.3.1.1 Breadth: who is covered?

Sri Lanka holds a unique position in South Asia as one of the first to provide universal health, free education, strong gender equality and a better opportunity for social mobility for its citizens since Independence in 1948 (Samarage, 2006). Sri Lanka has an extensive network of health-care institutions and patients have the freedom to choose between the state and private sectors. The HIES (2016) reveals that 90% of inpatient visits and approximately 45% of all outpatient visits are to the government sector facilities. While the upper wealth quintiles are seen to opt out and access private health care often, what is notable in the Sri Lankan context is that many persons access both sectors, and that even the lower wealth quintiles access the private sector for outpatient care and the richer quintiles the public sector for inpatient care (Department of Census and Statistics, 2018a). The government health system provides a safety net, but despite the intention to cover all citizens, disparities may arise due to the accessibility and availability of services, medications and investigations. Although health services are universal and therefore entitlement is for all, subnational variation is observed in accessing health services. Further, disparities in health-seeking behaviour may exclude certain populations. Attempts to cover all people are seen by the gradual expansion of health-care programmes dedicated to specific target groups, e.g. estate, urban sector, the elderly, youth, adolescents and, more recently, the focus on migrant populations.

Females show better health-seeking behaviour than males and have a larger number of interactions with the health services, some of which can be attributed to a well-organized maternal care service. This difference between males and females is reflected in the percentage of males over 18 years who had never measured their blood sugar level (58.4%) as compared to the percentage of females (43.1%) (World Health Organization, 2015). Similarly, only 65.7% of males previously diagnosed were currently taking medication prescribed for diabetes, as compared to 73.1% of women.

Sri Lanka is still in the process of reorienting health services to cater for the emerging needs of its population due to demographic, epidemiological and social transitions (refer Chapter 6). Strengthening primary care is considered a timely intervention to expand coverage.

10 Refer to Chapter 7.
Estate populations have received considerable attention. In the past, health services were provided by the estate management; however, a policy decision was taken in 1996 to deliver government services to this group. Currently, all preventive health services of the estate sector are provided by the provincial health authority and curative health services are progressively being absorbed into the state sector. Within the estate sector, problems of physical access to health services due to the difficult terrain, distance and limited transport facilities may affect timely availability of specialized services. Also, women and young people in the plantation sector face significant barriers in timely access to sexual and reproductive health services (Periyasamy, 2018).

Non-Sri Lankans are able to access health services at private health institutions through payment for services, or through state institutions at a nominal fee. Resident visa holders have outpatient and emergency health services covered by the government sector through a health protection plan, which includes a mandatory health assessment introduced recently.

### 3.3.1.2 Utilization of health services by income category

Analysis of the OOPE on health by expenditure deciles reveals that nearly 57% of the total spending on OOPE had been borne by the wealthiest quintile (deciles 9 and 10). This indicates a drop from 63%, the corresponding value given in HIES 2012–2013. Figure 3.8 demonstrates the OOPE spending by expenditure deciles for 2016.

**Figure 3.8 OOP spending on health by expenditure deciles, 2016**

A study comparing household income and expenditure data of 2006–2007 with that of 2009–2010 shows that the proportion of expenditure on health had increased in all income quintiles, but was more for the middle-income group (Kumara and Samaratunge, 2016). Possibly, the effects would be more for the lower- to middle-income groups, considering their disposable income for other needs.

3.3.1.3 Scope – what is covered?

Health care in Sri Lanka is provided through the public and private sectors. The MoH is responsible for comprehensive health-care provision throughout the country (Fernando, 2000).

Curative services at primary medical care units consist of only outpatient services, while specialized services are provided from base hospitals upwards. It is important to note that apart from selected programme-specific packages such as for MCH, and a list of medicines available for each level of hospital, there was no explicit service package defined for the whole population.

The government recently announced the explicit “Essential Service Package” (Ministry of Health, Nutrition and Indigenous Medicine, 2019a) defining the promotive, preventive, curative and rehabilitative facilities which the government will commit to provide to citizens. The purpose is to improve quality, efficiency and continuum of care in view of the changing demography and disease burden. This is a significant shift from what was practised when services were provided based on available resources. The full implementation of the Essential Service Package requires many changes. In addition to the resources, this would mean a change in service providers’ attitudes and accountability.

A major health sector reform to strengthen primary curative health care is under way, which would ensure that people avail the services that they require closer to home. This will also address issues in continuity of care, which is especially important for the control of NCDs and in the context of an ageing population. The reform would also improve access to diagnostic facilities and essential drugs in the state sector. The Essential Service Package is part of this reform. The reform in general takes on from the successes of the current PHC approach, which mainly targets MCH services. This model has been adapted to plan the primary curative care reforms so as to comprehensively address the current and emerging challenges.
3.3.1.4 Depth – how much of benefit cost is covered?

State health services are provided free at the point of delivery and account for about 90% of inpatient care and 45% of outpatient visits. The private sector plays an important role in the provision of ambulatory care, and accounts for over 50% of outpatient visits and a very small portion of inpatient care (4% of total). Services obtained in the private sector are mostly paid for by a household’s OOPPE because of the low coverage of voluntary health insurance in the population. OOP spending accounted for 50% of CHE (Ministry of Health, 2019), but almost half of all OOPPE is incurred by the two richest deciles 9 and 10 (57% of the total spending on OOPPE). Analysis of HIES (2015–2016) data showed that the upper quintiles are more likely to access health services in the private sector, especially in urban areas (Smith, 2018).

The major portion of OOPPE is incurred on general medical practitioners (SLR 40 billion/year; 40.6%), followed by medical and laboratory services (SLR 31 billion/year; 31.5%), private hospitals and nursing homes (SLR 20 billion/year; 20.3%) (Department of Census and Statistics, 2018a). As seen, laboratory tests and drugs account for approximately one third of the total OOP spending, of which a sizeable proportion is among those accessing services in the state sector.

3.3.2 Collection

The contribution from the general government budget constitutes the main financing mechanism for health as depicted in Table 3.5. There are no specific collections for health.

Table 3.5 Government contributions to health

<table>
<thead>
<tr>
<th>Item</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total government budget (million SLR)</td>
<td>584 784</td>
<td>1 831 654</td>
<td>3 475 411</td>
<td>3 860 318</td>
</tr>
<tr>
<td>Total MoH health budget (million SLR)</td>
<td>49 079</td>
<td>83 511</td>
<td>189 857</td>
<td>232 536</td>
</tr>
<tr>
<td>% Contribution to MoH from total government budget*</td>
<td>8.39</td>
<td>4.56</td>
<td>5.72</td>
<td>6.02</td>
</tr>
</tbody>
</table>

* This represents the contribution to the MoH from the total government budget. The allocation for tri-forces’ medical services and that of the Ministry of Higher Education are not included here.

MoH: Ministry of Health; SLR: Sri Lanka Rupee
Source: Management, Development & Planning Unit, Ministry of Health, Nutrition & Indigenous Medicine

Tax composition in Sri Lanka is a mix of direct tax (consisting of personal income tax, corporate income tax and tax on interest) and indirect tax (consisting of value added tax [VAT], excise tax, import duties and other
indirect taxes), as shown in Table 3.6. Income tax can be charged on residents’ and non-residents’ profits and income. Residents are charged on their global income while non-residents are charged on income arising in or derived from Sri Lanka. There is no earmarked tax for health.

The Sri Lankan tax system is considered less progressive (Amirthalingama, 2013) (as only 18–19% of tax revenue is from indirect taxes in a country where the Gini coefficient was 0.41 in 2016 (Department of Census and Statistics, 2018b).

The tax system does not generate the potential revenue in Sri Lanka. Although Sri Lanka’s per capita GDP at current market prices has increased from US$ 473 in 1990 to US$ 4065 in 2017 (Central Bank of Sri Lanka, 2018), the fiscal space measured by tax as a percentage of GDP had declined from 19.02% of GDP (1990) to 12.6% of GDP (2017) during this period.

Although the system is decentralized, the provincial health system too depends on centrally allocated funds through allocation by relevant ministries. Provincial and local taxation contributes only minimally to the Central Government revenues, amounting to only 4% (0.6% of GDP).

Table 3.6 Tax breakdown in Sri Lanka, 2010 and 2018

<table>
<thead>
<tr>
<th>Item</th>
<th>2010</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SLR (million)</td>
<td>Percentage of total tax revenue</td>
</tr>
<tr>
<td>1. Taxes on net income and profits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. Personal</td>
<td>30 993</td>
<td>52 242</td>
</tr>
<tr>
<td>1.2. Corporate</td>
<td>29 422</td>
<td>35 991</td>
</tr>
<tr>
<td>1.3. Tax on interest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4. Capital gains tax</td>
<td>-</td>
<td>104</td>
</tr>
<tr>
<td>2. Taxes on domestic goods and services</td>
<td>355 366</td>
<td>49</td>
</tr>
<tr>
<td>2.1. VAT</td>
<td>219 990</td>
<td>461 740</td>
</tr>
<tr>
<td>2.2. Excise tax</td>
<td>129 864</td>
<td>484 287</td>
</tr>
<tr>
<td>2.2.1. Cigarettes</td>
<td>40 675</td>
<td>92 243</td>
</tr>
<tr>
<td>2.2.2. Liquor</td>
<td>36 654</td>
<td>113 944</td>
</tr>
<tr>
<td>3. Taxes on foreign trade</td>
<td>130 749</td>
<td>18</td>
</tr>
<tr>
<td>4. Others</td>
<td>103 008</td>
<td>14</td>
</tr>
<tr>
<td>Total tax revenue</td>
<td>724 747</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sri Lanka, 2019
Table 3.7 shows the share of government health spending by financing source.

<table>
<thead>
<tr>
<th>Table 3.7</th>
<th>Share of public CHE by financing source (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Health</td>
<td>39</td>
</tr>
<tr>
<td>Provincial departments of health</td>
<td>47</td>
</tr>
<tr>
<td>Local governments</td>
<td>11</td>
</tr>
<tr>
<td>Other government ministries, departments &amp; agencies</td>
<td>3</td>
</tr>
<tr>
<td>Employees Trust Fund</td>
<td>0</td>
</tr>
<tr>
<td>President’s fund</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Amarasinghe, Dalapatadu and Rannan-Eliya, 2018

The share of CHE from the MoH has increased from 39% in 1990 to 61% in 2016, while the share from the provincial departments of health has decreased from 47% to 32% in the same period and that from local governments had reduced significantly from 11% to 2%.

3.3.2.1 Social health insurance pooled by a separate entity or entities

Sri Lanka does not have a social health insurance scheme. A semblance of such a scheme, the Agrahara insurance scheme, exists only for government sector employees (14% of employees are in the government and semi-government sectors) and their immediate family members. Limited insurance schemes are also available for some large-scale private sector companies. However, the informal sector of the country accounts for 60% of employees in the country (Labour Force Survey Annual Report, 2017).

The Agrahara, a public insurance scheme, provide three components:

i. medical insurance scheme
ii. personal accident and natural death insurance scheme
iii. loan guarantee scheme.

Contributions are collected from the monthly payroll, which goes into the National Insurance Trust Fund. All government employees are beneficiaries of this sickness benefit scheme. It pays compensation and reimburses selected medical bills. Recently, two types of benefit packages were introduced, depending on the premium an employee wished to pay. This insurance is limited because it only covers inpatient care and spectacles,
hearing aids and some mobility aids, but not outpatient care or drugs. The benefit scheme promotes utilization of the government sector in preference to the private sector. There is no benefit to the government health-care facilities through the system as payments are made to the patient and government facilities do not charge for services.

Another health insurance available in the country is Suraksha. This is a free health insurance policy covering schoolchildren between the ages of 5 and 19 years. The health insurance policy eases the financial burden when students are faced with illnesses, accidents and disabilities in and out of school. It helps students to continue with their education, overcoming any health-related obstacles they may encounter, irrespective of financial status. Suraksha provides inpatient (state and private sector) cover and outpatient benefits for a few but uncommon conditions – cancer, end-stage renal failure, multiple sclerosis, major organ transplant, paralysis, blindness and third-degree burns.

A separate pool of funds exists as the President’s Fund, which was established in 1978 by an Act of Parliament. This was created as a discretionary fund to draw on in order to assist those in dire need or deserving of help in the areas of health, education and other basic needs. The President’s Fund comes from public sources, including proceeds of lotteries, e.g. the Niroga lottery, which is health specific and collected by the National Lotteries Board. Financial assistance for medical treatment approved from the President’s Fund includes surgeries (heart, brain, kidney transplant, bone marrow transplant, liver transplant and eye surgery), cancer treatment, prostheses, orthopaedic implants and spinal disease. It specifies a list of hospitals (government, semi-government, private sector and foreign hospitals) where treatment/procedures could be obtained.

3.3.3 Pooling of funds

3.3.3.1 Allocation from collection agencies to pooling agencies
The most significant pooling of funds for health occurs through general taxation. The general taxes are the largest pool where relevant government department collections are available of import and export duties, excise tax, personal and corporate income tax, other non-tax revenue and pooled general revenue of the government. The revenue is disbursed for health through the health allocation in the annual budget following legislative approval. In addition, the treasury receives a very small amount of external funds (1%) from donors and as loans specifically for health budgetary support (Ministry of Health, Nutrition and Indigenous Medicine, 2018d).
3.3.3.2 Budget planning process

Historically, there has been a system of incremental, input-based budgeting for health over the years. Budgets are formulated for curative services, preventive services and administration. The funds are channelled through several financial arrangements within the national government.

Several socioeconomic indicators are taken into account in apportioning funds among the provinces under the province-specific development grants and criteria-based grants. The health-specific indicators include neonatal mortality rates and birth weights recorded in each province.

The MoH proposes major developments that are planned to be undertaken by them to the Department of National Planning under the Ministry of Finance. Large budget allocations require approval by the Cabinet of Ministers. In addition to this, special budget allocations are decided on during the course of the budget debate in the legislative process.

The Ministry of Indigenous Medicine was combined with the Ministry of Health in 2015 and thereafter the budget allocations for these two systems have been integrated into one common one.

Provincial ministries of health usually function together with one or two other sectors, housed under one ministry. The allocations received may therefore be subject to competing interests of other ministries.

3.3.3.3 Allocating resources to purchasers – revenue generation and pooling of funds

Sri Lanka’s health-care system relies almost solely on a tax-based health-care financing mechanism. Thus, social health insurance is not observed in the country.

3.3.4 Purchasing and purchaser–provider relations

No purchaser–provider arrangements are seen in the government health delivery system, as the government is both the financier and as well as the health-care provider. There are no strategic purchasing arrangements for entire institutions or for patient or community health service delivery. In the state sector, line budgets are used to manage services where direct responsibility for staffing, personnel management, procurements and capital improvements all lie with the provider and no purchaser–provider separation is seen.
3.3.4.1 Purchasing of ancillary services

Simple contractual agreements are present for selected outsourced functions from the private sector, such as security services, laundry services, preparation of meals and cleaning services. These contracts are given at the local hospital level and mainly apply to the larger hospitals. More recently, laboratory services for selected tests that are not available in state health facilities are outsourced to the private sector at no cost to the patients. Hospitals also can make limited local purchase of drugs that are not routinely available for the special needs of patients.

The government system is free for all types of patients, including those who are covered by private insurance. Service fees are not collected. Some gaps are seen in the availability of investigations, supplies and personnel at different levels of the system. Currently, there is no gatekeeping function, and patients are free to seek care at the health institution of their choice; in particular, bypassing PHC services for secondary and tertiary care hospitals. The expansion of specialized care services throughout the country, improved geographical access and changing expectations of the people have contributed to increased demand and also to creating a situation where people are more likely to bypass primary care institutions.

3.4 OOP payments

The global health expenditure database indicates that OOP payments constitute 50% of the current total health expenditure. It increased from 40% in 2000 to 50% in 2016. The trend of OOPE from 2000 to 2016 is shown in Figure 3.9.

Figure 3.9 OOPE as a percentage of CHE, 2000–2016

Source: World Health Organization, 2020
3.4.1 Composition of OOP payments

Several distinct categories of OOPE can be identified. They include payments for private outpatient care (general and specialized care), private inpatient care, medicines (self-prescribed or prescribed by a physician) and other health-related devices, e.g. spectacles, prostheses, laboratory investigations, dental care and indigenous treatment. According to HIES 2016, fees paid to private medical practitioners accounted for one third of the OOP payments for health, while purchase of medical and pharmaceutical items accounted for 26%. Payments to private hospitals and nursing homes constituted 18% and payment for medical laboratory tests accounted for 9%. One of the reasons for accessing private outpatient care has been the restricted hours of service in the government system. Attempts have been made recently to extend service hours, but challenges have been experienced in staffing (Ministry of Health, Nutrition and Indigenous Medicine, 2015a).

The breakdown of the OOPE on health is presented in Figure 3.10. The OOPEs on pharmaceuticals, while reflecting an inadequacy of funding for medicines, can also reflect on the non-adherence to clinical protocols for prescribing.

**Figure 3.10  Breakdown of the OOP spending on health, 2016**

The trends for components of out of pocket expenditure is given in Figure 3.11. The main component of the OOPE is fees to private medical practices. There is a steady increase in the amount spend for purchase of medical/pharmacy products.
3.4.2 Catastrophic health expenditure

An analysis of the HIES 2015–2016 reveals that 5.33% of households in Sri Lanka spent more than 10% of their total household budget on health and 0.91% of households spent more than 25% (Figure 3.12). Further analysis showed that at a poverty line of US$ 1.90, the percentage of the population under the poverty line is 0.07%, while 14 000 people are pushed below the poverty line annually. When a poverty line of US$ 3.10 is considered, the percentage of the population under the poverty line is 0.83%, with 170 000 people pushed below the poverty line (Wang, Torres and Travis, 2018).

Figure 3.12 Incidence of catastrophic health expenditure, 2016
Table 3.8 depicts important indicators pertaining to private expenditure on health in Sri Lanka from 2000 to 2016. There is an increasing trend in private sector utilization in Sri Lanka. The bulk of private sector financing consists of household OOP, which amounts to 85% of private expenditure (Amarasinghe, Dalpatadu and Rannan-Eliya, 2018). Expenditure by companies for providing health care and medical benefits to their employees has been the next largest source of private financing (5–8%).

Due to the high OOP, several considerations have been taken into account to introduce insurance systems, the most recent one being the child health insurance (Suraksha) mentioned earlier. Currently, the health financing strategy is under review.

### Table 3.8 Private expenditure on health (2000–2016)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE as percentage of GDP</td>
<td>4.25</td>
<td>4.01</td>
<td>3.87</td>
<td>3.89</td>
<td>3.89</td>
</tr>
<tr>
<td>Voluntary health insurance as percentage of CHE</td>
<td>1.45</td>
<td>2.16</td>
<td>1.32</td>
<td>1.95</td>
<td>2.04</td>
</tr>
<tr>
<td>OOP as percentage of CHE</td>
<td>40.04</td>
<td>40.50</td>
<td>53.30</td>
<td>48.93</td>
<td>50.12</td>
</tr>
<tr>
<td>OOPE per capita in US$</td>
<td>17.50</td>
<td>23.23</td>
<td>57.89</td>
<td>74.07</td>
<td>76.73</td>
</tr>
<tr>
<td>OOPE per capita in PPP Int$</td>
<td>88.39</td>
<td>107.15</td>
<td>172.22</td>
<td>227.97</td>
<td>245.82</td>
</tr>
<tr>
<td>Transfers from government domestic revenue (allocated for health purposes) as percentage of GDP</td>
<td>2.28</td>
<td>2.11</td>
<td>1.56</td>
<td>1.71</td>
<td>1.68</td>
</tr>
<tr>
<td>CHE by financing schemes as percentage of GDP</td>
<td>4.25</td>
<td>4.01</td>
<td>3.87</td>
<td>3.89</td>
<td>3.89</td>
</tr>
<tr>
<td>Government schemes and compulsory contributory health-care financing schemes as percentage of GDP</td>
<td>2.32</td>
<td>2.14</td>
<td>1.61</td>
<td>1.76</td>
<td>1.71</td>
</tr>
<tr>
<td>Household OOP payment as percentage of GDP</td>
<td>1.70</td>
<td>1.62</td>
<td>2.06</td>
<td>1.90</td>
<td>1.95</td>
</tr>
</tbody>
</table>

**Source:** World Health Organization, 2020

### 3.4.3 Cost-sharing (user charges)

There are no user fees charged for services in the state sector, even for patients who are covered by private health insurance and government employees covered by Agrahara. For non-citizens, an official communique stipulates that user fees should be charged. This has not been updated, and in the absence of billing systems at hospitals, this is poorly practised.
3.4.4 Direct payments

In the public sector, no official charges are incurred for inpatient/outpatient services. However, there are user charges only for paying wards. As a large segment of the population is not covered through prepayment insurance schemes, most private sector encounters would result in direct payments.

3.4.5 Informal payments

Lewis (2006) reported that informal payments do occur to obtain admission to a hospital, obtain a bed and to receive subsidized medications. In a study conducted in Colombo involving 200 households, 61.2% of respondents said that they had used personal relationships with hospital staff to circumvent formal procedures such as reducing waiting time for consultation and procedures, while 52.0% pointed out that they had given money or gifts to hospital staff (Transparency International Sri Lanka and Friedrich Ebert Stiftung, 2009). There has not been any recent study on informal payments that patients may incur to obtain services, despite their being free.

3.5 Voluntary private health insurance

3.5.1 Private medical insurance schemes

The Presidential Task Force on National Health Policy (1993) identified voluntary health insurance (VHI) as one mechanism to increase health sector financing. A report in 1997 (Rannan-Eliya, 1997) observed that:

- VHI expansion would support expansion of private health services, thus reducing the demand on government sector facilities where higher-income groups could opt for private health care.
- VHI was seen as a mechanism with the potential to bring in additional financial resources for the private health sector, as the public sector has limitations on charging a fee from VHI.
- VHI was also expected to support increased cost recovery by MoH facilities, in particular with respect to “pay-beds” at Sri Jayewardenapura General Hospital.

3.5.2 Market role and size

Although the economy has grown and the upper middle-income group has expanded, the corresponding increase in VHI is relatively small. In 1990, the VHI penetration was less than 1% of total health expenditure (THE) (Rannan-Eliya, 1997) and in 2013 it was 2.1% of CHE (Ministry of Health and Indigenous Medicine, 2016). Withanachchi (2009) reports that in 2004, it was estimated that VHI premiums account for 4.9% of THE. As a share of private health
insurance, VHI accounts for 9.7%, and around 10.4% of the total population have subscribed to long-term VHI (Withanachchi, 2009). VHI generally covers health risks that manifest less frequently and require expensive treatment in tertiary-care institutions. All insurance schemes offer coverage of inpatient treatment. Outpatient care is mostly covered too. The market has not been efficient enough to attract people adequately for VHI, which is reflected by its poor growth. Over time, with expanding per capita income, people’s expectations too have changed and there has been an expression of demand for private facilities within government hospitals to provide inpatient care. This has largely been from the upper- and middle-income groups. Government policies have in fact encouraged growth of the private health sector as a means of shifting more affluent people to access these services, whereby the government could focus more on providing care to lower-income groups. VHI schemes are largely based on the ability to pay. The increase in VHI is relatively small and mainly by the corporate sector for its employees. In fact, the growth of the private sector has not attracted a corresponding growth in VHI. Despite some growth in the health insurance market in recent years and many policies and competition between local companies, the overall contribution of private health insurance to health-care resource mobilization is still minimal in Sri Lanka.

### 3.5.3 Market structure

One government organization (National Insurance Trust Fund [NITF]), one not-for-profit firm and 13 for-profit firms provide health insurance in Sri Lanka (Withanachchi, 2009). Since Sri Lankan health care is universal and accessible to all, private insurance coverage is small and often supplementary or complementary in nature, benefiting the higher-income groups.

Private VHI is largely by enrolment of employed groups and, to a very low extent, by individual enrolment (Govindaraj, Navaratne, Cavagnero, & Seshadri, 2014). Pooling of OOPEs and formulating an insurance model of financing is not relevant as the dominant government health-care delivery is not organized in a way that can accept insurance payments and inpatient private beds are still limited.

### 3.5.4 Market conduct

Pricing and promotion strategies of private health insurance providers are diverse and decided by the industry. To some extent, the scope of services provided by the government health services would have an influence, as seen after the recent price reductions for essential drugs and devices by the MoH.
The government emphasis on health and well-being can also influence the promotion strategies of the insurance industry.

### 3.5.5 Public regulation of VHI

The insurance industry is bound by the Regulations of Insurance Industry Act No. 43 of 2000. The Insurance Act has vested the Insurance Board of Sri Lanka (IBSL) with the authority to regulate the for-profit and not-for-profit insurance firms (Withanachchi, 2009).

Regulation of private health care comes under the purview of the MoH but the regulation of VHI schemes, which has the potential to improve access to the private health sector by higher-income groups, has not been addressed. Considering the increase in purchasing power of the higher-income group and even the middle-income group, the regulation of the industry and pricing policies can contribute to reducing OOPE and improving health financing.

The Insurance Industry Act requires insurers to collect and provide basic statistics on the operation of their schemes and make this information publicly available.

### 3.6 Other financing

#### 3.6.1 Parallel health systems

The defence ministry and police departments have established their own health services, including tertiary-care hospitals. However, their employees can access government services as well. The Defence Ministry Scheme (Armed Forces and Police Hospitals) accounted for 0.4% of CHE in 2016 (SLR 284 million at current prices).

Estate health services originated as a parallel health system, which is now being absorbed gradually into the national health services.

Traditional medicine systems, including for both ambulatory and inpatient services have been in existence for longer than the allopathic services. They receive a separate government allocation. Government health expenditure for this system accounts for less than 1% of CHE (2017). The utilization of traditional medicine is limited when compared to services provided by the allopathic system. There are specific illnesses, usually of a chronic nature, for which traditional medicine is sought after most often by the population.
3.6.2 External sources of funds

The contribution of external sources is approximately 1% of CHE. This constitutes grants and loans from developmental partners and bilateral agreements.

3.6.3 Other sources of financing

Sri Lanka does not receive any other regular financial support of any significance from other sources.

3.7 Payment mechanisms

3.7.1 Paying for health services

Line item budgets are allocated for different services, i.e. hospitals, public health programmes, training institutes and administration. Further, these budgets are categorized under recurring and capital, purchase of medicines and supplies, laboratory services and administration and are listed separately in the annual budget.

Budget allocation is based on the allocation of earlier years and incremental calculations, where each year, unless there is a very specific need or item, the previous year’s budget is increased by a percentage without taking into account the actual figures of consumption or the outputs delivered.

The private sector operates on different terms and the payments are generally based on actual outputs to be delivered and on the overall business strategy.

3.7.2 Paying health workers

Payment mechanisms for health workers differ between the government and private sectors. The government employees get a fixed salary as per their scheme of recruitment, salary code, educational background, grade and duration of service. The government system also pays staff for working extra duty hours based on the rates applicable to the service category and grade of service.

There are no payments given based on capitation or fee for service as provider incentives and all payments strictly adhere to the well-established government financial regulations.
Private sector employees receive payments based on whether they are working full time, part time or on a fee-for-service basis. The emoluments could vary depending on the demand and supply of the specific category of staff. Further, compensation in the private sector is subject to variation, mostly on the basis of performance.

A significant number of MOs work both in the government and private sectors, the latter being after duty hours. This is known as dual practice or moonlighting. In the private sector, they would work on a fee-for-service basis, i.e. the number of patients seen or procedures performed.
4. Physical and human resources

Chapter summary
The state curative facilities in the allopathic system are organized into a tiered structure, each providing a defined level of care. They range from the National Hospital of Sri Lanka and teaching hospitals with super specialties; provincial, district, general and base hospitals with selected specialties; to divisional hospitals (outpatient care and inward care) manned by non-specialist doctors and primary medical care units offering only outpatient care. Some 628 hospitals provide inpatient care facilities and have a combined total bed strength of 83,275 with an average of 3.9 beds per 1000 population. The public health services are mostly provided by the state sector through a network of some 354 MOH units, which run 3,825 branch clinics spread across the country.

Sri Lanka completed a Service Availability and Readiness Assessment (SARA) survey in 2017 among a sample of 755 facilities, including curative and preventive service delivery points, the relevant findings from which have been summarized in this chapter.

Investment proposals are identified through the respective national and provincial budgets. Institutions that come under the line ministry are seen to get a major share of funding for physical resources. In the private sector, investment for ambulatory care clinics (general practitioner [GP] practices) is borne by the practitioners themselves. Investment for the establishment of private hospitals is done mostly through Board of Investment (BOI)-approved projects by entrepreneurs.

The past decade has witnessed the development and deployment of many institution-based electronic HISs in Sri Lanka. There are successful and scaled-up models (i.e. electronic Indoor Morbidity and Mortality Reporting [e-IMMR], Health Information Management System [HIMS], Hospital Health Information Management System [HHIMS], Reproductive Health Management Information System [RHIMS] and District Nutrition Management System [DNMS]), which have been implemented with varying levels of maturity, while the rest are limited to pilot implementation and have failed to scale up to the national level. Major concerns identified are lack of clear policies guiding
health information management, compartmentalization of the information governance mechanism, inadequate coordination among existing information systems, limited data-sharing, moderate use of information for decision-making and insufficient automation leading to a relatively modest quality of health information. The National Policy on Health Information (2016) seeks to rectify this situation.

The Ministry of Health (MoH) employs approximately 140,205 persons (both in the line ministry and provincial health ministries) belonging to 327 different categories. The health workforce has gradually increased during the period 2005–2015. However, this increase has not been uniform across staff categories and an appropriate skill mix is yet to be identified. Further, along with the evolving reforms in health care, service delivery cadres need to be revised. Private sector health-care delivery is expanding but estimates of the workforce are not available.

Recruitment and training of MOs has been regular through the university system. However, in other staff categories, such as nursing, professions supplementary to medicine (PSM) and paramedical categories, it needs to be streamlined. Initiation and expansion of graduate programmes in state universities for nursing and some PSM staff categories have been a significant achievement in the development of human resources (HR) for health. Doctors have evident career development opportunities, but more attention needs to be paid to career development pathways for other staff categories.

Data on the professional mobility of health workers is limited. Monitoring mechanisms need to be strengthened on dual practice, professional mobility and private sector health workforce.

At present, key HR management functions of the MoH, HR planning, recruitment services, training and development, services administration such as administration of salary structures, service minutes, transfers, discipline, performance appraisals, etc. are performed by various divisions of the MoH. The Human Resource Coordination Division was established in 2017 to improve coordination among these units.

11 The Ministry of Health (MoH) of Sri Lanka has undergone numerous name changes over the past 20 years. In the text of this document, we use “Ministry of Health (MoH)”, which is the current iteration. However, when referencing ministry publications, we use the name that was used by the Ministry at the time of publication.
4.1 Physical resources

This chapter describes the physical and human resources in the allopathic system of medicine in Sri Lanka.\(^{12}\)

### 4.1.1 Capital stock and investments

The state curative facilities are organized into a tiered structure, each providing a defined level of care. They range from teaching hospitals linked to universities that have super specialties, provincial, district, general and base hospitals with selected specialties, to divisional hospitals (outpatient care and inward care) manned by non-specialist doctors, and primary medical care units offering only outpatient care. There are also a few specialized hospitals that serve as centres of excellence in the system. In 2017, the total number of hospital beds in the state sector curative facilities stood at 83,275 (Ministry of Health, Nutrition and Indigenous Medicine, 2018a; Ministry of Health, Nutrition and Indigenous Medicine, 2019b). The numbers and bed strength according to different types of state hospitals as of 2016 are presented in Table 4.1.

#### Table 4.1 Distribution of state hospitals by category of institution and bed strength

<table>
<thead>
<tr>
<th>Category of institution</th>
<th>Number of hospitals</th>
<th>Bed strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching hospital</td>
<td>16</td>
<td>20,310</td>
</tr>
<tr>
<td>Provincial general hospital</td>
<td>3</td>
<td>5,076</td>
</tr>
<tr>
<td>District general hospital</td>
<td>19</td>
<td>12,080</td>
</tr>
<tr>
<td>Subtotal</td>
<td>38</td>
<td>37,466</td>
</tr>
<tr>
<td>Secondary care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base hospital – Type A</td>
<td>24</td>
<td>8,891</td>
</tr>
<tr>
<td>Base hospital – Type B</td>
<td>50</td>
<td>8,960</td>
</tr>
<tr>
<td>Subtotal</td>
<td>74</td>
<td>17,851</td>
</tr>
<tr>
<td>Primary care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divisional hospital – Type A</td>
<td>50</td>
<td>5,345</td>
</tr>
<tr>
<td>Divisional hospital – Type B</td>
<td>134</td>
<td>9,076</td>
</tr>
<tr>
<td>Divisional hospital – Type C</td>
<td>296</td>
<td>7,901</td>
</tr>
<tr>
<td>PMCU with maternity beds</td>
<td>11</td>
<td>145</td>
</tr>
<tr>
<td>Subtotal</td>
<td>491</td>
<td>22,467</td>
</tr>
<tr>
<td>Other hospitals</td>
<td>25</td>
<td>5,491</td>
</tr>
<tr>
<td>Total</td>
<td>628</td>
<td>83,275</td>
</tr>
</tbody>
</table>

PMCU: primary medical care unit

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2019b

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\(^{12}\) Although contemporary Sri Lanka has a pluralistic health system, the allopathic system caters to the majority of the population. As stated in Chapter 2, this publication is mainly on the allopathic system.
In addition to these state sector health-care facilities, the private sector has around 200 hospitals, which have a combined bed capacity of 5120 [Ministry of Finance, 2019]. Private sector ambulatory care services are provided through 424 full-time general practices and 4845 part-time general practices [Amarasinghe et al., 2015a]. Preventive services are mostly provided by the state sector through a network of 354 MOH units and 3825 of their branch clinics spread across the country.

The number of beds and the number of beds per 1000 population from 1965 to 2017 are presented in Figure 4.1. It indicates a 129% increase in the number of beds per 1000 population from 1965 to 2017. With the private sector combined, the overall bed strength has increased to 3.85 beds/1000 population. A comparison with selected countries in the Region shows that in 2012, Sri Lanka (3.8/1000 population) had the highest bed availability, with the least being reported by Indonesia (0.9/1000 population). Philippines, Malaysia, Thailand and Viet Nam recorded 1.0 (in 2011), 1.9, 2.1 (in 2010) and 2.5, respectively [World Bank, 2020].

**Figure 4.1** Number of beds and beds per 1000 population for Sri Lanka, 1965–2017

Source: Compiled by the authors from the Annual Health Bulletins of MoH 1980–2017

A SARA carried out in Sri Lanka in 2017 used a nationally representative sample of 755 facilities drawn from a population of 2543 health facilities in Sri Lanka. The sampling considered the type of facility and the geographical variation within the country, and was appropriately weighted. Table 4.2
indicates the General Service Readiness Index (GSRI) and domain readiness scores (out of 100) among health facilities by facility type and group (n=331). The SARA describes a GSRI, which is a composite measure designed to combine information from the five general service readiness domains: basic amenities, basic equipment, standard precautions, laboratory diagnostics and essential medicines. It is evident that the GSRI is higher in the private sector than in the public sector and that the public sector gets a reduced value due to the poor performance of primary care facilities. It is important to note that at the tertiary- and secondary-care levels, the public facility GSRI is higher than that for the private sector. This indicates that the public system is more responsive to complex and acute care (Ministry of Health, Nutrition and Indigenous Medicine, 2018b).

Table 4.2 General Service Readiness Index and domain readiness scores (out of 100) among health facilities, by facility type and group (n=331), Sri Lanka 2017

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Basic amenities</th>
<th>Basic equipment</th>
<th>Standard precautions for infection prevention</th>
<th>Diagnostic capacity</th>
<th>Essential medicines</th>
<th>General Service Readiness index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall average</td>
<td>91</td>
<td>90</td>
<td>84</td>
<td>45</td>
<td>83</td>
<td>79</td>
</tr>
<tr>
<td>Public sector</td>
<td>91</td>
<td>89</td>
<td>83</td>
<td>41</td>
<td>83</td>
<td>77</td>
</tr>
<tr>
<td>Public tertiary</td>
<td>97</td>
<td>96</td>
<td>96</td>
<td>76</td>
<td>96</td>
<td>92</td>
</tr>
<tr>
<td>Public secondary</td>
<td>96</td>
<td>96</td>
<td>91</td>
<td>76</td>
<td>94</td>
<td>91</td>
</tr>
<tr>
<td>Public primary</td>
<td>90</td>
<td>87</td>
<td>80</td>
<td>33</td>
<td>80</td>
<td>74</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>92</td>
<td>94</td>
<td>88</td>
<td>62</td>
<td>81</td>
<td>83</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f

The SARA survey assessed readiness in several domains: staff and guidelines, equipment, medicines and commodities, and overall readiness. Table 4.3 shows that domain-specific as well as overall readiness on these aspects were better in the public sector as compared to the private sector. The government sector tertiary health-care services recorded the highest values.
Table 4.3  Readiness score (overall and by domain) for surgical management services in health facilities that are expected to provide service, by facility type and group (n=157), Sri Lanka, 2017

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Staff and guidelines readiness score</th>
<th>Equipment readiness score</th>
<th>Medicines and commodities readiness score</th>
<th>Overall readiness score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall average</td>
<td>32</td>
<td>86</td>
<td>75</td>
<td>76</td>
</tr>
<tr>
<td>Public sector</td>
<td>42</td>
<td>94</td>
<td>86</td>
<td>85</td>
</tr>
<tr>
<td>Public tertiary</td>
<td>59</td>
<td>99</td>
<td>93</td>
<td>92</td>
</tr>
<tr>
<td>Public secondary</td>
<td>33</td>
<td>92</td>
<td>83</td>
<td>82</td>
</tr>
<tr>
<td>Public primary</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>25</td>
<td>80</td>
<td>67</td>
<td>69</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f

The average length of stay for acute care

Overall, there has been considerable improvement in the infrastructure facilities of hospitals, both in the line ministry as well as in the provincial health department. Sri Lanka has a low average duration of stay in hospitals relative to countries of the Organisation for Economic Co-operation and Development (OECD) and other countries in the Region (Smith, 2018). In terms of type of services, the longest duration of stay is observed in the leprosy hospital followed by mental hospitals. A decreasing trend can be observed in the average duration of stay in all hospitals over time. This may suggest improved technical efficiency over the years. A summary of the average hospital stay over time by type of facility is presented in Table 4.4.

Table 4.4  Average duration of stay (days) in selected types of hospitals per quarter from 2004 to 2017

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National hospitals</td>
<td>4.8</td>
<td>4.4</td>
<td>4.4</td>
<td>4.3</td>
<td>4.3</td>
<td>4.2</td>
<td>4</td>
<td>4.3</td>
<td>3.9</td>
<td>3.9</td>
<td>3.7</td>
<td>3.7</td>
<td>3.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Teaching hospitals</td>
<td>-</td>
<td>-</td>
<td>3.6</td>
<td>3.6</td>
<td>3.5</td>
<td>3.4</td>
<td>3.3</td>
<td>3.2</td>
<td>3.1</td>
<td>3.2</td>
<td>3.3</td>
<td>3.2</td>
<td>3.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Provincial hospitals</td>
<td>3.9</td>
<td>4.2</td>
<td>3.1</td>
<td>3.3</td>
<td>3.2</td>
<td>3.1</td>
<td>2.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Base hospitals</td>
<td>3.0</td>
<td>3.0</td>
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<td>Children’s hospital</td>
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<td>14.3</td>
<td>12.3</td>
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<td>3.7</td>
<td>3.8</td>
<td>3.8</td>
<td>3.5</td>
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<tr>
<td>Maternity homes</td>
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<td>2.2</td>
<td>3.1</td>
<td>2.6</td>
<td>1.4</td>
<td>1.6</td>
<td>1.6</td>
<td>1.8</td>
<td>1.4</td>
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<td>Leprosy hospitals*</td>
<td>-</td>
<td>-</td>
<td>73.3</td>
<td>77.0</td>
<td>87.9</td>
<td>75.0</td>
<td>88.1</td>
<td>74.5</td>
<td>84.4</td>
<td>77.6</td>
<td>87.7</td>
<td>81.9</td>
<td>81.9</td>
<td>75.5</td>
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<tr>
<td>Rehabilitation hospitals*</td>
<td>-</td>
<td>-</td>
<td>24.5</td>
<td>30.0</td>
<td>26.1</td>
<td>26.9</td>
<td>26.5</td>
<td>33</td>
<td>24.0</td>
<td>29.3</td>
<td>30</td>
<td>30</td>
<td>18.9</td>
<td>17.1</td>
</tr>
</tbody>
</table>

* It must be noted that the leprosy hospital is an institution from the past, when leprosy patients were isolated in institutions. It holds patients who have been there over a long period of time and would be closed when all the current patients are discharged.

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2019b

The average hospital stay for Sri Lanka in secondary- and tertiary-care hospitals is approximately 3.2 days (for acute care), while this is much lower (around 2 days) for smaller institutions. The average for OECD countries was 6.9, indicating that Sri Lanka experiences a high turnover of patients for acute care, probably a reflection of the differences in morbidity among admitted patients.
**Investment and funding**

Investments for physical resources are identified in the annual budget estimates at central and provincial ministerial levels. The Treasury will evaluate these proposals and decide on funding through domestic or external resources. Some investment for physical resources is received as grants and the majority is negotiated as soft loans. Institutions that come under the line ministry are seen to get a major share of the funding for physical resources. It is probably a reflection on the type of institutions that are under the line ministry.

In the private sector, investment for ambulatory care clinics (GP practices) are borne by the practitioners themselves. Investment for the establishment of private hospitals is done mostly as BOI-approved projects. Both local and foreign funds may be used for these investments.

Four companies, Nawaloka, Asiri Hospital Holdings, Lanka Hospitals and Durdans, deliver the bulk of private health-care services. Most of the private health sector is locally owned and operated, although around 3% of medium-size health facilities have a foreign partner. The low level of foreign investment could stem from the hostile takeover of Apollo, an Indian hospital company, in 2006 by a local business magnate. However, in 2012, a UK-based global private equity firm, Actis, invested US$ 32 million for approximately 30% of Asiri Hospital Holdings.

It appears that the high fixed costs of operating health-care facilities have served as a barrier to new entrants. Nevertheless, the big four have all engaged in expanding their capacity over the past few years, either within Colombo or to other cities outside the capital. The number of private hospital beds increased by 70% between 2006 and 2013 (The Economist Intelligence Unit, 2014).

Nongovernmental organizations (NGOs) have a very small role in the health-care system, focusing mainly on supplementing family planning services provided by the government sector.

### 4.1.2 Infrastructure

#### 4.1.2.1 Accident and Emergency (A&E) units and intensive care units

**A&E services**

In 2002, a need was identified to develop A&E services in the country. A five-year project was launched to improve A&E services covering level 1 to level 4 centres. A total of LKR 8 billion was invested in 12 new, purposely designed A&E units and in upgrading the existing 22 A&E units. With the current reorganization, it is envisioned that every hospital should have an
emergency treatment or A&E unit. A&E policy and implementation guidelines have already been issued to streamline A&E services. The A&E expansion project is expected to add 800 dedicated emergency beds to the system. At present, A&E data are not reported to the national level and there is a data gap regarding A&E service provision.

**Intensive care services**

According to a rapid survey conducted by WHO in 2020, it was identified that there were some 831 functional intensive care unit (ICU) beds in 141 ICUs across the country, with an average ICU bed availability of 3.8 beds per 100 000 population. The fact that each district will have at least one District General Hospital and two or more base hospitals guarantees that ICU beds are equitably distributed in the provinces. It is planned to increase ICU beds by 10% every year for the next five years. The distribution of ICUs by province is presented in Table 4.5 below.

**Table 4.5 Distribution of ICU facilities by province**

<table>
<thead>
<tr>
<th>Province</th>
<th>Number of ICUs</th>
<th>ICU beds</th>
<th>ICU beds/100 000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Province</td>
<td>51</td>
<td>344</td>
<td>5.6</td>
</tr>
<tr>
<td>Central Province</td>
<td>21</td>
<td>103</td>
<td>3.7</td>
</tr>
<tr>
<td>Southern Province</td>
<td>17</td>
<td>127</td>
<td>4.8</td>
</tr>
<tr>
<td>Northern Province</td>
<td>7</td>
<td>30</td>
<td>2.7</td>
</tr>
<tr>
<td>Eastern Province</td>
<td>14</td>
<td>78</td>
<td>4.6</td>
</tr>
<tr>
<td>North Central Province</td>
<td>8</td>
<td>39</td>
<td>2.9</td>
</tr>
<tr>
<td>North Western Province</td>
<td>7</td>
<td>37</td>
<td>1.5</td>
</tr>
<tr>
<td>Uva Province</td>
<td>8</td>
<td>42</td>
<td>3.1</td>
</tr>
<tr>
<td>Sabaragamuwa Province</td>
<td>8</td>
<td>31</td>
<td>1.5</td>
</tr>
<tr>
<td>Total national</td>
<td>141</td>
<td>831</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: World Health Organization, 2020b

**4.1.3 Medical equipment**

The SARA survey of 2017 assessed the availability of the following basic equipment: adult weighing scale, child weighing scale, thermometer, stethoscope, blood pressure (BP) apparatus and light source. Facilities were also assessed on the availability of the following tracer equipment needed for emergency or specialized care: intravenous infusion kits, ophthalmoscope, peak flow meter, spirometer, nebulizer, spacers for inhalers, infusion pump, pulse oximeter, cardiac monitor, defibrillator, oxygen supply with flow meter, speculum, spatula and colposcope. The summary of their availability as per SARA 2017 is presented in Tables 4.6 and 4.7.
According to the SARA (2017), the availability of adult weighing scales and BP apparatus was high among all levels of care. The private sector indicated greater availability than the public sector for all the tracer items. The availability of child weighing scales was low, particularly in primary health care facilities (30%). At the national level, 30% of facilities were equipped with all tracer items, with tertiary- and secondary-level facilities having high scores.

Table 4.6 Percentage distribution of basic equipment

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Adult weighing scale</th>
<th>Child weighing scale</th>
<th>Thermometer</th>
<th>Stethoscope</th>
<th>BP apparatus</th>
<th>Light source</th>
<th>Facilities with basic equipment tracer items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>96</td>
<td>38</td>
<td>71</td>
<td>75</td>
<td>94</td>
<td>79</td>
<td>30</td>
</tr>
<tr>
<td>Public sector</td>
<td>96</td>
<td>36</td>
<td>69</td>
<td>73</td>
<td>94</td>
<td>78</td>
<td>28</td>
</tr>
<tr>
<td>Public tertiary</td>
<td>98</td>
<td>80</td>
<td>98</td>
<td>98</td>
<td>100</td>
<td>100</td>
<td>78</td>
</tr>
<tr>
<td>Public secondary</td>
<td>100</td>
<td>86</td>
<td>100</td>
<td>96</td>
<td>98</td>
<td>99</td>
<td>80</td>
</tr>
<tr>
<td>Public primary</td>
<td>98</td>
<td>30</td>
<td>83</td>
<td>72</td>
<td>97</td>
<td>82</td>
<td>22</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>100</td>
<td>66</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>66</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f

According to the SARA (2017), nebulizers were seen to be available in almost all facilities. The private sector indicated greater availability than the public sector for all the tracer items. Of the public facilities, more emergency equipment was available at tertiary- and secondary-levels of care.

Table 4.7 Percentage availability of emergency equipment tracer items by type of facility

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Intravenous infusion kits</th>
<th>Ophthalmoscope</th>
<th>Nebulizer</th>
<th>Infusion pump</th>
<th>Pulse oximeter</th>
<th>Cardiac monitor</th>
<th>Defibrillator</th>
<th>Oxygen supply with flow meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>67</td>
<td>63</td>
<td>91</td>
<td>38</td>
<td>51</td>
<td>40</td>
<td>36</td>
<td>43</td>
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<tr>
<td>Public sector</td>
<td>65</td>
<td>60</td>
<td>90</td>
<td>33</td>
<td>46</td>
<td>36</td>
<td>32</td>
<td>40</td>
</tr>
<tr>
<td>Public tertiary</td>
<td>98</td>
<td>98</td>
<td>100</td>
<td>98</td>
<td>98</td>
<td>95</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>Public secondary</td>
<td>100</td>
<td>99</td>
<td>100</td>
<td>91</td>
<td>95</td>
<td>99</td>
<td>97</td>
<td>98</td>
</tr>
<tr>
<td>Public primary</td>
<td>68</td>
<td>56</td>
<td>89</td>
<td>19</td>
<td>41</td>
<td>29</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>90</td>
<td>88</td>
<td>100</td>
<td>56</td>
<td>86</td>
<td>69</td>
<td>71</td>
<td>88</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f
The SARA also assessed the availability of communication facilities, computers with Internet access, availability of emergency transportation, an emergency source of power, an improved source of water supply and sanitation facilities. It was observed that the private sector facility profile was better than that of the public sector and, among the public sector, tertiary-care facilities were functioning optimally with near 100% values (Table 4.8).

Table 4.8  Percentage availability of tracer items for basic amenities among health facilities, by facility type and group (n= 755), Sri Lanka, 2017

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Communication equipment</th>
<th>Computer with Internet</th>
<th>Emergency transport</th>
<th>Power source</th>
<th>Improved water source</th>
<th>Sanitation facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>91</td>
<td>53</td>
<td>86</td>
<td>92</td>
<td>99</td>
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<tr>
<td>Public sector</td>
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<td>51</td>
<td>93</td>
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<td>91</td>
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<tr>
<td>Public tertiary</td>
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<td>100</td>
<td>98</td>
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<td>Public primary</td>
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<td>41</td>
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<tr>
<td>Private hospitals</td>
<td>100</td>
<td>91</td>
<td>58</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f

Facility for radiological investigations was high, for example, 79% of secondary-care hospitals and 95% of tertiary-care hospitals had X-ray machines, and 90% of secondary-care hospitals and 95% of tertiary-care hospitals had ultrasound equipment. X-ray and ultrasound equipment was available at most private hospitals too (65% and 75%, respectively). The availability of CT scanners was limited to several government tertiary-care hospitals and major private hospitals (Table 4.9).

Table 4.9  Percentage availability of tracer items for diagnostic capacity among health facilities, by facility type and group (n=755), Sri Lanka, 2017

<table>
<thead>
<tr>
<th>Facility type</th>
<th>X-ray machine</th>
<th>Ultrasound machine</th>
<th>CT scanner</th>
<th>ECG machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>68</td>
<td>76</td>
<td>34</td>
<td>58</td>
</tr>
<tr>
<td>Public sector</td>
<td>71</td>
<td>77</td>
<td>59</td>
<td>55</td>
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<td>Public tertiary</td>
<td>95</td>
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<tr>
<td>Public secondary</td>
<td>79</td>
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<tr>
<td>Public primary</td>
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<tr>
<td>Private hospitals</td>
<td>65</td>
<td>75</td>
<td>27</td>
<td>80</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f
The percentage of health facilities with the capacity to manage acute myocardial infarction, stroke and provide haemodialysis and renal transplantation was assessed. The findings indicate that most of the state sector tertiary-care services have these services and that these facilities are lacking in some secondary-care facilities. The public sector had more services in this category than the private sector, where it was available in only a limited number of major private facilities (Table 4.10).

**Table 4.10** The percentage of health facilities with the capacity to manage acute myocardial infarction, stroke and provide haemodialysis and renal transplantation

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Management of cardiovascular disease</th>
<th>Monitoring of cardiac functions</th>
<th>Thrombolysis</th>
<th>Coronary angioplasty or stenting</th>
<th>Haemodialysis</th>
<th>Renal transplantation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>59</td>
<td>46</td>
<td>51</td>
<td>35</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Public sector</td>
<td>64</td>
<td>47</td>
<td>93</td>
<td>38</td>
<td>26</td>
<td>60</td>
</tr>
<tr>
<td>Public tertiary</td>
<td>100</td>
<td>100</td>
<td>97</td>
<td>38</td>
<td>59</td>
<td>19</td>
</tr>
<tr>
<td>Public secondary</td>
<td>99</td>
<td>86</td>
<td>92</td>
<td>-</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Public primary</td>
<td>56</td>
<td>38</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Private hospitals</td>
<td>38</td>
<td>39</td>
<td>21</td>
<td>34</td>
<td>18</td>
<td>7</td>
</tr>
</tbody>
</table>

*Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f*

Mammography services, imaging services such as CT and MRI, angiography and positron emission tomography (PET) scans are available only at tertiary care facilities and several specialized hospitals. Specialized hospitals refer to those for diseases of the eye and ear, nose, throat (ENT), cancer, children, maternity, chest, among others, specialized for a group of people or specific diseases or services. The availability of these equipment depends more on the availability of specialized HR to provide these services. Data on the availability and distribution of these technologies or data on population numbers served are not routinely available.

While access to medical technologies that may result in better diagnosis and treatment has improved over time, this has also contributed to increases in health spending. The availability of CT, MRI, mammography and radiation therapy units were considered for cross-comparison with other countries in the Asia Pacific Region. It had been reported that in 2013, per 1 million persons, there were 1.7 CT scanners, 0.4 MRI machines, 0.6 radiation therapy units, and 2.8 mammography machines per 1 million females 50–69 years (OECD/WHO, 2016). The availability of these in comparison with Asia Pacific regional and OECD countries are presented in Table 4.11.
Table 4.11 Availability of imaging and therapeutic equipment in selected Asia Pacific countries

<table>
<thead>
<tr>
<th>Country</th>
<th>CT/million population **</th>
<th>MRI/million population **</th>
<th>Mammography/million females 50–69 years *</th>
<th>Radiation therapy/million population **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>1.7</td>
<td>0.4</td>
<td>2.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Thailand</td>
<td>6.0</td>
<td>-</td>
<td>27.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Myanmar</td>
<td>0.1</td>
<td>0.1</td>
<td>0.7</td>
<td>0.1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>6.4</td>
<td>2.9</td>
<td>86.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Singapore</td>
<td>8.9</td>
<td>7.8</td>
<td>127.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Philippines</td>
<td>1.1</td>
<td>0.3</td>
<td>13.1</td>
<td>0.2</td>
</tr>
<tr>
<td>OECD</td>
<td>25.0</td>
<td>14.8</td>
<td>176.7</td>
<td>7.2</td>
</tr>
</tbody>
</table>

* for the year 2014 except for Sri Lanka, which was for 2013; ** 2013

Source: OECD/WHO, 2016

Sri Lanka fares better than Myanmar and worse than Thailand in the Region and lower than countries in the Western Pacific Region (Malaysia and Singapore) and the OECD countries. This may reflect the impact of limited investment on health as indicated by an investment of less than 2% of the GDP during the past decade.

4.1.4 Information technology

The past decade has witnessed the development and deployment of many institution-based electronic health information systems in Sri Lanka. There are successful and scaled up models (i.e. electronic Indoor Morbidity and Mortality Reporting [e-IMMR], Healthcare Information and Management System [HIMS], Hospital Health Information Management System [HHIMS], electronic Reproductive Health Management Information System [e-RHIMS] and District Nutrition Monitoring System [DNMS]), which have been implemented with varying levels of maturity at the moment.

There are about 23 different types of health information systems currently used by different directorates, programmes, institutions and focal points of the MoH (Table 4.12). Since an evaluation has not been done of the different systems by reviewing their intended use, scope, capabilities, outputs, platforms on which they have been developed and their interoperability, limited effort has been expended in linking the information generated within each of these systems. Efforts to integrate these systems at different levels have been identified as an urgent need, yet the execution shows slow progress due to varied reasons. This has led to lost gains and gross duplication of information, and extra effort to input information into these systems.
Table 4.12 Health information systems in Sri Lanka*

<table>
<thead>
<tr>
<th>Health information systems in Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curative care</strong></td>
</tr>
<tr>
<td>Electronic Indoor Morbidity and Mortality Reporting (e-IMMR)</td>
</tr>
<tr>
<td>Hospital Health Information Management System (HHIMS)</td>
</tr>
<tr>
<td>Hospital Information Management System (HIMS)</td>
</tr>
<tr>
<td>Accidents and Emergency Information System, OPD Information System</td>
</tr>
<tr>
<td><strong>Preventive care</strong></td>
</tr>
<tr>
<td>Electronic Reproductive Health Management Information System (e-RHMIS)</td>
</tr>
<tr>
<td>District Nutrition Monitoring System (DNMS)</td>
</tr>
<tr>
<td>Web-based Immunization Information System (WEBIIS)</td>
</tr>
<tr>
<td>Electronic Mental Health Management Information System</td>
</tr>
<tr>
<td><strong>Disease-specific</strong></td>
</tr>
<tr>
<td>HIMS – Anti-Malaria Campaign</td>
</tr>
<tr>
<td>National HIV/AIDS Programme (EIMS)</td>
</tr>
<tr>
<td>Quarantine Health Record Management and Surveillance System (QHRMS)</td>
</tr>
<tr>
<td>Anti-Leprosy Campaign (LeIS)</td>
</tr>
<tr>
<td><strong>Administrative and other</strong></td>
</tr>
<tr>
<td>Health Facility Survey System (HFSM)</td>
</tr>
<tr>
<td>Medical Supplies Management Information System</td>
</tr>
<tr>
<td>Human Resource Management Information System (HRMIS)</td>
</tr>
<tr>
<td>National Blood Transfusion Service (NBTSIS)</td>
</tr>
<tr>
<td>Electronic Monthly Statistics Reporting System (eMSRS)</td>
</tr>
<tr>
<td>Civil Registration and Vital Statistics System (CRVS)</td>
</tr>
</tbody>
</table>

*List collected through personal communications, official channels and from already published material; an open invitation was sent to all MoH stakeholders to provide information about their HIS systems.

Major concerns identified by the national policy on health information can be listed as lack of clear policies guiding health information management, compartmentalization of the information governance mechanism, inadequate coordination among existing information systems, limited data-sharing, moderate use of information for decision-making, and insufficient automation leading to a relatively modest quality of health information. It has also been noted that new information systems/solutions were developed with the use of a significant amount of resources by the government and the private sectors. Efforts to integrate the systems at different levels have been identified as an urgent need.
A detailed electronic health information system mapping was conducted in 2018 by the MoH with technical support from WHO. The assessment was based on the mHealth Assessment and Planning for Scale (MAPS) toolkit as the primary evaluation tool, which has a proven validity internationally. Twenty-three data points of four types of systems from curative care, four types of systems from preventive care, four disease-specific systems and six types of administrative (other) systems were included in the evaluation. The number of health-care workers using the systems varied from 50 to over 2000 workers. Most of the systems were national-level implementations with most using universal classifications/coding systems and data standards such as the ICD-10 and Health Level Seven (HL7) international standards.

The MAPS evaluation identified the following:

- An architectural plan needs to be developed to address the business requirements of the MoH.
- Systems that are not available need to be developed and those that are already implemented need to be fine-tuned to suit the requirements of the business architecture.
- Data architecture should deal with the data elements that need to be shared between systems. The data architecture of the current systems could serve as the baseline for a better, interoperable data architecture.
- Technology architecture should deal with hardware and network requirements.
- Target application architecture should decide the applications that fulfil the needs of the identified business architecture.

Hence, the MAPS evaluation and the information derived from it should provide a comprehensive starting point.

**Use of information technology (IT) in health systems**

For the continued progress of health care, electronic health records (EHRs) are the next step that can strengthen the relationship between patients and doctors. The data, timeliness and availability of records would enable providers to make better decisions and provide better services to stakeholders of the Sri Lankan health sector, including decision-makers. The information and communication technology (ICT) agency of Sri Lanka developed the HHIMS (Hospital Health Information Management System) at the request of medical practitioners and administrators of the government health sector as far back as 2010. It is a free and open-source software solution (FOSS). The system includes an electronic medical record with separate sections for: patient admission, giving appointments and queue
management; clinic management; Laboratory Information System (LIS); pharmacy stock management; notification of communicable diseases; outpatient department (OPD) management; performance and monitoring of report generation; ward management; user management; Permission and Picture Archiving and Communicating System (PACS) modules. A performance management dashboard is also included in the HHIMS.

By 2017, 35.71% of secondary- and tertiary-care institutions were using EHR for record-keeping at OPDs and clinics. Of these, in 40% of hospitals, 100% of OPD prescriptions were electronic. Electronic prescription can facilitate a review of the prescription and consumption of different types of antibiotics in response to antimicrobial resistance (AMR) through improved stewardship.

4.2 Human resources

The health workforce can be defined as “all people engaged in actions whose primary intent is to enhance health” (World Health Organization, 2006). HR in health care comprises different kinds of clinical and non-clinical staff responsible for public and individual health interventions. Undoubtedly, the most important of the health system inputs, the performance and benefits the system can deliver, depend largely on the knowledge, competencies, attitudes and motivation of those individuals responsible for delivering health services.

The MoH employs slightly over 140 000 staff (both in the line ministry and provincial health ministries). Of all staff, 58% are skilled personnel and, of them, the core is composed of medical officers (specialist and grade medical officers), nurses, midwives, public health inspectors, dental surgeons, medical laboratory technologists and pharmacists (Ministry of Health, Nutrition and Indigenous Medicine, 2017b). Distribution of selected main staff categories and the health facility levels at which they work are shown in Table 4.13.
### Table 4.13 Distribution of selected main staff categories and the health facility levels at which they work (2015)

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Curative and preventive care</th>
<th>Preventive care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TH, PGH, DGH, BH</td>
<td>DH</td>
</tr>
<tr>
<td>Medical officers</td>
<td>18 243</td>
<td>√</td>
<td>✓</td>
</tr>
<tr>
<td>Dental surgeons</td>
<td>1 340</td>
<td>√</td>
<td>✓</td>
</tr>
<tr>
<td>Nurses</td>
<td>42 420</td>
<td>√</td>
<td>✓</td>
</tr>
<tr>
<td>Public health nursing sisters</td>
<td>290</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Public health inspectors</td>
<td>1 604</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public health midwives</td>
<td>6 041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital midwives</td>
<td>2 765</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>1 504</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Dispensers</td>
<td>1 177</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical laboratory technicians</td>
<td>1 554</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Microscopists (PHLT)</td>
<td>245</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Radiographers</td>
<td>588</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Physiotherapists</td>
<td>519</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Occupational therapists</td>
<td>90</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>School dental therapists</td>
<td>349</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental technicians</td>
<td>50</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Ophthalmic technician</td>
<td>178</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Food &amp; drug inspectors</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECG recordists</td>
<td>298</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>EEG recordists</td>
<td>66</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>PH field officers</td>
<td>403</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>2 236</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Skilled personnel</strong></td>
<td><strong>82 015</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendants</td>
<td>9 070</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Support</td>
<td>49 120</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>140 205</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BH: Base Hospital; DGH: District General Hospital; DH: Divisional Hospital; MOH: Medical Officer of Health; PGH: Provincial General Hospital; PHLT: public health laboratory technician; PMCU: Primary Medical Care Unit; RDHS: Regional Director of Health Services; TH: Teaching Hospital

Sources: Ministry of Health, Nutrition and Indigenous Medicine, 2017b and 2019a

The proportion of non-skilled staff members is relatively higher compared to skilled staff. Although non-skilled staff members do not have formal training, they engage in high-volume multiple tasks, which are necessary in the Sri Lankan context, considering the relatively slow rate of mechanization.
and automation of processes. Further, specific assistant staff categories are limited in the Sri Lankan setting; thus, work such as handling electrical equipment, plumbing, lighting adjustments in the theatre, distribution of food in the hospital, some cleaning processes, etc. are handled by the non-skilled staff. Thus, some degree of multitasking is evident, which has some favourable as well as unfavourable consequences on the current system.

The private sector contribution to the provision of health care in Sri Lanka has been growing immensely during the past two decades. Specialists, MOs, nurses and selected PSM and paramedical categories in the state sector have been granted permission to engage in off-hours private work; most of the private sector specialists and MOs are from the state sector. However, the exact number of health-care personnel employed in the private sector currently is not known. The national health workforce accounts would fill in the gaps in statistics in the private sector.

According to a private health sector review (2015), there are 424 full-time and 4845 part-time MOs (Amarasinghe et al., 2015a). The number of nurses working in private hospitals was approximately 4500; most work full-time while some of the nursing tasks were done by nursing assistants. It is estimated that around 50–60% of government sector MOs and more than 90% of government sector medical specialists (consultants) work part time in the private sector. However, private health-care delivery has greatly improved in the past two decades and anecdotal evidence suggests that HR estimates should be much higher than that given by Amarasinghe et al. (2015a).

**4.2.1 Health workforce trends**

The number of health workers in the MoH has been steadily increasing from 2005 to 2015. Given that the population did not grow as fast as the number of health workers, the increase in health workers has led to an improvement in the number of health workers per population. In 2005, there were 2.2 health workers (including doctors, nurses and other cadres) per 1000 population and, by 2015, there were 3.7 doctors, nurses and midwives per 1000 population (World Health Organization, 2018b). This represents a 70% increase in the ratio of health workers to population over the past decade in Sri Lanka. Furthermore, Sri Lanka has almost reached the WHO-identified minimum density threshold of 34.5 skilled health personnel per 10 000 population (World Health Organization, 2014a) in the context of universal health coverage, with a level of 33 skilled health personnel (physicians, nurses and midwives) per 10 000 population. However, this upward trend in the number of staff has not been uniform across all categories (World Health Organization, 2018b). This increment has been significantly higher in MOs, dental surgeons and nurses relative to other staff categories.
Doctors, dental surgeons and nurses

By 2017, there were 19,800 medical doctors (including specialists), 1,473 dental surgeons, 45,480 nurses (including trainees) (Ministry of Health, Nutrition and Indigenous Medicine, 2019b). Improvement in the numbers and density of doctors, nurses and dental surgeons is shown in Table 4.14 and Figure 4.2, respectively. During the 2005–2017 period, out of the three staff categories, the number of nurses increased by 128%. The number of MOs and dental surgeons increased by 94% and 54%, respectively. The increase in the number of nurses has been unsteady, with large surges in the number of nurses in 2006, 2007, 2010, 2014 and 2015. Among MOs, such inconsistency is less evident but was seen in 2008 and 2009.

Table 4.14 Distribution of the numbers and density of the health workforce – medical officers, dental surgeons and nurses, 2005–2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Medical officers</th>
<th>Dental surgeons</th>
<th>Nurses</th>
<th>Medical officers density</th>
<th>Dental surgeons density</th>
<th>Nurses density</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>10,198</td>
<td>954</td>
<td>19,934</td>
<td>0.52</td>
<td>0.05</td>
<td>1.01</td>
</tr>
<tr>
<td>2006</td>
<td>10,279</td>
<td>1,181</td>
<td>24,988</td>
<td>0.52</td>
<td>0.05</td>
<td>1.26</td>
</tr>
<tr>
<td>2007</td>
<td>11,023</td>
<td>1,314</td>
<td>31,466</td>
<td>0.55</td>
<td>0.06</td>
<td>1.57</td>
</tr>
<tr>
<td>2008</td>
<td>12,479</td>
<td>858</td>
<td>30,063</td>
<td>0.62</td>
<td>0.04</td>
<td>1.49</td>
</tr>
<tr>
<td>2009</td>
<td>13,737</td>
<td>1,046</td>
<td>31,297</td>
<td>0.68</td>
<td>0.05</td>
<td>1.53</td>
</tr>
<tr>
<td>2010</td>
<td>14,668</td>
<td>1,139</td>
<td>35,367</td>
<td>0.71</td>
<td>0.06</td>
<td>1.71</td>
</tr>
<tr>
<td>2011</td>
<td>15,273</td>
<td>1,147</td>
<td>35,870</td>
<td>0.73</td>
<td>0.05</td>
<td>1.72</td>
</tr>
<tr>
<td>2012</td>
<td>15,910</td>
<td>1,223</td>
<td>36,486</td>
<td>0.79</td>
<td>0.06</td>
<td>1.79</td>
</tr>
<tr>
<td>2013</td>
<td>16,690</td>
<td>1,279</td>
<td>35,629</td>
<td>0.82</td>
<td>0.06</td>
<td>1.73</td>
</tr>
<tr>
<td>2014</td>
<td>17,615</td>
<td>1,360</td>
<td>38,451</td>
<td>0.85</td>
<td>0.07</td>
<td>1.85</td>
</tr>
<tr>
<td>2015</td>
<td>18,243</td>
<td>1,340</td>
<td>42,420</td>
<td>0.87</td>
<td>0.06</td>
<td>2.02</td>
</tr>
<tr>
<td>2016</td>
<td>18,968</td>
<td>1,433</td>
<td>42,556</td>
<td>0.89</td>
<td>0.07</td>
<td>2.01</td>
</tr>
<tr>
<td>2017</td>
<td>19,800</td>
<td>1,473</td>
<td>45,480*</td>
<td>0.92</td>
<td>0.07</td>
<td>2.12</td>
</tr>
</tbody>
</table>

*Including around 7,500 trainees

The ratio of doctors per 1000 population in Sri Lanka increased from 0.52 in 2005 to 0.92 in 2017. However, this is lower than the OECD average of 3.4 doctors per 1000 population in 2015 (World Health Organization, 2018b). The ratio of nurses has doubled during the past decade to reach a density of 2.12 nurses per 1000 population by 2017. This is still significantly lower than the average across OECD countries, where there were around 9 nurses per 1000 population in 2015 (World Health Organization, 2018b).
The ratio of nurses to MOs in 2005 was 1.95 nurses per MO and this had increased to 2.3 by 2017. However, this is still below the OECD average in 2015, where there was 3 nurses per MO (World Health Organization, 2018b).

**Figure 4.2**  Trends in health workforce density (medical officers, dental surgeons and nurses), 2005–2017

Sources: Annual health bulletins, 2008–2017; Annual health statistics, 2017

**Professions supplementary to medicine (PSM) and paramedical categories**

Several health-care categories are identified under the PSM and paramedical categories. The main functions and work settings of selected categories are shown in Table 4.15.
<table>
<thead>
<tr>
<th>Category</th>
<th>Main functions</th>
<th>Work setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacist</td>
<td>Issuing medicines, pharmaceutical devices and other health-care products prescribed by medical professionals Providing health-care information for Good Pharmacy Practice Maintaining institutional medical supplies</td>
<td>Hospitals, regional medical supplies divisions Central institutions (e.g. Medical Supplies Division [MSD]), private hospitals</td>
</tr>
<tr>
<td>Medical Laboratory Technologist (MLT)</td>
<td>Conducting medical laboratory tests and procedures</td>
<td>Medical laboratories at government hospitals and specialized health institutions, central research institutions</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>Providing physiotherapy services to patients</td>
<td>Physiotherapy units in hospital settings</td>
</tr>
<tr>
<td>Occupational Therapist (OT)</td>
<td>Involved in rehabilitation activities with patients who have physical and/or psychological health problems</td>
<td>Occupational therapy units in hospitals and community settings</td>
</tr>
<tr>
<td>School Dental Therapist (SDT)</td>
<td>Looking after the oral health needs of schoolchildren from 3 to 13 years</td>
<td>School dental clinics</td>
</tr>
<tr>
<td>Radiographer</td>
<td>Performing radiological investigations</td>
<td>Radiography units of hospitals</td>
</tr>
<tr>
<td>Radiotherapists/ Radiation therapist</td>
<td>Delivering radiation treatment, primarily for people diagnosed with cancer</td>
<td>Hospital/institutional radiotherapy departments</td>
</tr>
<tr>
<td>Health Entomology Officer</td>
<td>Carrying out entomological investigations and assisting in vector control activities</td>
<td>Field-level officers – Medical Officer of Health areas and local government institutions</td>
</tr>
<tr>
<td>Ophthalmic Technologist</td>
<td>Involved in detecting eye and visual abnormalities</td>
<td>Optometry units of hospitals</td>
</tr>
<tr>
<td>Prosthetist and Orthotist</td>
<td>Designing and applying prosthesis and orthosis</td>
<td>Prosthetics and orthotics units of major hospitals</td>
</tr>
<tr>
<td>Electrocardiographer</td>
<td>Performing investigations such as electrocardiography (ECG), exercise ECG test, Holter monitoring, etc.</td>
<td>In hospital settings</td>
</tr>
<tr>
<td>Electroencephalographer</td>
<td>Performing neurophysiological investigations</td>
<td>In hospital settings</td>
</tr>
</tbody>
</table>

Source: Compiled by Human Resources for Health Coordination Unit - Ministry of Health, Sri Lanka (2020)
The distribution of health-care personnel in these categories is shown in Table 4.16. During 2006–2016, the number of pharmacists increased the most (103%) followed by MLTs (82%). Physiotherapists, occupational therapists, ophthalmic technicians and dental technicians increased by 62%. However, the increment is grossly irregular across all staff categories. In some categories, the number has been static or nearly static in consecutive years.

Table 4.16 Distribution of numbers of health-care personnel in selected PSM and paramedical categories, 2006–2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Pharmacists</th>
<th>MLTs</th>
<th>Pharmacists</th>
<th>Occupational therapists</th>
<th>School dental therapists</th>
<th>Dental technicians</th>
<th>Entomological assistants</th>
<th>Ophthalmic technicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>786</td>
<td>716</td>
<td>193</td>
<td>43</td>
<td>403</td>
<td>18</td>
<td>34</td>
<td>77</td>
</tr>
<tr>
<td>2007</td>
<td>886</td>
<td>858</td>
<td>233</td>
<td>57</td>
<td>402</td>
<td>27</td>
<td>43</td>
<td>105</td>
</tr>
<tr>
<td>2008</td>
<td>959</td>
<td>973</td>
<td>243</td>
<td>56</td>
<td>335</td>
<td>21</td>
<td>47</td>
<td>111</td>
</tr>
<tr>
<td>2009</td>
<td>1086</td>
<td>1155</td>
<td>278</td>
<td>73</td>
<td>341</td>
<td>39</td>
<td>63</td>
<td>142</td>
</tr>
<tr>
<td>2010</td>
<td>1240</td>
<td>1402</td>
<td>345</td>
<td>87</td>
<td>345</td>
<td>40</td>
<td>88</td>
<td>138</td>
</tr>
<tr>
<td>2011</td>
<td>1336</td>
<td>1480</td>
<td>369</td>
<td>84</td>
<td>386</td>
<td>46</td>
<td>95</td>
<td>145</td>
</tr>
<tr>
<td>2012</td>
<td>1365</td>
<td>1478</td>
<td>381</td>
<td>85</td>
<td>392</td>
<td>42</td>
<td>91</td>
<td>140</td>
</tr>
<tr>
<td>2013</td>
<td>1348</td>
<td>1483</td>
<td>385</td>
<td>103</td>
<td>434</td>
<td>54</td>
<td>98</td>
<td>132</td>
</tr>
<tr>
<td>2014</td>
<td>1469</td>
<td>1461</td>
<td>452</td>
<td>112</td>
<td>365</td>
<td>52</td>
<td>125</td>
<td>180</td>
</tr>
<tr>
<td>2015</td>
<td>1504</td>
<td>1554</td>
<td>519</td>
<td>90</td>
<td>349</td>
<td>50</td>
<td>140</td>
<td>178</td>
</tr>
<tr>
<td>2016</td>
<td>1546</td>
<td>1566</td>
<td>500</td>
<td>111</td>
<td>364</td>
<td>47</td>
<td>141</td>
<td>198</td>
</tr>
<tr>
<td>2017</td>
<td>1626</td>
<td>1724</td>
<td>618</td>
<td>137</td>
<td>368</td>
<td>42</td>
<td>155</td>
<td>240</td>
</tr>
</tbody>
</table>

Sources: Ministry of Health, 2015; Ministry of Health, Nutrition and Indigenous Medicine, 2019b

As per Figures 4.3 and 4.4, there is a gradual positive trend in the number and density of pharmacists, MLTs and physiotherapists. In some health-care professions, the numbers had declined towards the latter part of the reporting period. As shown in Figure 4.3, recruitment for training of MLT, radiographers and physiotherapists has been irregular. Most of the other PSM and paramedical categories have not been recruited during the 2013/2014 period.
According to the *Global pharmacy workforce report* (International Pharmaceutical Federation, 2012), out of the 82 countries that had been included, the mean density of pharmacists was 6.02 per 10,000 population. The South-East Asia Region has a reported density above 3 per 10,000 population. The Sri Lankan figure is well below the average.

Irregularity in recruitment for training has resulted in fewer PSM and paramedical staff joining services annually. This is well expressed in Figure 4.4. In all three categories, no recruitment has taken place for training during 2011–2013 and a larger number of trainees have been recruited afterwards.

*Source*: Compiled by the Human Resources for Health Coordination Unit, Ministry of Health Sri Lanka based on Annual Health Statistics 2010–2017
Public health cadres

Categories considered under public health cadres are public health midwives and public health inspectors, public health nursing sisters and public health midwives working in the field. At field level, they provide clinic care (at maternal, child welfare, family planning and well-woman clinics) and domiciliary care (provided during household visits to children and pregnant mothers) and communicable disease control. The target population for a public health midwife is 3000 in rural settings, including the estate setting, and 5000 in urban settings.

Public health inspectors are responsible for environmental management in relation to health, investigation and control of communicable diseases, maintenance of occupational health, school health, food safety, health education and health promotion, and enforcement of public health law. The target population for a public health inspector is 10 000. The distribution of numbers and density over 2005–2017 is shown in Table 4.17.

Table 4.17 Distribution of the number of health-care personnel in public health categories, 2005–2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Public health nursing sisters</th>
<th>Public health midwives</th>
<th>Hospital midwives</th>
<th>PH inspectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>313</td>
<td>4896</td>
<td>2371</td>
<td>1512</td>
</tr>
<tr>
<td>2006</td>
<td>299</td>
<td>5080</td>
<td>2555</td>
<td>1354</td>
</tr>
<tr>
<td>2007</td>
<td>290</td>
<td>6167</td>
<td>2828</td>
<td>1548</td>
</tr>
<tr>
<td>2008</td>
<td>270</td>
<td>5331</td>
<td>3016</td>
<td>1475</td>
</tr>
<tr>
<td>2009</td>
<td>264</td>
<td>5389</td>
<td>2768</td>
<td>1398</td>
</tr>
<tr>
<td>2010</td>
<td>380</td>
<td>5477</td>
<td>2971</td>
<td>1436</td>
</tr>
<tr>
<td>2011</td>
<td>349</td>
<td>5491</td>
<td>2884</td>
<td>1501</td>
</tr>
<tr>
<td>2012</td>
<td>332</td>
<td>5821</td>
<td>2605</td>
<td>1510</td>
</tr>
<tr>
<td>2013</td>
<td>322</td>
<td>5950</td>
<td>2848</td>
<td>1544</td>
</tr>
<tr>
<td>2014</td>
<td>277</td>
<td>5954</td>
<td>2888</td>
<td>1526</td>
</tr>
<tr>
<td>2015</td>
<td>290</td>
<td>6041</td>
<td>2765</td>
<td>1604</td>
</tr>
<tr>
<td>2016</td>
<td>277</td>
<td>6247</td>
<td>2365</td>
<td>1692</td>
</tr>
<tr>
<td>2017</td>
<td>328</td>
<td>5746</td>
<td>2485</td>
<td>1720</td>
</tr>
</tbody>
</table>

Sources: Annual health bulletins, 2005–2017

The number of public health nursing sisters has remained almost static, other than the surges in 2010 and 2017. The number of public health midwives and public health inspectors has increased by only 17.4% and 13.8%, respectively, during the 2005–2017 period. This increment too has
been irregular over the period and can clearly be explained by the variation in recruitment of trainees. The number of hospital midwives also increased by 4.8%, but this too has been irregular throughout. Compared to other staff categories, the increase in public health staff has been low. This is mainly due to reluctance among the younger population to enter the public health sector and an irregular recruitment process. Thus, the target population for service provision usually exceeds the expected number and sometimes a field public health midwife has to look after vacant service areas. This jeopardizes the quality of services. In addition, the numbers leaving the service through retirement have not been adequately addressed by new recruitments, as seen in 2017 (Figure 4.5).

**Figure 4.5  Trends in health workforce density – public health cadre, 2008–2017**

According to the annual statistics for 2015 (Ministry of Health, Nutrition and Indigenous Medicine, 2017b), health staff are concentrated in relatively urban, developed districts and around areas with teaching hospitals. The density of MOs is highest in Colombo district, where seven tertiary care hospitals out of the 16 in the country are located. The second highest is in the Kandy district, where three tertiary care hospitals are located. The density of MOs demonstrates a close positive relationship with bed strength (Figure 4.6). In addition, these districts have many teaching units, giving rise to a number of teaching and training staff. The District of Ampara demonstrates an increase due to having two health regions within the district. Equity of human resources for health is further described under section 7.3.2 and Table 7.1.
The government has implemented several measures to improve the maldistribution of staff. Some of these measures are targeted admission policies, a policy to recruit students based on district quotas with special attention to rural areas, establishing state medical faculties, recruiting nurses and PSM/paramedical staff categories to cover almost all provinces, and instituting compulsory appointment of intern and post-intern MOs to relatively underserved areas. Further attempts are under way to define certain medical institutions as difficult medical institutions based on some selected criteria and appoint staff to them.

In the private sector, of the 125 private hospitals recorded in 2011, 51 (41%) were in the Western Province, which is home to nearly a third of the country’s population and where Colombo, the country’s administrative and commercial capital, is located. Furthermore, the Western Province accounted for approximately 54% of the total private hospital beds in 1990 and this has increased to 65% in 2011 (Amarasinghe et al., 2015a).

**Skill mix**

Sri Lanka is yet to identify the most appropriate skill mix of staff categories for hospital settings, which would be necessary to face the evolving health sector challenges. Along with efforts that are under way to restructure and
strengthen PHCs, HR needs and the right skill mix at varying hospital levels will be defined. Workload studies (workload indicators of staffing needs) are being conducted; these will help to identify the HR needs and skill mix in primary care institutions.

Among public health cadres, population standards are already set and implemented, the population per public health midwife (PHM) being 3000 in rural settings and 5000 in urban settings, and the population per public health inspector (PHI) being 10 000. Currently, fulfilling these cadres with adequately qualified personnel has been challenging due to lack of preference for these staff categories among the younger generation. This is highly evident among PHMs. On several occasions (in 1996, 2000, 2002 and 2009), recruitment criteria were changed for PHMs, lowering the educational qualifications to improve service delivery in rural and underprivileged districts, and war-affected areas of the Northern and Eastern Provinces where there are difficulties in providing adequate care. As financial incentives, several allowances are given to PHMs and PHIs. PHMs are provided with an office allowance (LKR 250 per month), field allowance (LKR 3000 per month) and a clinic allowance (LKR 400 per additional clinic session with a maximum of 5000 per month), with some cadres getting extra duty payments up to a maximum of 50 hours. PHIs are given a risk allowance (LKR 3000 month), office allowance (LKR 1000 per month), uniform allowance (LKR 15 000 per year), combined travelling allowance (maximum LKR 5000 month upon fulfilling the criteria for the allowance). However, some of these allowances have not increased on a par with the current cost of living and need to be revised.

In the curative sector, the medical specialties to be established at each level have been identified. Along with the specialty’s establishment, expansion of relevant supportive services and infrastructure development have been taken into consideration to optimize HR allocation and utilization.

4.2.2 Professional mobility of health workers

An HR projection on specialists (De Silva, 2017) has indicated that during 2016–2025, a total of 765 specialists will be lost to the MoH due to joining local universities, defence establishments, the private sector or the global market. However, apart from those joining the global market, others will be serving the Sri Lankan population.

Migration of medical professionals is a long-recognized problem in Sri Lanka, but it has not been studied in depth. In 2000, the number of Sri Lankan-born doctors working in OECD countries was estimated to be 4668 and, by 2010, it was estimated to have reached 5784. This could be considered as an increase
of 24%. When the annual stock of foreign-trained Sri Lankan doctors in five English-speaking OECD countries is considered, the UK and Australia are the largest recipients of Sri Lankan doctors (World Health Organization, 2018b). However, recent evidence suggests that the pass rate of the clinical component of the Australian Medical Council examination has declined.

The Sri Lanka Bureau of Foreign Employment encourages the migration of skilled HR, which includes doctors, nurses and paramedics as a policy. However, coordination is not well established in regulating this process between the Ministry of Foreign Employment and MoH and there is no proper understanding/monitoring of health worker flow.

The number of Sri Lankan-born nurses working in OECD countries was estimated to be 2032 in 2000 and, by 2010, it had more than doubled and was estimated to be 5372. However, the Nursing and Midwifery Council in the UK showed that there were only 83 nurses of Sri Lankan nationality and training in the UK in 2017 and it is assumed that others may be working as unregistered nurses/ informal carers (World Health Organization, 2018b). Migration of nurses is generally considered to be low and one reason for the low levels of migration of nurses is that a large majority of nurses in Sri Lanka do not hold university degrees; therefore, their nursing training may not be recognized outside Sri Lanka.

A study in 2009 showed that of the postgraduate trainees who migrate for overseas training, 11% have not returned or left the country without completion of the bond period. The main reasons for migration were to seek a better quality of life, avoid compulsory placements in rural parts of Sri Lanka and for career development and social security (De Silva et al., 2013). Among medical undergraduates and new graduates, 24% has shown an intention to migrate and the underlying reasons for this is presumed to be a better quality of life, need for a higher income and availability of better medical services (De Silva et al., 2014).

4.2.3 Training of health workers

Doctors
There are currently 10 government faculties of medicine (with two newly established) under the state university system and another medical school is planned. There are no private medical schools in Sri Lanka. The medical faculties are under the Ministry of Higher Education and the MoH does not decide the intake to these faculties. The current output is around 1100–1200 and it is estimated that another 150–200 physicians trained by these three new state medical faculties will enter the health workforce 6–7 years from 2019.
Currently, all medical graduates from state universities are employed by the government system and recruitment for service is under the MoH. Graduates from state universities are given provisional registration from the Sri Lanka Medical Council (SLMC) to proceed with their internship. Following successful completion of internship, which consists of two tenures of 6 months each of surgery (General Surgery or Obstetrics and Gynaecology) and medicine (General Medicine or Paediatrics), a full SLMC registration is granted, allowing them to practise medicine in Sri Lanka.

There has been a substantial increase in the number of Sri Lankan students studying medicine abroad. Once they return, foreign medical graduates are required to pass a licensing examination (Examination for Registration to Practice Medicine, ERPM) conducted by the SLMC before they are granted permission to do internship. Following completion of internship, full SLMC registration is granted, allowing them to practise medicine in Sri Lanka. Candidates completing the ERPM have doubled, from just over 100 in 2010 and 2011, to an average of more than 200 per year in the four-year period 2014–2017. Therefore, foreign medical graduates now comprise about 15% of new entrants to the medical workforce.

Dental surgeons

The recruitment and training of dental graduates is mainly under the Ministry of Higher Education. Currently, only one state university provides training, producing approximately 75 dental surgeons per year. These graduates must undergo one year of internship to obtain full SLMC registration to practise dentistry in Sri Lanka.

Nurses

Nurses are involved in the care of patients from a wide variety of health-care institutional settings such as hospitals (medical, surgical, maternal and child care, critical care, psychiatry, infection control, health promotion, quality management, etc.) and preventive care institutions (public health nursing).

Two separate training programmes are available for nurses under the MoH and Ministry of Higher Education. Training under the MoH is conducted in 16 nurses training schools, which are located throughout Sri Lanka. Around 2500–3000 are recruited annually to the nurses training schools. Following completion of this 3-year training, a Diploma in General Nursing is awarded and the nurses are recruited to public sector service. A graduate programme for nurses (Bachelor of Science in Nursing) is also available under the Ministry of Higher Education. Currently, training is available in five state universities. These graduates are given the opportunity to enrol in state
service following application, once these applications are gazetted and after completing a six-month training in a hospital. Annually, 120–150 nursing graduates are produced by the university system and the government aims to upgrade the diploma awarded by the training colleges to university degrees.

Following completion of the diploma/graduate programme, a certificate of proficiency is obtained from the Ceylon Medical Council (CMC) affiliated to the University of Colombo. The certificate of proficiency is needed to acquire registration to the Nursing Council, which is a pre-requisite for practising nursing in Sri Lanka. However, in the private sector, leading private hospitals have their own nurses training schools attached to their hospitals. Information on the numbers and quality of the training is yet to be evaluated and streamlined.

Undergraduates who complete a state university nursing degree are also recruited to the MoH. They are given six months’ orientation and coordination training prior to employment. They have to follow the same registration process as nurses who complete the Diploma in Nursing.

**PSM and paramedical categories**

Duties, responsibilities and work settings of PSM and paramedical categories are shown in Table 4.18. A summary on the training of PSM and paramedical staff and the qualifications awarded are shown in Table 4.18. All training for the PSM and paramedical categories is provided in training schools under the MoH. Following completion of training, a certificate of proficiency is awarded. With this certificate, registration with the Ceylon Medical College Council (CMCC) must be obtained to practise as a professional in these categories. Degree programmes for several PSM categories were initiated in 2005 under the Ministry of Higher Education. The annual cumulative recruitment of trainees to training schools for the PSM and paramedical categories is approximately 1500–1750 and, in addition, nearly 400 are enrolled in the university system. The MoH is currently running at the maximum training capacity for the PSM and paramedical categories. Capacity for training cannot be increased in the short run as it is necessary to improve infrastructure facilities and recruitment of trainers to improve training capacity.

Following completion of the diploma/degree programme, a certificate of proficiency is obtained from the CMCC, which is affiliated to the University of Colombo. The certificate of proficiency is needed to acquire registration in the SLMC, which is a necessity to practise in Sri Lanka. Graduate trainees must undergo a mandatory six months of internship if they wish to enter government service.
<table>
<thead>
<tr>
<th>Service</th>
<th>Name of the training course</th>
<th>Training period</th>
<th>Training school</th>
<th>Annual intake</th>
<th>Qualification awarded</th>
<th>Qualification awarded</th>
<th>Approximate annual intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professions Supplementary to Medicine</td>
<td>Medical Laboratory Technologist</td>
<td>2 years</td>
<td>Higher Diploma in Medical Laboratory Technology</td>
<td>150</td>
<td>4 years Bachelor of Science in Medical Laboratory Sciences</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pharmacist</td>
<td>2 years</td>
<td>Higher Diploma in Pharmacy</td>
<td>300</td>
<td>4 years Bachelor of Pharmacy</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physiotherapist</td>
<td>2 years</td>
<td>Higher Diploma in Physiotherapy</td>
<td>20</td>
<td>4 years Bachelor of Science in Physiotherapy</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occupational Therapist</td>
<td>2 years</td>
<td>Higher Diploma in Occupational Therapy</td>
<td>60</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radiographer</td>
<td>2 years</td>
<td>Higher Diploma in Diagnostic Radiography/Higher Diploma in Radiotherapy</td>
<td>40</td>
<td>4 years Bachelor of Science in Radiography/Radiotherapy</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speech Therapist/ Audiologist</td>
<td></td>
<td></td>
<td></td>
<td>4 years Bachelor of Science (Speech and Hearing Sciences)</td>
<td>40–50</td>
<td></td>
</tr>
<tr>
<td>Paramedical</td>
<td>School Dental Therapist</td>
<td>2 years</td>
<td>Higher Diploma in Dental Therapy</td>
<td>30</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health Entomology Officer</td>
<td>2 years</td>
<td>Higher Diploma in Health Entomology</td>
<td>30</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ophthalmic Technologist</td>
<td>2 years</td>
<td>Higher Diploma in Ophthalmic Technology</td>
<td>30</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prosthetist and Orthotist</td>
<td>3 years</td>
<td>Higher Diploma in Prosthetics and Orthotics</td>
<td>15</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public Health Inspector</td>
<td>1 ½ years</td>
<td>Diploma for Public Health Inspectors</td>
<td>395</td>
<td>NA</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Electrocardiographer</td>
<td>1 year</td>
<td>Diploma in Cardiography</td>
<td>100</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electroencephalographer</td>
<td>1 year</td>
<td>Diploma in Electroencephalography</td>
<td>25</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled by the Human Resources for Health Coordination Unit - Ministry of Health, Sri Lanka (2020)
4.2.4 Career paths of doctors

Following completion of one year of internship, doctors are appointed to permanent posts. Often, the first appointments are to relatively underserved areas. Annual transfer schemes enable doctors to change their posts at 4-year intervals and enable some choice towards a career path. Doctors have the opportunity to expand their careers as grade MOs or specialists. Doctors start their career as a preliminary grade MO. They can upgrade to Grade II MO upon completion of an efficiency bar examination, which assesses managerial knowledge and language proficiency. Thereafter, a Grade II MO can get upgraded to Grade I after 6 years if they complete an additional diploma or a master’s degree provided by the Post Graduate Institute of Medicine. Otherwise, they can reach Grade I upon completion of 12 years in service.

Specialist training for MOs is provided at the Post Graduate Institute of Medicine, and this specialist training is funded by the MoH for public sector-employed doctors. Currently, 36 specialty training courses are conducted. Opportunities available and the numbers admitted for postgraduate training of doctors is determined by the current and projected numbers of vacancies in the health system. However, the requirements of the private health-care market are not worked into the system in a coordinated manner.

Postgraduate training is facilitated by the government by providing study leave with salary; the overseas component of the specialist training is also funded by the MoH. Thus, there is a great interest among medical graduates to pursue specialist training courses. Following specialist training, they are entitled to salary increments and practice in the private sector, with a higher payment rate than grade MOs. Currently, some specialists are engaged in full-time private practice.

However, when a request for specialist training is accepted, the candidate is required to submit to a bond agreeing to return after training and work in Sri Lanka for four years. If they fail to complete the bond period, they are liable to reimburse the stipend and the salary that they received during their foreign training period, which is relatively modest compared to the potential remuneration in an overseas country.

4.2.5 Other health workers’ career paths

Dental surgeons

Dental surgeons have the opportunity to expand their career as a grade dental surgeon or a specialist. Dental surgeons start their career as a Grade
II dental surgeon. After they reach the Grade II level, a grade dental surgeon can upgrade to a Grade I dental surgeon after 9 years if they complete an additional diploma or a master’s degree provided at the Post Graduate Institute of Medicine. Otherwise, they can reach Grade I upon completion of 15 years in service.

Postgraduate training for dental surgeons is also provided by the Post Graduate Institute of Medicine, and this specialist training too is funded by the MoH for public sector-employed doctors. Currently, there are five specialties; Oral and Maxillofacial Surgery, Community Dentistry, Restorative Dentistry, Orthodontics and Oral Pathology. Clinical specialist dental surgeons (consultants) are employed in higher hospital settings (secondary- and tertiary-care hospitals).

From 2008 to 2015, the number of specialist dental surgeons has increased more than fourfold. Similar to doctors, dental surgeons’ postgraduate training is facilitated by the government by providing study leave with salary and funding for the overseas component of the specialist training through the MoH. Following specialist training, they are also entitled to salary increments and practice in the private sector, at a higher payment rate.

School dental therapists are trained at the School for Dental Therapists situated in Maharagama in the suburbs of Colombo. It was started in mid-1955 and continues to train around 30 school dental therapists per year. School dental therapists are based in large schools. They provide services to nearby smaller schools as well as preschool children in the community. The services of school dental therapists are available in all districts of Sri Lanka.

Community dental services are arranged in several vertical programmes managed by specialists in Community Dentistry and, at the ground level, community dental services are provided by community dental clinics and adolescent dental clinics. However, there are relatively few community dental clinics and adolescent dental clinics in the country.

Nurses

Nursing officers start their careers as Class III nursing officers. They have the opportunity to upgrade to Class II upon completion of 10 years of service, and from Class II to Class I upon completion of 10 years from reaching Class II. Nursing officers at the Class II level can sit for post-basic training (in Hospital Services, Public Health or Nursing Education) and can reach the Class I level in a shorter time. Nursing officers in Class I are known as
Special Grade Nursing Officers; they can reach super grade on completion of 10 years in Class I (special grade).

Nursing officers can expand their career in the field of nursing education by becoming a tutor at a nurses training school. Nursing officers can follow training for 1.5 years in a post-basic training school and become a nursing tutor. Following completion of 5 years in the nursing tutor position, they can upgrade to special nursing tutor, and subsequently to nursing principal.

Postgraduate schemes (MSc) for nurses are available in two state universities. Following completion of 5 years of service, nursing officers can apply for a postgraduate degree. Study leave with salary is given to follow these courses.

**PSM and paramedical categories**

Opportunities for following the graduate schemes mentioned in Table 4.18 via lateral entry are facilitated by provision of paid study leave.

PSM and paramedical categories start their careers in Class III. They then have the opportunity to upgrade to Class II after 10 years’ service from completion of training/appointment. They can go from Class II to Class I upon completion of 10 years in Class II. From the Class I level, they can reach a super grade upon completion of 10 years and special grade after 5 years in super grade.

PSM and paramedical categories can expand their career in the field of education by becoming a tutor in PSM and paramedical training schools. They can apply for tutor posts when they reach Class II or Class I level. Following completion of 5 years in the tutor position, they can upgrade to a senior tutor’s post and subsequently, to a principal’s post after 3 years as a senior tutor.

Postgraduate training is provided at six state universities for selected PSM categories – Radiography, Pharmacy, Physiotherapy, Medical Laboratory Technology. Three years of duty leave is provided to follow the course.

**Continuing professional development in the health sector**

A national continuing professional development (CPD) certificate has been introduced by the SLMA for doctors and specialists. However, this certificate is not mandatory for renewal of registration. A CPD certificate is awarded by the National Centre for CPD in Medicine (NCCPDIM), which comprises representatives from all recognized medical professional bodies in Sri Lanka. The certificate is valid for three years once issued (Sri Lanka Medical
Association, 2010). The CPD system for nursing and other health categories has been piloted in two hospitals. Much attention is needed to formulate and implement CPD systems for all health staff categories.

4.2.6 Dual practice

In Sri Lanka, dual practice is legal and several health staff categories in the public sector are allowed to engage in private practice after working hours since 1977. Dual practice among health professionals is used as a supplementary source of income where base salaries are considered inadequate and serve as a mechanism for improving recruitment and retention in rural areas.

Doctors and dental surgeons have been enjoying this privilege since the Dual Practice Act of 1977. The Act legally permits public sector doctors to work in the private sector after working hours. While routine statistics are not available, sample studies indicate that 40–60% of doctors, 70% of dental surgeons and 90% of specialists employed in the public sector are engaged in private practice after hospital working hours (De Silva, 2017). This includes public sector doctors in academia and the Ministry of Defence.

However, the monitoring mechanism for engagement in dual practice as per staff categories is not well implemented. Also, the impact of dual practice on rural retention, quality of care in public sector institutions during official working hours and migration of staff categories has yet to be fully understood.
5. Provision of services

Chapter summary

Sri Lanka has an extensive health-care system encompassing both curative and preventive services, which have historically been separated into two parallel arms operating within the same organizational structure. Preventive health-care services are provided by 354 MOHs and a team of professionals covering all parts of the country. They provide a package of preventive services, including MCH services, to a defined population. Curative care comprises different levels, ranging from outpatient-only facilities and primary care institutions to tertiary-care institutions and specialized hospitals. These are organized into a hierarchical pyramidal network, the higher-level institutions acting as referral institutions for the lower-level facilities. The state-owned health system is free of charge for the care seeker and covers about 95% of inward care and 50% of total ambulatory care services in the country. Indigenous medicine services, though not the mainstream health system, have been included under the purview of the Ministry of Health since 2015. However, this document discusses mainly the allopathic system, since public demand is mainly for this sector.

Private health services comprise general practitioners and private health institutions providing primary to tertiary care and is governed by the PMIRA. A separate directorate has been established within the MoH to coordinate private health-care services.

The state health services in the country are well distributed as there is a health institution or facility within a distance of 4.8 km on an average (Ministry of Health, Nutrition and Indigenous Medicine, 2017b). There is also a free community ambulance service, which has increased health-care access in an emergency. The state also provides the required medicines and investigations free of charge to the patient. Together, all these have enabled Sri Lanka to achieve near UHC based on the principles of primary health care.

However, the system has not evolved and transformed appropriately to meet the changing demands of the demographic and epidemiological transitions.
Hence, the health services of Sri Lanka will continue to be challenged by the rapidly ageing population and the changing disease burden. Within the present structure for delivery of care, some selected functions are organized as vertical programmes. Although this system has been able to deliver the desired results in the past, a more integrated approach to service delivery is needed to address emerging challenges. Given the financial limitations, a major challenge would be to reorient the system so that human and other resources function in a synchronized manner with optimal productivity.

5.1. Public health

In Sri Lanka, the origins of the current structure for delivery of public health services began in 1926 with the setting up of the first health unit in Kalutara. However, written laws relating to public health predate this initiative by a few decades. The initial legislation was mostly concerned with prevention and control of major communicable diseases, e.g. the Quarantine Ordinance No. 3 of 1897. Strict implementation of these laws was responsible for a reduction in the incidence of diseases such as smallpox, plague and cholera.

Sri Lanka has eliminated/eradicated most of the communicable diseases such as filariasis, leprosy, polio, malaria and neonatal tetanus, and achieved near-elimination of other VPDs through successful public health programmes and a dedicated health workforce. The National Health Policy (1992) and Health Master Plans of 2007–2016 and 2016–2025 recognized the prevention and control of NCDs such as CVDs, diabetes, chronic respiratory diseases, mental health and malignancies as priority areas of work.

The provision of preventive health services is the responsibility of the 354 MOHs. Four of these units are managed by the municipal councils and the others are managed by the provincial health authorities. An MOH unit is served by a team of professionals led by an MO, and comprises public health nursing sisters (PHNSs), supervising public health midwives (SPHMs), PHMs, supervising public health inspectors (SPHIs) and PHIs. It provides services to the people living in a defined geographical area, usually comprising a population of 50 000–100 000.

National programmes such as those of the Family Health Bureau (FHB), Epidemiology Unit and the Health Promotion Bureau, as well as national disease-specific vertical programmes reach the community through MOHs and their staff. They are supported by technical inputs from relevant officials at provincial and national levels. At the community level, the PHM plays a key role in all components of the national family health programme and immunization services. She is supported in this work by the SPHM and
PHNS through regular supervision. Communicable disease prevention, environmental and occupational health and food sanitation come under the purview of the PHI. School health services are provided by the MOH supported by the PHI and PHM of the area.

All preventive health-care services are monitored and supervised by the district-level supervisory staff: Medical Officer of Maternal and Child Health (MoMCH) and the Regional Epidemiologist (RE). These officers are in turn supervised at the provincial level by provincial consultant community physicians and the national focal agencies: the FHB and Epidemiology Unit.

### 5.1.1 National Family Health Programme

The FHB is the focal point for MCH in Sri Lanka. The organization is responsible for planning, coordination, monitoring and evaluation of MCH and family planning services in the National Family Health Programme. The main components of the National Family Health Programme are: preconception care, maternal care, intrapartum and newborn care, infant and child health including child development, nutrition and care of children with special needs, schoolchildren and adolescent health, family planning, women’s health including perimenopausal care and gender concerns. The organization of the components of the National Family Health Programme within the different administrative levels of the health system are presented in Figure 5.1.

With the introduction of the concept of reproductive health in 1996, well women clinics (WWCs) were incorporated into the Family Health Services. These function mainly in MOH clinics and provide screening services for women over 35 years of age against common NCDs such as diabetes, hypertension and breast and cervical cancers.

Training and supervision of health personnel and quality assurance of the MCH programme is an important function of the FHB. Towards this end, data on the provision of services and the impact of the programme at the field level are collected through the Reproductive Health Management Information System (RHMIS) based on quarterly and annual returns originating from PHMs. In addition, morbidity and mortality data are also collected through the Maternal Morbidity and Mortality Surveillance System. The information collected is used for monitoring and evaluation of programmes, while timely operational research provides supportive evidence for programme management (Ministry of Health, Nutrition and Indigenous Medicine, 2017b).
Figure 5.1 Organization of the National Family Health Programme at different levels of the health system

<table>
<thead>
<tr>
<th>Key</th>
<th>Administrative Guidance</th>
<th>Technical Guidance</th>
<th>Care Provision</th>
<th>Referral Pathway</th>
<th>Back Referral Pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Health system</td>
<td>Preventive Care</td>
<td>Creative Care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>Secretary Health DGHS DG-PHS</td>
<td>FHB</td>
<td>Tertiary Care Hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provincial Directorate</td>
<td>Provincial Director</td>
<td>Provincial CCP</td>
<td>Provincial General Hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Directorate</td>
<td>Regional Director</td>
<td>MOMCH</td>
<td>RE</td>
<td>District General Hospital</td>
<td></td>
</tr>
<tr>
<td>Divisional (MOH) Unit</td>
<td>Medical Officer of Health</td>
<td>RSPHNO</td>
<td>SPHID</td>
<td>Base Hospital A/B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHNS</td>
<td>SPHI</td>
<td>PHI</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPHM</td>
<td>PHM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CCP: Consultant Community Physician; FHB: Family Health Bureau; RE: Regional Epidemiologist; MOH: Medical Officer of Health; MOMCH: Medical Officer of Maternal and Child Health; PHM: Public Health Midwife; SPHM: Supervising Public Health Midwife; PHI: Public Health Inspector; SPHI: Supervising Public Health Inspector; SPHID: Supervising Public Health Inspector – District; RSPHNO: Regional Supervising Public Health Nursing Officer; PHNS: Public Health Nursing Sister

Source: Ministry of Health, 2014: p.3

5.1.2 Epidemiology Unit

The Epidemiology Unit of Sri Lanka was set up in 1959 with the support of WHO, with a WHO consultant and a local MO with public health qualifications. Since then, the Epidemiology Unit has developed into a centre of excellence for VPDs and is recognized around the world. The mission of the Epidemiology Unit is ‘Promoting health and the quality of life by prevention and control of disease, injury and disability’.
Notifiable diseases were first gazetted, and notification of communicable diseases became a legal requirement in Sri Lanka as early as 1897. Legislation drafted in relation to major communicable diseases included measures such as restricting the movement of people during epidemics, immunization and compulsory notification. The list of notifiable conditions is approved on the recommendations of the Advisory Committee on Communicable Diseases (Epidemiology Unit, 2008). Currently, a total of 25 diseases are on the list of notifiable diseases and this is revised based on emerging priorities from time to time.

Every registered medical practitioner professing to treat diseases, who attends on any person having symptoms of any disease in the notifiable disease list, is required to notify this to the proper authorities. Any person who contravenes this regulation shall be guilty of an offence and is liable to be prosecuted in a magistrate court.

The disease surveillance system consists of:

1. routine notification of communicable diseases;
2. special surveillance on selected communicable diseases; and
3. sentinel site surveillance.

Surveillance of notifiable diseases begins with data collection at the hospital level through the bed head ticket (clinical notes), notification card and notification register (ward and institute). These data from all hospitals across the country are then sent to the relevant MOHs for investigation. Each MOH in the country sends a weekly return of communicable diseases containing data from hospitals on notifiable diseases to the Regional Epidemiologist and to the Epidemiology Unit. Data on inpatients available in the Indoor Morbidity and Mortality Register (IMMR) are sent to the Medical Statistics Unit. The data collected through the IMMR also reach the Epidemiology Unit through the Statistics Unit, while data from different campaigns are sent directly to the Epidemiology Unit where central-level surveillance is undertaken.

The Epidemiology Unit produces a weekly epidemiology record, which summarizes the trends and the situation in respect of the week under consideration. This is sent to all curative and preventive institutions within the MoH. A summarized flow diagram of the information system is presented in Figure 5.2.
5.1.3 Environmental and occupational health services

The Environmental and Occupational Health Unit of the MoH is responsible for coordination with the relevant ministries and other agencies in relation to environmental health, strengthening infrastructure facilities at the central and regional levels, training public health staff on environmental health issues, establishing occupational health units at the district and provincial levels, and conducting awareness and training programmes for targeted high-risk groups, including the industrial sector.
Technical guidance is provided to other ministries, relevant agencies and the general public on environmental health in the areas of waste disposal, biosafety, water supply and sanitation, climate change, environment and health toxicology and air and water pollution, among others. Interministerial and interagency collaborative activities are carried out in order to strengthen the environmental health measures in the country.

Public health staff are trained on environmental health issues and strategic solutions. Major activities related to environmental health are developing policies and guidelines on environmental health, waste management (including health-care waste management) and research. Additionally, many activities related to occupational health are also conducted to increase awareness of occupational health and safety and to promote occupational health among marginalized and socially deprived workers.

5.1.4 Health Promotion Bureau

The health education services in the country date back to the mid-twentieth century with a small unit in the public health section of the Department of Health Services. The main focus then was the prevention of common communicable diseases prevalent at the time such as malaria, worm infestations, diarrhoeal diseases and typhoid fever through public meetings and distribution of public health material such as posters, leaflets and brochures. Major reorganization of the services commenced in 1972 with the appointment of a full-time MO in the administrative grade in charge of the unit. Within the next few years, with the support of WHO, the organization developed rapidly into a full-fledged bureau with a large complement of technical staff. The rising burden of NCDs and the threat of epidemics of communicable diseases identified the need to plan, implement, monitor and evaluate efficient health promotion strategies, thereby leading to the upgrading of the health education services to the status of the current Health Promotion Bureau (HPB). Twelve specialized units have been established to effectively implement the strategies identified in the National Health Promotion Policy.

The HPB is the centre of excellence in Sri Lanka for health education, health promotion and publication of health information. The activities of the Bureau are coordinated and implemented through seven units, which are under the supervision of consultant community physicians and a consultant in community dentistry. The individual units include: Training, Evaluation and Research Unit; Nutrition and Family Health Communication Unit; Health Promotion Unit; Behaviour Change Communication Unit; Oral Health Unit; Planning Unit and the Publicity Unit.
Public awareness aiming for healthy behavioural changes in the community is a unique service that has been provided for years by the HPB and appreciated by all sectors. In addition, the HPB plays a vital role in public awareness of health promotion and healthy behavioural changes by actively participating in mass-scale health exhibitions, national campaign days and community events. Developing households and public places such as hospitals, schools, villages, workplaces as health promotion settings is another successful programme being conducted by the HPB.

5.1.5 Noncommunicable Diseases Unit

As described in Chapter 1, NCDs are of increasing importance. The implications of demographic transition and increased prevalence of NCDs are numerous. The provision of care for the chronically ill will require additional HR, infrastructure, medical facilities and financial resources (Jayasinghe, 2013).

To face this emerging disease burden, the MoH has a separate unit for NCDs under a Deputy Director-General. The mandate of the unit is to prevent and control the rapidly growing NCDs in partnership with relevant stakeholders, guided by the National Policy on Prevention and Control of Chronic NCD. The objective of the NCD prevention programme is to reduce premature mortality (less than 70 years) due to chronic NCDs by 2% annually over the next 10 years through expansion of evidence-based curative services, and individual and community-wide health promotion measures for the reduction of modifiable risk factors. This would lead to healthy lives free of morbidity, disability and premature mortality, and lessen the human, social and economic impact on the people.

The National Policy on Prevention and Control of Chronic NCDs addresses four major NCDs and strategies for reduction of shared modifiable risk factors: smoking, alcohol, obesity, unhealthy diet and sedentary lifestyles. These are implemented through the existing health network with the support of both government and NGOs in the country. Further, there is a National Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases 2016–2020, which has been developed in order to achieve the 10 voluntary targets adopted by Sri Lanka based on the nine global targets and the specific regional targets identified for the South-East Asia Region.

This Plan is composed of four strategic areas: advocacy, partnership and leadership; health promotion and risk reduction; strengthening health systems for early detection and management of NCDs and their risk factors and surveillance; and monitoring, evaluation and research.
The strategic area of health promotion and risk reduction specifies the plans for the following: reduction of tobacco and alcohol use; promotion of a healthy diet high in fruit and vegetables and low in saturated fat and trans-fat, sugar and salt; promotion of physical activity and healthy behaviour; and reducing household air pollution (Ministry of Health, Nutrition and Indigenous Medicine, 2016c).

Cost-effective strategies adopted include NCD screening programmes at the community level and empowering communities to adopt healthy lifestyles. The NCD screening strategy consists of screening people above 35 years of age at healthy lifestyle centres (HLCs), workplace screening and mobile screening. HLCs will address risk reduction through early identification of both behavioural and intermediate risk factors. Currently, there are some 896 HLCs established throughout the country.

Reorganization of primary health care has commenced. It will provide continuing care for NCDs closer to people’s homes. The Ministry has piloted a Package of Essential NCD Interventions (PEN) and adopted an Essential Services Package for Sri Lanka. Both these packages highlight the need for instituting opportunistic screening at primary health-care settings and these proposed changes would need extra HR with a better skill mix. This warrants a rescaling and retooling of existing staff to meet these demands.

5.1.6 Disease-specific campaigns

In addition to the above programmes, specific diseases of public health importance are addressed through specialized vertical campaigns, administered centrally. Tuberculosis (TB), sexually transmitted infections (STIs) and leprosy are some such campaigns. The elimination of malaria and filariasis were led by two such vertical programmes. These programmes undertake preventive, curative and rehabilitative activities in disease-specific areas relevant to their mandate. The preventive and promotive components of these services as well as some curative functions reach the community through the MOH system.

5.2 Curative care services

In the government sector, curative services are provided through an extensive hierarchical network of institutions ranging from primary medical care units (PMCU), divisional hospitals (DHS), base hospitals (BHS), district general hospitals (DGH), provincial general hospitals (PGH), special hospitals and teaching hospitals (THs).13

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13 Refer to Chapter 4, Table 4.1.
PMCs and DHs deliver primary medical care. They are manned by MBBS-qualified doctors without specialist qualifications. DHs are categorized according to their bed strength. Type A hospitals have more than 100 beds. Type B DHs have a bed strength of 50–100 beds. Hospitals with a bed strength of less than 50 are categorized as type C hospitals.

BHs and a few Type A DHs constitute the secondary level of care. They provide specialized services in general surgery, general medicine, obstetrics and gynaecology and paediatrics, in addition to outpatient services. A few may provide other subspecialties such as ophthalmology and ENT services. Primary and secondary levels of care come under the purview of the provincial ministries of health.

The DGHs, PGHs, THs, special hospitals and the National Hospital of Sri Lanka constitute the tertiary level of care and provide services in a wide range of specialties. These are managed by the MoH.

All curative services provided in the government health system are free of charge for the patient at the point of delivery. However, due to the large numbers utilizing the system, there are long waiting lists for some of the specialized investigations and clinical procedures.

The institutional network is described in detail in Section 4.1.1. In addition to these state services, there are GPs who work independently and private hospitals that are based mostly in big cities, which provide curative care.

### 5.2.1 Patient pathways

As there is no gatekeeping process within the Sri Lankan health system, citizens can access any of the curative care institutions without any barriers. Once a patient makes contact with an MO at any primary care level, the decision is made to either treat the patient as an outpatient, inpatient or, if deemed necessary, refer to a specialist care unit. Also, patients are able to directly select an institution of their choice independently, irrespective of the level (secondary or tertiary) as the first point of contact. This weakness in the system has given way to overcrowding of secondary- and tertiary-care levels with underutilization of primary care institutions (Ministry of Health, Nutrition and Indigenous Medicine, 2017b). Although there are no official processes to transfer patients treated at private hospitals to state facilities, such instances have been observed (Figure 5.3).

In the private sector, patients can visit a GP who also takes the decision on whether the patient needs specialized care, or whether the patients can themselves directly visit a medical specialist as an outpatient. In Sri Lanka,
dual practice is permitted for state medical professionals. It is documented that between 40% and 60% of MOs and 90% of specialists engage in dual practice. The MOs provide services mostly as part-time GPs, and some may work part time in private hospitals. Medical specialists are seen to offer their services to the public mostly at “channel centres” and private hospitals (Rannan-Eliya et al., 2015b).

**Figure 5.3 Patient pathways for curative care**

5.3 Ambulatory care

5.3.1 Primary/ambulatory care

All curative care hospitals in the country are geared to look after the primary health-care needs of the community. Most of the facilities provide ambulatory care from 08.00 to 16.00 during weekdays, 08.00 to 12.00 on Saturday and 08.00 to 10.00 on Sundays. It is noted that secondary- and tertiary-care hospitals offer ambulatory services during extended hours. People can directly access secondary and tertiary-care hospitals, bypassing the primary level altogether, leading to underutilization of the PHC curative sector. PHC does not act as a gatekeeper in the current system. This may be due to the limited capacity of the primary care system to provide comprehensive PHC facilities, lack of after-hour services and essential medicines, and limited access to investigations (Ministry of Health, Nutrition and Indigenous Medicine, 2017b, Perera and Weerasinghe, 2015).
The increase in the elderly population and NCDs have added to the burden on the existing health-care system, which has been slow to respond to these changes. The proposed reorganization of the PHC would ensure that it would act as a gatekeeper towards accessing secondary- and tertiary-care services. Accordingly, specialized services would be made available through a referral pathway from the PHC system. These changes in the referral system would be facilitated through the use of IT solutions. However, it should be recognized that the success of PHC reforms would depend on a sea change in population and provider perceptions and behaviour.

5.3.2 Specialized ambulatory care (day care/day hospitals/day clinics/surgical centres)

The MoH promotes the provision of day-care services in all hospitals with a view to providing comprehensive patient care without unnecessary delays and as a means of reducing admissions, hospital-acquired infections and the cost of patient management.

Currently, selected hospitals provide day-care services such as day surgeries, radiological and other investigations, family planning procedures, rehabilitation, haemodialysis services, physiotherapy, occupational therapy and speech therapy. Although day-care services are functioning within the system, their performance data are not captured separately in the HIS. In addition to these services, the state has introduced the concept of preliminary care units in many of its secondary- and tertiary-care hospitals, so that all patients needing acute care are first treated at these PCUs and then reviewed by the respective consultants. Only those who need inward care are admitted for further management. This too has significantly reduced the number of admissions and has been identified as an initiative that reduces the inward workload and congestion and improves the quality of inward care.

5.4 Inpatient care

Among countries in the Asian region, Sri Lanka is a country with a high hospital bed penetration (4 per 1000 population) (World Bank, 2020). Inpatient care is provided by both public and private hospitals with state sector institutions providing the bulk of the services. The health facility survey of 2016 identified 628 public hospitals (Table 5.1), accounting for 73% of hospitals and 93% of the bed strength in the country (Department of Census and Statistics, 2016). Levels of care have been categorized, facilities for each level of care have been identified and institutions are being developed in a phased manner.
The same survey identified 141 private institutions located mostly in Colombo and other large cities. Inpatient care by the private sector contributes around 5% to the total patient care (Ministry of Health, Nutrition and Indigenous Medicine, 2017b). Subspecialization is noted within private hospitals in Colombo in areas with a high demand, such as neurosurgery, cardiac surgery, maternal and newborn care and cancer treatment. Inpatient care in the private sector is provided mainly by a few key players who hold nearly 50% of the private sector bed capacity.

Table 5.1  Summary of the different services by level of care and management authority

<table>
<thead>
<tr>
<th>Curative, rehabilitative &amp; palliative care</th>
<th>Preventive care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tertiary care</strong></td>
<td></td>
</tr>
<tr>
<td>Teaching hospitals</td>
<td>16</td>
</tr>
<tr>
<td>Provincial general hospitals</td>
<td>3</td>
</tr>
<tr>
<td>District general hospitals</td>
<td>19</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>38</strong></td>
</tr>
<tr>
<td><strong>Secondary care</strong></td>
<td></td>
</tr>
<tr>
<td>Base hospital – Type A</td>
<td>24</td>
</tr>
<tr>
<td>Base hospital – Type B</td>
<td>50</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>74</strong></td>
</tr>
<tr>
<td><strong>Primary care</strong></td>
<td></td>
</tr>
<tr>
<td>Division hospitals – Type A</td>
<td>50</td>
</tr>
<tr>
<td>Divisional hospitals – Type B</td>
<td>134</td>
</tr>
<tr>
<td>Divisional hospitals – Type C</td>
<td>296</td>
</tr>
<tr>
<td>Primary medical care unit (PMCU) with maternity beds</td>
<td>11</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>491</strong></td>
</tr>
<tr>
<td><strong>Other hospitals</strong></td>
<td></td>
</tr>
<tr>
<td>Including rehabilitation hospitals, Cancer Institute Maharagama and others</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>628</strong></td>
</tr>
</tbody>
</table>

Source: Department of Census and Statistics, 2016

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14 This is based on the Health Facility Survey (2016) and is an update of the 2011 figure of 125 stated in Chapter 4.
5.6 Emergency care

Although care for emergencies and accidents have been available in government health institutions since the inception of health care, the current model of specific services for emergency and trauma care in Sri Lanka was established with the introduction of the first ever Emergency Treatment Unit (ETU) at the Base Hospital, Nuwara Eliya in 1988. This was followed by the rapid establishment of similar units in many other hospitals (Ministry of Health, Nutrition and Indigenous Medicine, 2015b). The establishment of the Accident Service of the National Hospital in Sri Lanka in 1991 was a major milestone in emergency and trauma care. The A&E policy of the country was developed in 2016, the main aim being the organization of coordinated, stratified and cost-effective A&E care services within the country.

In Sri Lanka, provision of both pre-hospital and emergency care are under the purview of the MoH. The ageing population and an increase in the numbers of people requiring emergency care for NCDs, especially traffic accidents, have resulted in an increased need for emergency care services.

Currently, an A&E treatment unit is available in all government facilities, including and above the level of BHs. These offer A&E services of varying sophistication. Some DHs also have small emergency care units. PMCUs, which currently provide only outpatient care, will have functional emergency care units as identified in the Essential Services Package under the new reforms.

5.6.1 Services for patient transport and pre-hospital care

Pre-hospital care was available as a fragmented service, provided in response to demand through the fire brigade ambulance service within the Colombo municipal area, ambulance service in Jaffna, St John’s Ambulance Brigade and small-scale privately owned ambulance services. Furthermore, the public sector has 689 ambulances in running condition used for transporting patients between institutions, which can be mobilized in case of emergencies.

A pre-hospital toll-free ambulance transport service (Suwasariya) was initiated in 2016 as a donation to the Sri Lankan people from the Indian Government. This service was first instituted as a pilot system and since then has been scaled up to cover the entire country. It is implemented under the Ministry of Economic Development and Public Distribution and is managed by the MoH. A toll-free hotline 1990 has been made available for this service. It transports patients from their homes or accident victims from any location to government hospitals. It is only in very rare situations, such as the need for
continuity of care, that patients are taken to private hospitals. An evaluation of this service is yet to be undertaken, and limited information is available on the quality of the calls received or the services offered.

Prehospital care in Sri Lanka is still evolving. Geographical inaccessibility, unpredictable travel times, inequitable distribution of resources and inaccessibility during extreme weather conditions remain challenges to the road transfer of patients. Therefore, a limited air transfer service for patients was initiated for selected patients with the approval of the DGHS. However, its cost, safety and effectiveness raise concerns in a small island nation like Sri Lanka.

5.6.2 Training of health personnel in emergency care

A postgraduate training programme on emergency medicine was initiated in 2012. MOs who enrolled in the course are now entering the service as specialists in emergency medicine. Since the setting up of the 1990 free ambulance service, emergency medical technicians (EMTs) for pre-hospital care have been trained by the Indian agency in charge of setting up the toll-free ambulance system. The MoH conducts some on-the-job training for nurses and other relevant allied health workers. Despite the countrywide expansion of the emergency ambulance service, a formal training programme for EMTs has not yet been developed by the MoH.

Upgrading the training curriculum of technical-level staff and establishing a national simulation centre has been identified as high priority for A&E (Ministry of Health, Nutrition and Indigenous Medicine, 2015b). Currently, the quality of A&E services is monitored using only five A&E indicators. It is planned to periodically review A&E performance at provincial and district levels (Ministry of Health, Nutrition and Indigenous Medicine, 2016b).

5.7 Pharmaceutical care

5.7.1 Pharmaceutical industry

It is estimated that around 20% of the national health expenditure is on pharmaceuticals. Only a small proportion (12% by value) is locally manufactured (Daily Mirror, 2018), and the rest is imported, with India and Bangladesh being the largest providers of medicines to Sri Lanka (Trading Economics, 2019). The annual importation value of pharmaceuticals is SLR 65 billion. The State Pharmaceuticals Manufacturing Corporation is the state-owned manufacturer and there are a few private sector local manufacturers. The MoH has provided a buy-back guarantee for all locally manufactured medicines and this has served as an incentive to expand local manufacture.
None of the pharmaceutical manufacturers in Sri Lanka produce any active pharmaceutical ingredients locally. All manufacturers must have a good manufacturing practice (GMP) certificate. Compliance with standards is assessed annually. With the intention of increasing the local production of pharmaceuticals, a drug manufacturing zone was set up as a public–private partnership in 2016. It is expected that once completed, this will provide nearly 60% of the local pharmaceutical requirement.

Starting in 2016, the government introduced price regulation through a price formula on selected essential medicines as a means of containing their costs and reducing OOPE. Initially introduced for only 48 high-volume essential medicines, it has now been increased to include 72 categories of medicines, including cancer drugs, insulin, glucometers and strips. Similarly, price regulation has been introduced for commonly used devices such as intraocular lenses and stents for angioplasty.

The MSD of MoH provides all drugs and related medical items for all government sector health-care institutions. The MSD imports drugs mainly through the State Pharmaceuticals Corporation. Regional MSDs in each district distribute drugs from the MSDs to health institutions under the purview of provincial councils. The MoH has its own logistic facilities for distribution across the country. Self-distribution is the main mode of distribution of drugs among private importers. The importation and distribution of drugs is regulated by the NMRA guidelines (National Medicines Regulatory Authority, 2019).

5.7.2 Regulation and monitoring of pharmaceuticals

The NMRA plays a leading role in protecting and improving public health by ensuring that medicinal products available in the country meet the applicable standards of safety, quality and efficacy. The Authority regulates medicines, medical devices, borderline products, clinical trials and cosmetics. The National Medicines Quality Assurance Laboratory (NMQAL) is charged with ensuring the quality of medicinal products and also functions under the purview of the NMRA.

Drug quality assurance is an integral part of the national drug management system. The NMRA and NMQAL are the two principal institutes that work on national drug quality assurance. The NMRA has the mandate of regulating and controlling manufacturing, importation, registration, promotion, sale and distribution of medicinal drugs and devices, and ensuring the quality of drugs that are imported or manufactured in the country (National Medicines Regulatory Authority, 2019).
The NMQAL tests samples of medicinal drugs for quality control before they are registered by the NMRA and also has a role in post-marketing surveillance of these medicinal drugs through random assessments.

5.7.3 Blood and blood products

The National Blood Transfusion Service (NBTS) is a fully state-owned special campaign for maintaining blood transfusion services across the country. The NBTS has a service history spanning more than 55 years. There are 99 functioning blood banks within the state hospitals at the level of BHs and above, and two stand-alone blood centres (the National Blood Centre and the Southern Regional Blood Centre) affiliated to 19 cluster centres, based on the geographical distribution. Each cluster centre is headed by a consultant transfusion physician who provides clinical and technical guidance. The service provides quality-assured blood and blood components and relevant laboratory testing for the entire state sector hospitals and for most of the private sector hospitals. Sri Lanka collects 100% of the blood from voluntary donors. All donated blood is tested for HIV, hepatitis B and C, and syphilis (National Blood Transfusion Services, 2016). The human leukocyte antigen (HLA) laboratory of the NBTS is the only place in Sri Lanka where cross-matching for organ transplantation is carried out. Other functions of the NBTS include manufacturing laboratory reagents and reagent red cells, promoting appropriate clinical use of blood and blood components through hospital transfusion committees, conducting training programmes for postgraduate trainees on transfusion medicine and haematology, and promoting transfusion medical research.

5.8 Rehabilitation

Although the true extent of disability in Sri Lanka is unknown, WHO estimates that 15% of the population has some form of disability. Currently, both inpatient and outpatient rehabilitation care are available in secondary- and tertiary-care institutions in the government sector and in the larger private hospitals. In addition, special rehabilitation hospitals at Ragama, Digana and Laliambe provide dedicated rehabilitative care to around 4500 patients every year (Ministry of Health, Nutrition and Indigenous Medicine, 2016b). These services are under consultant rheumatologists and their supportive technical teams comprise general physiotherapists, speech therapists and occupational therapists. Lack of knowledge among the general population about what can be achieved through rehabilitation has led to a degree of acceptance of disability. This, together with insufficient services, both institutional and community based, problems of accessibility and cost remain as barriers to rehabilitation.
The two key ministries working in the area of disability are the Ministry of Social Services and the MoH. The Ministry of Social Services is the nodal agency for programmes for persons with disabilities. A separate secretariat has been set up in the Ministry of Social Services with a directorate providing support for assistive devices, livelihood and monetary support. A significant achievement was the launch of the World Disability Report, which highlights the different barriers that people with disabilities face – attitudinal, physical and financial. This was followed by the formulation of a National Action Plan on Disability (World Health Organization, 2014b). A National Steering Committee for the Care of People with Disabilities is chaired by the Secretary Health. The Secretary of this Committee is the consultant community physician attached to the Directorate of Youth, Elderly and Persons with Disabilities (YED).

At the level of the MoH, the Director YED is responsible for providing technical guidance, including policy and guidelines for rehabilitation. The Directorate also supports rehabilitation facilities that function under the MoH. These include rehabilitation hospitals and other hospitals with rehabilitation departments and facilities. At the provincial level, the PDHS is responsible for providing disability and rehabilitation services in the facilities managed by the province.

Four types of health institutions provide rehabilitation services in Sri Lanka. They are: (i) rehabilitation hospitals under consultants in rheumatology and medical rehabilitation; (ii) all tertiary-level GHs and some DGHs and BHs, many of whom have consultant rheumatologists; (iii) some DGHs and BHs that provide limited rehabilitation services and physiotherapy; and (iv) hospitals with no rehabilitation services, with patients being referred to higher levels or for community-based rehabilitation.

Together with the MoH, the Ministry of Social Services implements community-based rehabilitation programmes. These aim to promote rehabilitation of persons with disabilities in order to enable them to enjoy their rights, carry out their responsibilities and create opportunities through social development programmes to integrate them into society. The Ministry attempts to promote early identification and intervention and educate the community to encourage home-based care rather than institution-based care, and thereby improve the quality of life of persons with disabilities by promoting and protecting their rights.
5.9 Long-term and informal care

Increasing longevity and the changing epidemiological profile of the country have resulted in the need for increasing access to quality long-term care. Currently, such facilities are scarce within the state sector. There are a few NGOs (HelpAge Sri Lanka and Sarvodaya) and some private sector institutions that provide nursing care for a fee, and a few fee-levying homes for elders and communities where assisted living is provided.

In the past two decades, many initiatives have been taken to respond to the social and medical needs of the ageing population. The Protection of Elders Act (2000) has led to the formation of the National Council for Elders, which is located within the Ministry of Social Empowerment, Welfare and Kandyan Heritage. Other initiatives include home-care services, provision of assistive devices for elderly individuals with disabilities, financial assistance for those in need, free legal advice services and support for income-generating activities. However, the services available are insufficient to meet the need (Samaraweera and Maduwage, 2016).

The curative care needs of those in long-term care are met by the curative care system of the state as well as that of the private sector. Preventive care programmes such as healthy living for elders are conducted by the MOH and staff. Provision of dedicated units for long-term care in primary medical care institutions (PMCs), which are closer to people’s homes, and extension of nursing and other services such as physiotherapy services to the community are options being considered in the current reorganization of primary curative care services.

There are no formal mechanisms to support family carers who provide long-term care for a family member, i.e. providing allowances for low-income family carers of senior citizens living with them. The National Council for Elders has provided some training for carers, but these services are patchy and inadequate.

5.10 Palliative care

Palliative care has been recognized as an essential component of comprehensive care in the National Health Policy (2016–2025) and in several other policy documents such as the National Policy and Strategic Framework for Prevention and Control of Chronic Non-communicable diseases (2010), National Policy and Strategic Framework for Prevention and Control of Cancers (2015), National Elderly Health Policy and the Essential Services Package for Sri Lanka (2019). The MoH has initiated a steering committee for palliative care and developed a national strategic framework in 2018.
strategy envisages the development of services at all levels of care, including community care. Towards this end, the HR necessary, guidelines for practice and means of ensuring the availability of drugs and home-based care are in the process of being institutionalized.

The Palliative Care Association of Sri Lanka estimates that around 60% of all those who die, i.e. around 68 000 people in the country, need palliative care annually. The number of trained persons and institutions available to provide palliative care in the country are inadequate at present. A draft National Strategic Framework for Palliative Care 2018–2022 (draft 05.11.2018) has been developed.

Currently, consultant palliative care physicians are not available in the country. Towards addressing this deficiency, the Postgraduate Institute of Medicine, Sri Lanka, commenced a postgraduate diploma programme in Palliative Medicine in 2016. Home-based palliative care is planned to be provided by PHC teams based in PMCs or by the patients’ GP. If further treatment is required, the patient will be directed to secondary- or tertiary-care institutions. Figure 5.4 shows the proposed model for palliative care.

Figure 5.4 Proposed model for delivery of palliative care – community level to institutional care

Patients with life limiting illnesses at the Tertiary (TH/PGH) & secondary (DGH, BH) Care Hospitals
(Cancer, End stage renal disease, Heart Failure, etc.)

‘Palliative Care Consult Service’ attached to Tertiary (TH/PGH) & Secondary (DGH,BH) Care Hospitals
(Consultant, Medical Officers trained in Palliative Care, Nursing Officers trained in Palliative Care, Social Services Officers, Physiotherapist Counsellor, Pharmacist, etc.)

Primary Medical Care Institution (DH, PU, RH, CD)
Palliative care trained Medical Officer & Public Health Nursing Officer (PHNO)/
General Practitioner

Home Based Care PHNO
Trained Family Care Giver Trained Volunteer Care Giver

Community Support Group (NGO, CBO...)

Local MOH Office
MOH, PHNS, PHI, PHM

Patients with unmet palliative care needs in the community

CBO: Community based organization; PHNO: Public Health Nursing Officer
Note: A PHNO is a Nursing Sister further trained for 1 year and attached to MOH Units.
Source: National Cancer Control Program, 2018
5.11 Mental health care

The Directorate of Mental Health is the national-level focal point responsible for the National Mental Health Programme within the MoH, Sri Lanka. The Directorate is responsible for policy development and strategic planning, coordination, supporting implementation and monitoring and evaluation of mental health services in the country. A Mental Health Act has been under deliberation since 2005. After years of multiple drafts and competing interests, a diverse task force consisting of representatives from the MoH, WHO, Sri Lanka College of Psychiatrists, NGOs and other stakeholders have compiled a draft act, and this is being reviewed currently prior to finalization. The Act will replace the present Mental Diseases Ordinance of 1956.

The National Mental Health Advisory Council (NMHAC) was established in 2007 to advise the Director Mental Health. The Secretary of Health was appointed as the Chair with the DGHS as the convener, and consisted of a diverse, interdisciplinary team with both technical and administrative expertise. Within a couple of years, it was reconfigured as the National Committee on Mental Health, chaired by the DGHS and convened by the Director Mental Health.

The mental health sector provides its services through a multidisciplinary team consisting of consultant psychiatrists, MOs of mental health, psychologists, counsellors, occupational therapists, speech therapists, physiotherapists, psychiatric social workers and community workers. Over the past 15 years, there have been major gains in HR development for mental health across all cadres to support the growing demands on services.

At the district level, an MO Mental Health is the focal point. The MO assists the Regional Director of Health Services and coordinates all mental health services within the district, having a close linkage with the national level, district health team and all other relevant departments and community groups. Within a district, services are provided through a network of medical institutions and health units.

A major shift has occurred in the level of organization of services, from institutionalized mental health-care delivery to care in smaller facilities and outpatient care closer to people’s homes. In 2007, the main mental hospital located at Angoda was restructured into the National Institute of Mental Health.

There are seven tertiary-care hospitals in Sri Lanka with facilities for acute psychiatric inpatient care. In addition, acute inpatient units are currently available in 23 of the 26 districts and in few regionally managed institutions.
Presently, there are 61 adult inpatient units, three child inpatient units and one forensic unit in the country.

Medium-stay units were available in only five districts in 2004, which has now expanded to 15 districts. Outreach clinics currently exist in almost all MOH areas. In addition, community support centres are being set up at district level to serve as hubs for the promotion of mental well-being.

Outpatient care is provided through specialist, divisional and outreach clinics. Mental outreach clinics provide close-to-home services that enable better care and follow up of clients, and reduce the treatment gap. These clinics support continuity of care, assessment, treatment and home visits. They are conducted by the MO Mental Health or MO Mental Health Focal Point or Consultant Psychiatrist. Home visits are mainly for tracing defaulters and providing assistance to their carers. Home visits are done by a team consisting of an MO, nursing officer and psychiatry social worker.

The main hospitals that specialize in child care, Lady Ridgeway Hospital in Colombo and the Sirimavo Bandaranayke Specialized Children’s Hospital in Kandy, address child mental health needs. In addition to the regular outpatient clinics and inpatient services, the Lady Ridgeway Hospital for Children and the Colombo North Teaching Hospital conduct specialized programmes to address specific learning disabilities (SLDs), attention deficit hyperactivity disorder (ADHD), early intervention for autism spectrum disorder (ASD) and family support for children with behavioural disorders. To make child care services available at the district level, the Directorate of Mental Health has promoted child psychiatry outpatient clinics in all DHs. Currently, there are four child and adolescent psychiatrists working in four districts, addressing promotive, preventive, clinical and rehabilitative care for children and adolescents.

The number of mental health rehabilitation centres in Sri Lanka has grown from one in 2000 to 22 in 2017. These include medium-stay (6 months) and long-stay (1 year-plus) rehabilitation centres. Medium-stay units provide services to individuals who do not require intensive medical interventions but need further treatment and support to develop life competencies to live productively in society. An important part of rehabilitation is occupational therapy that builds life and vocational skills. The rehabilitation centres focus on the client’s learning of daily life skills such as self-care, cooking and cleaning. Most of these centres are hospital based and their management may differ from one district to another. In addition to these government rehabilitation centres, NGOs such as Nest and Sahanaya have their own facilities.
The mental health programme also addresses the issue of gender-based violence (GBV). GBV desks and mithuru piyasa centres have been set up and are being managed in tertiary-care institutions in selected districts. They collaborate with other relevant services such as the police, social services, child protection, probation, legal/justice, education and NGOs.

Deaddiction rehabilitation units (alcohol rehabilitation centres) are another initiative to combat the increasing use of alcohol. There are seven centres, located in Gampaha, Kandy, Jaffna, Batticaloa, Kurunegala, Badulla and Killinochchi. The client-centred model of rehabilitation provided in these centres requires voluntary admission; however, they may be encouraged and motivated to enrol by community workers and mental health professionals. Rehabilitation activities include play therapy, group therapy, counselling, gardening, religious programmes and family interventions.

Responding to mental health needs during emergency situations is another area that has evolved satisfactorily over the past few years. Mental health teams, other community officers and volunteer groups provide psychosocial support for victims of natural disasters and in emergency situations. The Directorate of Mental Health has trained teams of master trainers and established them in all vulnerable districts. During disasters, the Directorate of Mental Health mobilizes these teams to train the staff of affected areas and take action to provide psychosocial support to the community.

“Consumer and care groups” is a nationally widespread concept. There are about 70 groups representing most districts. Ten of them are registered as non-profit entities. The Consumer Action Network Mental Health Sri Lanka (CANMH Lanka), which operates from the National Institute of Mental Health, is one such successful organization. The Network was established for the collaboration of people affected by mental health issues and their carers to advocate for a secure mental health system.

District review meetings act as a platform for the Mental Health Directorate to monitor and guide service provision. These meetings review district mental health services (gaps and challenges), outreach clinics, school programmes and other initiatives carried out in the district. Further, mental health-related guidelines that are developed at the national level are customized and implemented at the local district level through this platform.
5.12 Dental care

Organizational arrangements for dental care services in Sri Lanka are given in Figure 5.5.

The overall management of the Dental Health Services of the Country comes under the purview of the Deputy Director-General (Dental Services), who is assisted by regional dental surgeons, consultants, dental surgeons and dental therapists of the department. They cater to the oral healthcare needs of nearly two million patients a year. The present workforce consists of 1350 dental surgeons of the Department and 55 specialists in the fields of oral and maxillofacial surgery, orthodontics, restorative dentistry and community dentistry. As an islandwide service, appointments, transfers and any other HR management decisions with regard to dental surgeons are handled by the DDG/DS of the division and the Director Oral Health.

**Figure 5.5 Organizational arrangement of dental care services in Sri Lanka**

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ADC: adolescent dental clinics; CDC: community dental clinics; DDG: Deputy Director-General; DI: dental institute; DS: Dental Surgeon; FHB: Family Health Bureau; IOH: Institute of Oral Health; MOH: Medical Officer of Health; OMF: oral and maxillofacial; OPD: outpatient department; PDHS: Provincial Director of Health Services; RDHS: Regional Director of Health Services

*Source*: Ministry of Health, 2012b
School dental services are handled by the Oral Health Unit of the FHB. The DDG/DS of the division coordinates with this Unit to upgrade the dental services delivered by dental therapists to the children through the school dental clinics.

5.13 Health services for specific populations

The Sri Lankan health system has a special focus on delivering health care to specific populations. Plantation sector employees, internally displaced people, refugees, the prison community and slum dwellers are not adequately captured by the mainstream health system. The policy on health services in the plantation sector addresses the health issues of this population, which comprises the largest group under this category.

During the colonial era, it was the responsibility of the estate management to provide for the health needs of this community. With the Land Reform law brought about in 1970, the Sri Lankan government took more responsibility for the plantation sector. Since then, many of the plantation sector hospitals have been taken over by the provincial ministries of health and the necessary mechanisms put in place to integrate these into the mainstream health system by providing the necessary HR and the other resources. Subsequent governments have continued upgrading the infrastructure facilities of estate hospitals and also improved the sanitary facilities in the estates (National Cancer Control Program, 2018).

Indigenous communities in Sri Lanka live in semi-evergreen dry monsoon forests. Due to immigration and colonization, the distinctive characteristics of their culture have changed. But like all Sri Lankans, these Indigenous people have full access to the free state health services of Sri Lanka (Institute of Policy Studies, 2017).

Prison medical services are under the purview of a DDG Medical Services of the Ministry of Health, and the prison hospitals are administered by a medical director. The International Committee of the Red Cross helped to develop prison hospitals with the consensus of this Directorate. The National Programme for Tuberculosis Control and Chest Diseases runs its screening programmes in prisons because inmates are considered a high-risk group for TB. Similarly, the National STD/AIDS Control Programme has been carrying out screening programmes on HIV and other STIs on inmates since 2005. Apart from screening, life skills-based education and health promotion programmes are carried out in prisons (Ministry of Health, Nutrition and Indigenous Medicine, 2017b).
There are about 42,000 internally or internationally displaced persons within the boundaries of Sri Lanka (Internal Displacement Monitoring Center, 2019). Malaria, TB and dengue awareness programmes are being conducted for them with the collaboration of the United Nations High Commissioner for Refugees (UNHCR) and IOM. The health sector of Sri Lanka closely liaises with UNHCR to provide psychosocial support and counselling services to those who are in need (United Nations High Commissioner for Refugees, 2018). The MoH collaborates with UNHCR and other stakeholders to conduct awareness-raising sessions for international refugee protection.

5.14 Complementary and alternative medicine, including traditional medicine

In Sri Lanka, the Traditional Medicine (TM)/Indigenous Medicine system comprises Ayurveda, Siddha, Unani and Deshiya Chikitsa (local indigenous medical practices). The Ayurveda Act, enacted in 1961, regulates the TM system in the country, including TM education. The Department of Ayurveda, Ayurveda Medical Council, Ayurveda College and Hospital Board, and the Ayurveda Research Committee were established under the Ayurveda Act no. 31 of 1961 (Parliament of the Democratic Socialist Republic of Sri Lanka, 1961). The Department of Ayurveda, under the guidance of the MoH, administers and regulates the TM system with the assistance of provincial councils and local government bodies. The Ayurveda Medical Council is the main regulatory body for Ayurvedic practitioners, Ayurveda pharmacists and Ayurveda nurses. In addition, the Council is responsible for formulating rules to regulate ethical conduct and the practice of Ayurveda, and any matter relevant to service provision and education. The Ayurveda College and Hospital Board regulates the content of courses on Ayurvedic medicine, appoints examiners and conducts examinations for awarding diplomas, exhibitions (Jatha dakshina), bursaries, medals and other prizes for students (Parliament of the Democratic Socialist Republic of Sri Lanka, 1961). It regulates and controls admissions, discipline and the moral development of students. The Ayurveda Research Committee is responsible for carrying out research in all branches of Ayurveda to promote its development and provide advice to the Department of Ayurveda and Ayurvedic educational institutions.

The indigenous curative and preventive medical services of the public sector (State) are provided to the public through a network of 708 Ayurvedic hospitals and dispensaries located islandwide. These facilities come under the administrative purview of the indigenous medical sector of the MoH. In Ayurvedic hospitals and dispensaries, indigenous medical OPD care is carried out daily and, in addition, the hospitals provide inpatient care. The necessary medicines are mainly manufactured locally while a few are imported.
6. Principal health reforms

Chapter summary
This chapter discusses some of the major health-care reforms and policies that have taken place from 2006 to date: the establishment of the National Authority on Tobacco and Alcohol (NATA), National Policy and Strategic Framework for Prevention and Control of Chronic Non-communicable Diseases, National Migration Health Policy, establishment of the National Medicines Regulatory Authority (NMRA), National Policy on Health Information, and Policy on Health Service delivery for UHC. These policies and reforms address the needs of the country brought about by demographic, epidemiological and social transition. Some of the problems in service provision are highlighted in Chapters 5 and 7.

Despite strong policy commitment to health reform such as NATA, the National Human Resource Coordinating Division and NMRA, implementation gaps point to the need for strengthening the technical aspects of human resources in these new agencies to fulfil their mandates.

The Health Services Act of 1952 was the basis for the first health reform and reorganization of services in an independent Sri Lanka. Some of the reforms and policies such as the establishment of the health unit system 93 years ago, which predates Independence, and the Dual Practice Act of 1977, remain relevant and have a considerable influence on how services are provided even today. Decentralization of administration to the provinces in 1987 and health becoming a partially devolved subject have had many implications on service provision, quality and equity.

The ongoing health service delivery reform for UHC emphasizes PHC and attempts to shift focus from the current predominance of specialized care to that of more coordinated care across all levels. This is based on the evidence of the merits of patient-centred PHC combined with a proper referral system in achieving equitable access to care. It is envisaged that this would lead to better health systems efficiency and quality of services for chronic NCD conditions. This needs continued strong political leadership, as the key missing reform policy is an increase in fiscal space for health. The government should increase its spending on health, which currently stands at 8% of the GGHE (average 2009–2016). This is to help reduce the current high level of OOPE, which was 50.1% of CHE in 2016 (see Chapters 3 and 7).
6.1 Analysis of the significant health reforms that affected health developments in Sri Lanka

The reforms date back to 1926 when the MOH system was established. The principal reforms in Sri Lanka are described in Table 6.1 and can be categorized with reference to the six health systems building blocks. Although almost all these policies change the impact of multiple building blocks of the system, each is seen to have an impact on one component more than the rest. These reforms include the following:

a. governance: legislation of the Health Service Act 1952; regulation of the private sector in 2006; addressing health risks such as the tobacco and alcohol policy in 2006; and establishing the framework for prevention and control of NCDs in 2009;

b. medicines and medical products: establishment of the NMRA in 2015;

c. health workforce: dual practice policy in 1977; establishment of HR coordinating division in 2016;

d. health delivery systems: decentralization of health services to the provincial health departments in 1987; establishment of a DGH in each district in 2000; and policy towards health service delivery for UHC in 2018; and

e. HIS strengthening in 2016.

Table 6.1 Major health-care reforms and policy measures

<table>
<thead>
<tr>
<th>Year</th>
<th>Reform</th>
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<tbody>
<tr>
<td>1926</td>
<td>Establishment of health unit (Medical Officer of Health) system</td>
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<tr>
<td>1952</td>
<td>Health Services Act (No. 12 of 1952)</td>
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<tr>
<td>1977</td>
<td>Dual practice*</td>
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<tr>
<td>1987</td>
<td>Decentralization of health services and establishment of provincial health departments</td>
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<tr>
<td>1991</td>
<td>Management reform to amalgamate preventive and curative care services in keeping with local administrative boundaries</td>
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<tr>
<td>2000</td>
<td>Development of one hospital to the level of a district general hospital for each district</td>
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<tr>
<td>2005</td>
<td>National Medicinal Drug Policy</td>
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<tr>
<td>2006</td>
<td>Private Health Sector Regulation Act</td>
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<tr>
<td>2006</td>
<td>National Authority on Tobacco and Alcohol</td>
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<tr>
<td>2009</td>
<td>National Policy and Strategic Framework for Prevention and Control of Chronic Non-Communicable Diseases</td>
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<tr>
<td>2013</td>
<td>National Migration Health Policy</td>
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<tr>
<td>2016</td>
<td>Establishment of National Human Resource Coordinating Division</td>
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<td>2017</td>
<td>National Policy on Health Information</td>
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<tr>
<td>2018</td>
<td>Policy on Health Service Delivery for UHC</td>
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* Government health professionals are allowed to engage in private practice during off hours.

Source: Compiled by the authors
6.2 Analysis of recent major reforms

This section highlights key health-care reforms from 2006 to date, which are considered to have a significant impact on the health of the population and on the health system.

6.2.1 National Authority on Tobacco and Alcohol (NATA)

The requirement for a national-level coordinated response to address the harms from tobacco and alcohol in Sri Lanka was building up since the late 1990s. A vibrant nongovernment sector, professional bodies and some sections of the government apparatus saw the need for such a response and strongly advocated for it for over a decade. Initial steps consisted of banning advertising of tobacco in the media, inclusive of the national press and billboards through the amendments to the Consumer Protection Act in 1999. The restriction at that time was enforced partly through legislation and partly through voluntary actions by the tobacco industry. The Global Youth Tobacco Survey (GYTS) of 2003 revealed that 8.7% of schoolchildren were current users of tobacco products and 79.1% and 78.5% had seen pro-smoking messages on billboards and newspapers, respectively. The almost-parallel process of negotiation and finalization of the WHO FCTC in 2003 added impetus to this process, although there were many obstacles placed by the alcohol and tobacco industries. The findings of the GYTS reinforced the need for a national authority for the effective implementation of the FCTC and this resulted in the National Authority on Tobacco and Alcohol Act, No. 27 of 2006.

The role of the NATA was defined as “Identifying the policy on protecting public health for the elimination of tobacco- and alcohol-related harm through the assessment and monitoring of the production, marketing and consumption of tobacco products and alcohol products; to make provision for discouraging persons, especially children, from smoking or consuming alcohol, by curtailing their access to tobacco products and alcohol products” (Parliament of the Democratic Socialist Republic of Sri Lanka, 2006).

The implementation of a strict anti-tobacco and alcohol policy by NATA, in collaboration with strong non-state stakeholders such as the Alcohol and Drug Information Centre (ADIC) saw the use of tobacco products among youth decreasing from 8.7% in the GYTS of 2003 to 3.7% in the GYTS of 2015. Vigorous health promotion activities directed at target groups starting from the preschool age upwards, the persistent vigilance against direct and indirect advertising, and advocating for an increase in taxes on tobacco and alcohol products have paid dividends. Statistics from the Sri Lanka Customs show that cigarette production fell from 4800 million in 2006 to 2600 million, which is a substantial drop of 45% (World Bank, 2017). According
to islandwide statistics by the Alcohol and Drug Information Centre (ADIC) in 2014, 31.2% of the population continue to use tobacco products, which has shown a steady but slow drop in the recent past. In recognition of the outstanding achievements in tobacco control, NATA Sri Lanka was conferred with the “World No Tobacco Day Award” by WHO Regional Office for South-East Asia in 2017. NATA mainly conducts advocacy, and the actual regulatory functions are carried out through health ministry officials, the police and departments of excise and customs. Pertinent cultural elements and vociferous civic participation continue to play a major role in bringing down tobacco and alcohol use among the public and, in particular, among children and the youth.

The tobacco and alcohol industries have continued to actively interfere with the government’s policy to foster implementation of best buy interventions such as increasing tax and controlling the availability of alcohol (Tuangratananon et al., 2019, Tangcharoensathien et al., 2019). Between 2010 and 2017, alcohol consumption has increased by 34% in the South-East Asia Region from 3.5 to 4.7 litres per capita per year (Sornpaisarn et al., 2020). The prevalence of current drinkers in the South-East Asia Region is forecasted to increase from 39% in 2018 to 45% by 2030, while the prevalence of heavy episodic drinkers will increase from 11% in 2018 to 14% by 2030. It is also observed that in Sri Lanka’s per capita total alcohol consumption rose from 4.0 litres in 2010 to 4.3 litres in 2016 (World Health Organization, 2018c).

This calls for further policy advocacy, improved awareness on harm from tobacco and alcohol, and improved government regulatory capacity to combat both direct and indirect advertising and marketing, with a particular focus on young people and women. Persistent strategic alliances and engagement with civil society organizations and active citizens are recommended.

6.2.2 National Policy and Strategic Framework for Prevention and Control of Chronic Non-Communicable Diseases

Over the past few decades, NCD mortality in the country has shown a sharp increase. CVD has been the leading cause of death over the past 40 years, while mortality from DM and cancer has doubled. WHO estimates for 2016 suggest that over 80% of the mortality in the country is due to major NCDs (Ministry of Health, Nutrition and Indigenous Medicine and World Health Organization, 2019). Based on a 20% increase in hospital admissions due to cerebrovascular diseases and related causes observed from 1999 to 2005, a projection had been made for the next 10 years, which predicted an exponential increase in these diseases (Premaratne, Amarasinghe and Wickremasinghe, 2005). In 2008, Katulanda et al. reported that pre-diabetes
or diabetes affected one in five adults in Sri Lanka and one third of them were undiagnosed. Significant mortality due to asthma has been observed over the past two decades, with prevalence rates varying from 20% to 25% based on the geographical region. Chronic renal disease of unknown etiology (CKDu) was emerging as a public health problem in the North Central and North Western provinces of the country (Ruwanpathirana et al., 2019).

The policy on management and control of chronic NCDs was adopted in 2009 to accord priority and ensure resource efficiency in responding to the emerging epidemic of chronic NCDs in the country (Ministry of Health, Nutrition and Indigenous Medicine, 2009). The policy was a result of multi-stakeholder consultation and gained high-level political support for implementation. It was also reflective of the global discourse on chronic NCDs and drew upon a series of international policy documents, including the guidance on NCDs developed by WHO, the World Health Assembly Resolution on the Global Strategy on Diet and Physical Activity, Health and Preventing Chronic Diseases, and the WHO Strategic Framework for NCD Control and Prevention 2008–2013 (Ministry of Health, Nutrition and Indigenous Medicine, 2009).

The scope of the policy was to address four major NCDs and their risk factors: cardiovascular diseases, DM, chronic respiratory diseases and chronic renal diseases. The policy identified the need for a comprehensive approach, with equal emphasis on health promotion, prevention, early detection, proper case management, and reorganizing health-care delivery to ensure effective implementation. Important changes to health-care delivery were the identification of an essential list of medicines for management of NCDs at primary-level health institutions, which was guided by the pilot experience of the WHO Package of Essential NCD Interventions (PEN) project. Guidelines for the management of chronic NCDs at the primary care level were developed and rolled out to strengthen the capacity of frontline health workers. The key emphasis of the policy was on expanding services to detect the undetected. This took the form of establishing Healthy Lifestyle Centres (HLCs) islandwide. By 2018, 900 such centres had been established. The NCD prevention project by Japanese International Cooperation Agency (JICA) provided key inputs to organizing HLC services. The intervention, although implemented on a wide scale, did not achieve the expected results due to not being optimally utilized by people. Male participation for screening was seen to be very low (Mallawaarachchi et al., 2016). HLC was the key strategy implemented as a service delivery intervention towards reducing preventable mortality.
Considering the high prevalence of risk factors for NCDs, prevention of the main risk factors is the main policy focus through the application of best buy interventions as proposed by WHO (Ministry of Healthcare and Nutrition, 2008). Increasing the size of pictorial warnings on cigarette packages, increasing taxation on alcohol and tobacco, a traffic light system on sugar-sweetened beverages, introducing a tax on sugar-sweetened beverages, increasing public awareness on reducing sugar and salt consumption and the importance of physical activity, are some of these.

Many interventions adopted in the policy fell short of the service delivery organization changes mentioned as a key strategy. The reforms for PHC services were conceptualized initially to address the growing problem of NCDs and evolved as a policy to provide UHC (see Section 6.3.1).

6.2.3 National Migration Health Policy

Migration has played a pivotal role in the socioeconomic development of Sri Lanka. Although known as a labour-exporting country with foreign employment being the principal foreign exchange earner, a mixed profile is seen at present, where the country has also become a labour-receiving country (Weerarathne, 2018).

In 2015, 54% of the foreign exchange received was from remittances coming from migrant workers employed in the Middle East. The Sri Lanka Bureau of Foreign Employment in their corporate plan 2017–2021 state that 1.5 million Sri Lankans were estimated to be living outside the country on foreign employment. The Government of Sri Lanka felt that special attention needed to be focused on the health needs of families left behind to ensure that the benefits are reaped without enduring negative consequences (Siriwardhana and Stewart, 2013).

In 2008, the MoH took actions as recommended by the World Health Assembly resolution on promoting the health of migrants, and set up a secretariat with the support of International Organization for Migration (IOM). This aimed to conduct a rapid assessment to identify the migration health profile, policy gaps and where service coverage should be improved. A National Steering Committee on migration health was established under the chairmanship of the Secretary Health, with participation of high-level officials from other relevant government ministries. A technical task force functioned under the chairmanship of the DGHS. The technical task force was supported by IOM in conducting further research based on the rapid assessment carried out. The findings of the commissioned studies contributed to policy drafting.
The National Migration Health Policy was published in 2013 (Ministry of Health, Nutrition and Indigenous Medicine, 2013).

The National Migration Health Policy highlights the need to protect health and access to health services by outbound migrants and families left behind, inbound migrants and internal migrants through multisectoral approaches.

Having eliminated communicable diseases such as malaria and lymphatic filariasis as public health concerns, Sri Lanka had to take the necessary steps to prevent the reintroduction of these pathogens through incoming migrants, as the entomological profile continues to be vulnerable to an outbreak. This is conducted through health screening of all resident visa applicants and treatment of positive cases of malaria and filariasis.

The MoH entered into a memorandum of understanding with IOM to establish a health assessment facility for residence visa applicants in 2018, applying a model of build, operate and transfer. Residence visa applicants are to be screened for malaria, filariasis, HIV and TB at this certified facility and will be referred to national programmes for confirmation and follow-up treatment.

The Policy provides the opportunity to link several other disease control efforts. A national Pre-Departure Health Assessment (PDHA) for outbound migrants from Sri Lanka was finalized in 2017 following an international consultation, which was themed “PDHA as a global public health good”. The event brought in participants from several countries, both labour-receiving and -sending. Experts were able to discuss and address the challenges in screening protocols, which were often misinterpreted as diagnostic, particularly in the case of TB. Protocols followed at these inbound and pre-departure health assessments offer linkages to the National TB Control Programme for follow-up care of those who screen positive.

Sri Lanka has actively advocated for migration health within the country, regionally and globally, and has succeeded in sensitizing and getting migration health on the agenda of many regional and global meetings. The Policy will have many opportunities in forging greater understanding on important public health issues such as the control of TB and elimination of malaria from the South-East Asia Region.

6.2.4 National Medicinal Drug Policy

Sri Lanka has made efforts to develop country-specific drug policies from the late 1950s onwards. These led to the development of the first-ever Ceylon Hospital Formulary. The landmark report, “The Management of Pharmaceuticals in Ceylon” in 1971, by Professor Senaka Bibile and Dr
S.A. Wickremasinghe, who had been officially tasked by the then Prime Minister of Ceylon to recommend ways to rationalize the medicines policies of the country, made a signal contribution towards the formulation of a comprehensive policy. In 1980, Sri Lanka approved the Cosmetics Devices and Drugs Act (CDD) (1980 Act No. 27), which formed the legal basis for the regulation of medicinal drugs until 2015. The Cosmetics Devices and Drugs (CDD) division functioned under a Director with powers delegated by the DGHS.

From the 1990s onwards, major lobby groups were working towards the development of a comprehensive national medicines policy based on the “Bibile principles” and its implementation in Sri Lanka. As a result, the government formulated and approved the National Medicinal Drug Policy (NMDP) in 2005 (World Health Organization, 2016). This Policy, which involved a wide range of stakeholders, covered 10 main elements: selection of essential medicines, affordability and equitable access, financing options, supply systems and donations, regulations and quality assurance, quality use of medicines, research, human resources, viable local pharmaceutical industry, and monitoring and evaluation.

The government reactivated the policy process in 2015 and the Parliament of Sri Lanka passed National Medicinal Regulatory Authority Act in and established the National Medicines Regulatory Authority (NMRA) the same year. The new NMRA Act also replaced the existing CDD Act, which regulated medicinal drugs in Sri Lanka from 1980 to 2015 (Jayakody and Galappatthy, 2015).

The establishment of NMRA as the regulatory body introduced changes to the governance of regulation of medicines in Sri Lanka. Through the previous CDD Act, the drug regulatory authority functioned under the DGHS; under the new NMRA Act, the NMRA functions as an independent authority, with an independent board to regulate medicines, medical devices and borderline products. The Minister of Health is the appointing authority who also appoints the advisory committee, which includes civil society representation. In comparison to the previous CDD Act, the new Act does not include cosmetic products, but includes a new area designated as “borderline products”. This comprises substances that may fall in between foods and drugs, which were not identified in the previous act. Under the powers of the new act (NMRA), the government can issue a maximum retail price for essential medicines. This Act also enables the NMRA to consider cost and need in addition to quality, safety and efficacy in registration. The implementation of the NMRA Act also guaranteed affordability and equal access.
The remaining components of the National Medicinal Drug Policy are at various levels of implementation. This requires the support and collaboration of multiple stakeholders, including public, private, health and non-health partners. The other major challenges seen in implementation of the total activities under the Policy are the recruitment of required qualified HR and further expansion of the capacity of the National Drug and Medicines Quality Assurance Laboratory to assess medicines at pre-registration and for post-market surveillance of medicines in the market. Post-marketing quality assessment and pharmacovigilance are also crucial aspects that need continued political commitment and support (Jayakody and Galappatthy, 2015). The NMRA is likely to make significant improvements in the availability of quality-assured medicines at affordable prices in the country.

**6.2.5 Health Information Policy**

The HIS has developed over decades and supports developments in the government health system. Several contributing subsystems are identified, i.e. hospital information systems, preventive health information systems, population census, Civil Registration and Vital Statistics (CVRS) system and routine population-based health surveys. A survey conducted by the MoH in 2009 using the WHO Health Matrix Network (HMN) tool (unpublished) highlighted that resources and data management were present but not adequate when compared to the HMN suggested standards. The survey also identified compartmentalization of the information governance mechanism, limited data-sharing, moderate use of information for decision-making, insufficient automation leading to a relatively modest quality of health information, and the need for explicit policies on health information management.

Based on the results of the HMN survey in 2009, policy directions were identified through a series of focus group discussions with relevant high-level stakeholders from the health and other relevant sectors. A draft policy was submitted to officials of the MoH, registrar generals of departments, Department of Census and Statistics and other development partners for comments, which led to approval by the Cabinet of Ministers in 2017. This Policy is aligned with the national e-government policy (Information and Communication Technology Agency of Sri Lanka (ICTA), 2009 ).

The Health Information Policy aimed to systematically convert appropriate areas of HIS to an electronic information system and encourage innovations in the field of HIS (Ministry of Health, Nutrition and Indigenous Medicine, 2016d).
The broad policy objectives of the Health Information Policy are:

- to ensure that 50% of all health institutions generate, disseminate and use timely and quality health information to support organizational management and development;
- to make available comprehensive systems for personalized and community-based health information management for shared and continuous care recipients who receive care at 50% of all BHs, DGHs, PGHs and THs;
- to ensure optimal data-/information-sharing and access to health information in relation to all sharable data in HIS, while ensuring ethical considerations and confidentiality of care recipients;
- to encourage suitable innovations related to health information management and e-health in all information processes, while ensuring interoperability of information systems;
- to ensure the security and integrity of all health data/information; and
- to ensure the sustainability of all HIS.

The Policy has allowed the identification of cadres in relation to health information management in currently established health programmes and the need for terms of reference for medical informaticians and other related health-care cadres involved in HIS. The contribution of this dedicated cadre will require further evaluation.

Several pre-existing manual health data collection and reporting processes have been computerized. The details of these are explained in Chapter 5.

The full implementation of the National Health Information Policy is expected to result in an integrated national HIS. The patient information component of the planned system will provide a unique patient identification number (PIN) and a personal health record (PHR), which will ensure patient-centred integrated care delivery and follow up to support UHC as well as population-based morbidity data. The e-health record will be initiated with the envisaged reforms on PHC.

Implementation of the Policy is further complemented by the National Act on Right to Information (Parliament of the Democratic Socialist Republic of Sri Lanka, 2016). Public access to information and its effect on transparency and public engagement in health development as well as improving health literacy through providing timely information are key gains expected through policy harmonization, which health authorities must put into practice.
6.2.6 Establishment of a central HRH coordination unit

Historically, the MoH did not have a specific Human Resources for Health (HRH) department or unit, and HRH functions were scattered across several units and departments. The publication Better health for Sri Lanka: report on a health manpower study by Simenov et al. in 1975 had identified the need for coordinating key HRH functions such as planning, production and deployment. But little meaningful action seemed to have resulted from this. The increasingly complex nature of health services delivery and associated HRH functions reflect the urgent need for a more coordinated approach towards HRH in Sri Lanka. Therefore, a number of processes towards improving HRH coordination have been initiated within the MoH. Significant policy formulation milestones that can be identified in this regard are the Staffing Study for Cadre Determination of all Medical, Nursing and Paramedical Personnel in 1981, Presidential Task Force for the formulation of the National Health Policy Report of 1992, which gives a comprehensive analysis of HRH and recommendations, the National Health Policy Report of 1996, emphasizing the need to support and strengthen HR development, National Strategic Plan for Nursing and Midwifery Development 2001–2010, Perspective Plan for Health Development in Sri Lanka (1995–2004) and the Health Manpower Development Plan (1997–2006). These strategic documents on HRH were developed during a phase when sustained interest through a focal unit within the Ministry for HRH did not exist. Many of these did not influence the system in any tangible way due to these organizational deficiencies.

The HRH strategic plan developed in 1998 through external technical assistance of WHO for the period 1999–2009 listed an initial set of policy proposals to support the objectives of the plan. This plan too has not been implemented because of low stakeholder involvement and poor advocacy on the process. The latest of this series of policy documents is the HRH strategic framework 2009–2018, which was commissioned in response to the recommendations of the Health Master Plan (HMP) for Sri Lanka 2007–2016. Although comprehensive in scope, adoption of the strategic framework has also been far from satisfactory. The functions of training, recruitment and deployment of HRH are carried out by different units in the MoH and that may have impeded a consolidated effort to develop HRH in Sri Lanka.

A recent development recommended in the HRH Strategic Plan materialized through strong political influence, and the HRH Coordinating Unit was established within the MoH in 2017 to coordinate the multiple HRH functions. Its focus has largely been on workforce projections and sharing information on training plans. Enhanced capacities are required on HRH policy analysis.
to improve the scope and functions of this unit, which could also lead to transforming health professional education through coordination with other ministries such as Education/Higher Education and units in the MoH.

Slow but steady progress of this Unit has increased its acceptance and its coordination functions, which extend to liaising with administrative bodies that influence HRH outside the Ministry. However, this Unit has to strengthen its own capacity in the main HRH functions and infrastructure facilities to conduct its operations and liaise with existing units in the Ministry mandated to perform these functions.

6.3 Future developments

6.3.1 Health service delivery for UHC, emphasizing primary care reforms

Primary health care, which was introduced through the establishment of the health unit system (MOHs) to address health needs in 1926, has been the backbone of the Sri Lankan health system. Subsequent governments have supported and enhanced this model of addressing the preventive health issues of a defined population. The population served by an MOH area and its subunits is defined so that it coincides with local government boundaries. The strengths of the MOH system have been its well-trained field public health staff, supportive supervision and a system of accountability for health outcomes in a defined population, supported by a good management information system.

In 1987, a major political and administrative reform was the Thirteenth Amendment of the Constitution of Sri Lanka, which created provincial councils with a degree of decentralization of governance to the provinces. With this process, health became a partially devolved subject. Important service components that became the responsibility of the provinces were the primary-level health services comprising the MOH system for preventive care, the network of DHs and PMCUs for curative care, and the BHs that form the secondary level. Larger secondary-level hospitals are being managed with difficulty by the provincial health authorities due to limitations in resources. Eight BHs out of 83 have been handed over to the MoH. Although difficult, many provincial authorities maintain their management position to secure even the limited financial allocations they receive. The Treasury is tasked with allocating the limited health budget between the Centre and provincial authorities. More large and specialized institutions coming under the direct management of the Centre has seemed to justify the Centre receiving a significantly higher financial allocation than the provinces.
A management reform to amalgamate the preventive and curative sectors was introduced in 1991 as a step to further the decentralization process, conforming to the local administration unit, i.e. the DS divisions. The reform assigned the MOH as the administrative head of primary-level curative hospitals situated within the same DS/MOH area. This reform was short lived as it was perceived as having a negative impact on preventive services provided by the MOH and is seen as a premature reform without adequate pilot implementation or assessment.

In 2000, a policy aimed at strengthening one hospital to the level of a DGH was implemented to improve the infrastructure facilities and specialist services in each district. Over the past decade, there has been significant expansion of specialized services, with major capital funding diverted to larger hospitals. This has benefited MCH services, where free hospitalization and better access to specialized care and emergency services have led to a reduction in mortality. In the absence of a clear set of guidelines for rational development, this policy led to some ad-hoc developments of secondary and tertiary hospitals. The expansion of secondary- and tertiary-care institutions resulted in the bypassing of primary care institutions, compromising continuity and the quality of care. The policy on health service delivery for UHC is a significant change that will give more emphasis to primary care and address some of the gaps in service delivery.

The policy has taken considerable time to develop and has been catalyzed with political commitment and development partner interest. Refer to Figure 6.1 for the timeline.
Figure 6.1 Chronological events: towards primary health care reform in Sri Lanka, 2009–2018

Source: Compiled by Organization Development Unit, MoHNIM (2018)
The need to reorganize the system from a model for predominantly acute illness management to a model for chronic illness care in response to the changing disease epidemiology has formed the basis for reorganization of primary curative care.

A key concern addressed by the policy has been to respond to the increasing burden of NCDs, including mental health, cancer and injuries as well as the health-care needs of an ageing population, while also addressing the health needs of young persons. The policy, through integration at the primary care level, will offer opportunities for unresolved health challenges such as controlling TB and malnutrition.

The changes envisaged based on this policy are as follows. All health institutions below the level of BHs, which are the DHs and PMCU (Perera and Perera, 2017; Perera et al., 2019), will be linked with their closest specialist hospital (BH and above) to constitute a cluster. At present, PMCUs have varying capacities for patient management. The catchment population living in the GN divisions in the proximity of each PMCI will be empanelled to it and the institution would be responsible for the delivery of a comprehensive range of PHC services to the identified population. The GN areas have varying populations that can range from 200 to 2000 or more. For each PMCI, the closest secondary- or tertiary level-hospital will be identified as a referral institution. As described above, the group/cluster of PMCIs sharing a common referral institution will form a “shared care cluster”. A model of this is presented in Figure 6.2. Care would be shared between primary and specialized services, providing continuity; and the varying resources within the cluster would also be shared, including medicines, diagnostics and health-care workers such as physiotherapists. It would also include the rationalization of HR with a skill mix necessary for optimum service delivery at each level. These would be complemented by ancillary services and essential supplies. The reform focuses on curative care but emphasizes on integration of preventive and promotive functions. These are currently carried out by the MOH/community health services through functional linkages with guidelines, protocols, job descriptions of key health personnel available at the primary care level (both curative and community health services).
The reform will introduce a package of essential services delivered in their own locations focused on the management of NCDs; link curative, preventive and promotive services; and ensure patient-centred continuity of care. This would also provide vertical programmes within the Ministry, such as those for NCDs, TB, elderly care, child health, opportunities for greater integration at the primary care level and added efficiency gains. The reforms envisage the incorporation of new technology into the health-care system in a judicious and equitable manner.

A unique ID and an individualized patient record system would form an integral part of the envisaged service provision to citizens. Each person will be provided a secure smart health card, which will contain personal health information accessible at both public and private health-care delivery points. This would further strengthen the synergies between the private and public sectors and facilitate continuity of care. The patient information system would be synchronized with institutional as well as disease notification and surveillance systems.

The reform process faced many challenge, namely, overcoming the strong emphasis by policy-makers and demand to build larger specialized care hospitals (BHs, DGHs, THs and hospitals for specialties and subspecialties), and the fact that responsibility for primary care lies with the provincial councils, which often experience resource constraints. This has led to a lack of public confidence in primary curative care institutions, resulting in bypassing of these institutions. Although the right of individuals to access
services in any government curative care facility at whatever level has ensured equity, it has contributed to the phenomenon of bypass, inefficient use of PHC resources and potential low quality of tertiary hospitals due to overcrowding. In a resource-scarce provincial setting, the demand for care in secondary- and tertiary-level institutions has led to expansion of infrastructure and resources to these institutions at the expense of primary-level institutions, contributing to underutilization of the latter.

However, given the long years of experience the MoH has with the evolution of community-based preventive health services, there is opportunity to build the envisaged primary curative care by taking into consideration the strengths of the system and, more importantly, the lessons learnt over the years.

Implementation of the UHC policy needed many other health development interventions to fall into place. Noteworthy were the finalization of the Policy on Chronic NCDs (2010), the issue of Priority NCD Drug Circular No. 02-135/2011 on adoption of 16 essential drugs for the management of chronic NCDs at the primary care level (2011), development of guidelines for the management of NCDs in primary health care (2012), pilot interventions to introduce different tools such as the personal health record, lifestyle modification training and tools, and supervision tools. Each of these has been developed with extensive participation of experts in the respective fields of clinical medicine, public health and administration, economics and communication.

Vital to the reform are the clinical and non-clinical competencies (such as communication towards change in lifestyles in the population) among PHC health cadres to provide person-centred continuity of care. While several other HR gaps need to be addressed, the changes required in the curriculum of undergraduate medical and other allied professional education were considered of paramount importance. Discussions involving all the medical faculties led to the development of a common competency framework for doctors to deliver better primary care, and the MoH informing the Ministry of Higher Education of these requirements. This work has to necessarily expand to include other health professional cadres.

Key instruments to implement the UHC policy are the action plan with adequate funding support and effective monitoring and evaluation systems, Essential Services Package, Cluster Management Framework and the National Health Performance Framework 2018, which will serve as an overarching policy monitoring framework. The policy aims at further improving efficiency and effectiveness, and providing financial protection within the current health-care delivery system. The underlying limitation in doing this is the requirement for critical decisions to be taken to allocate
resources prioritizing the strengthening of primary care. As specialized care also forms the continuum of care, overall policy implementation would require more government allocation for health. As efficiencies are to be gained through phased-out reorganization and retooling, the allocation required will not be too large to manage but requires careful planning and strategic decisions.

The policy process attracted and has also been catalysed by the interest of key development partners. Significant technical contributions have been made by WHO and through the financial support of the Asian Development Bank (ADB) and the World Bank (WB).

The Cabinet of Ministers approved this policy in April 2018, laying the foundation on which UHC will be implemented in Sri Lanka. This is in keeping with our commitments towards achieving the Sustainable Development Goals (SDGs).
7. Assessment of the health system

Chapter summary

The health system of Sri Lanka has a proven track record of satisfactory performance and has gained international recognition as a successful model of "good health at low-cost". It has achieved commendable health outcomes above what is commensurate with its income level. The objective of Sri Lanka’s health services from inception has been to ensure and maintain health care of a high quality, free at the point of delivery to all its citizens. Sometimes, maintaining equity has had priority over quality. However, this has not been through a reduction in clinical standards of care but through accepting a lower quality of amenities. A key feature of the services is that they are provided close to people’s homes through a widespread network of government health institutions, and a person is free to seek care at any hospital in the country without a formal referral. This has ensured increased accessibility for all persons to any service offered in the government sector. However, there is increased inequity when the poor cannot afford to seek health care at higher-level institutions due to travel and incidental expenses. Free choice of health institution may also result in overcrowded tertiary care hospitals, leading to constraints in the quality of care.

Health financing indicators demonstrate that the health system is both pro-poor and efficient compared to other low- or middle-income countries in the region (refer Table 3.2). Although OOP expenditure as a proportion of CHE has risen steadily during the past two decades, financial hardships due to illness are minimal, mainly because catastrophic illness is taken care of at public facilities.

The country has a preventive system, which adopted a primary care approach from as far back as 1926. This, together with the prioritization of social interventions, such as female education and nutrition interventions, have delivered health indices, such as life expectancy at birth, neonatal, infant, under-five mortality and maternal mortality rates, better than those in countries with much higher incomes. Tracer UHC indicators on prevention show a high score while those for treatment coverage do not reach the same level, identifying the need for reform in the curative sector.
The major challenges facing the system at present are inadequate government spending on health to match the demand for services resulting from the epidemiological and demographic transitions, increasing allocative efficiency and maintaining equity and quality of services, particularly at the primary care level. There is a system mismatch since the prevailing system had been built mainly for managing episodic acute conditions. The level of GGHE, 8–9% of GGE, is inadequate, as reflected by the high level of OOPE, which has been more than 50% of CHE since 2008. The government health allocation since the beginning of the “good health at low cost” era in the 1980s cannot meet the current health challenges.

Further, implementation of health system reforms to provide quality people-centric, first-contact curative care services, manage the rising burden of NCDs and the problems of an ageing population, while maintaining equitable access and improving the quality of services poses a challenge. Outbreaks of diseases such as dengue and H1N1 infections, and both acute and chronic undernutrition among children under 5 years of age continue to burden the system. In response to these challenges, a policy on health-care delivery for UHC [Ministry of Health, Nutrition and Indigenous Medicine, 2018e] has been launched and many supportive policies towards promoting health have been formulated in recent years.

This chapter aims to provide an assessment of the health-care system in Sri Lanka, especially regarding financial protection, equity in financing, access to health care, user experience, health and service outcomes, quality of care, and health system efficiency, transparency and accountability.

7.1 Objectives of the health system

The Constitution of the Democratic Socialist Republic of Sri Lanka does not explicitly state that health is a fundamental right. However, an indirect statement in Article 27 2 (c) reads as follows:

“The realization by all citizens of an adequate standard of living for themselves and their families, including adequate food, clothing and housing, the continuous improvement of living conditions and the full enjoyment of leisure and social and cultural opportunities” [Parliament of the Democratic Socialist Republic of Sri Lanka, 1978].

been to ensure health care of high quality, free at the point of delivery to all its citizens, thus ensuring services to all rather than focusing on a demand-based approach.

The country has a commendable preventive health-care system with health indices comparable to those of developed nations, but the same is not true for curative care services, which are resource intensive. Tracer UHC indicators on prevention have achieved high levels when compared to other lower-middle-income countries but indicators on treatment coverage are lagging behind. The system is increasingly under pressure to bring about the changes necessary to address the challenges of the demographic and epidemiological transitions but has been slow to respond. This has led to the formulation of many policies in health and related areas in recent times.

The enactment of the National Authority on Tobacco and Alcohol (NATA) Act No. 26 of 2006, after the FCTC ratification in November 2003, saw the establishment of NATA, which resulted in measures such as 80% pictorial warning on cigarette packs, ban on advertising and smoking in public places, and the increase in taxation of tobacco leaf and stick. The total tax on tobacco was 62.1% of the retail price of most sold brands of cigarettes in 2016. The government had not increased retail prices between 2008 and 2016 to make tobacco less affordable until the increase in taxes in 2017 (World Health Organization, 2019b).

2017 saw the revision of the 1992 health-care policy. The new policy will be in operation until 2025 (Ministry of Health, Nutrition and Indigenous Medicine, 2017a). The new strategic plan consists of four separate volumes of HMPs for each of the following areas: preventive health services, curative care, rehabilitative care and health administration, and human resources for health. The objectives of the health system, as stipulated in the new policy document, are as follows: strengthen service delivery to achieve preventive health goals, provide appropriate and accessible high-quality curative care for all Sri Lankan citizens, promote equitable access to quality rehabilitation care, strengthen evidence-based service delivery to support the journey along the continuum of care, develop new strategies to reduce OOP spending and financial risk, ensure a comprehensive health system through better restructuring, including HR management, and develop strategic partnerships with all providers of health care.

In addition to the National Health Policy, 2017 saw the introduction of policies such as on migrant health, health information, and prevention and control of micronutrient deficiencies. Another key strategy introduced
recently was taxation on the sugar content of sugar-sweetened beverages and implementation of a traffic light system indicating the sugar content in beverages as mechanisms to empower consumers and increase public awareness of the sugar content with an aim to halt and reverse the NCD burden. This has now been extended to the salt and trans-fat content of food.

Recently, a policy on health-care delivery for UHC was introduced (Ministry of Health, Nutrition and Indigenous Medicine, 2018e). This envisages the provision of quality first-contact care through strengthening primary-level curative services with a special focus on NCDs. A patient- and family-centric approach would be used, and continuity of care ensured. An Essential Services Package for Sri Lanka has been developed, which describes the services to be delivered in all primary medical care settings. A multisectoral action plan for the prevention and control of NCDs, formulated in 2016, underpins some of these reforms.

Since Independence, all successive governments have supported and have been committed to the provision of free health care to the population as a key social policy. In the past, various directorates under the MoH had developed subsector policies and strategic plans, for which approval had been granted by the Cabinet of Ministers of the Government of Sri Lanka. These policies have been directed towards the maintenance of free health care to the population and to further raise the health status of the people (Ministry of Health, Nutrition and Indigenous Medicine, 2017a).

The Cabinet is the forum in which inter-ministerial coordination takes place and the system ensured that all important policy decisions were taken collectively. There is a parliamentary “Sectoral Oversight Committee on Health” and this committee is key to ensuring health in all policies. Cooperation between ministries has been sought between and among sectors, on an ad-hoc basis, to deliver the services and implement programmes at a decentralized level.

7.2 Financial protection and equity in financing

7.2.1 Financial protection

UHC encompasses three domains: population (who is provided), services (which services at what quality) and cost (how much of the cost is covered). There is also a requirement that all people receive health services of appropriate quality without being exposed to financial hardships.

As of 2017 (latest available data), the government contributes to 42.95% of total CHE, while private expenditure accounts for 55.71% (World Health
Organization, 2020). Of private expenditure on health, approximately 95% is by households (Amarasinghe et al., 2015b). It is noted that the proportions of public and private expenditure on health as a proportion of CHE has become inverted from 2007 when the proportion of domestic private expenditure surpassed the proportion of government health expenditure (Figure 7.1).

Figure 7.1  Current health expenditure in Sri Lanka by source of financing, 2000–2016

The total expenditure on health as a percentage of the GDP fluctuated between 3.5% and 4.5% during the past 15 years, which is lower than the global average. An increase is being noted in more recent years. CHE as a share of the GDP has significantly decreased, especially from 2004 to 2012, currently being around 4.3% of the GDP (Figure 7.2). This was mostly driven by public spending on health growing at a slower rate than the overall economy.

Figure 7.2  Current and capital health expenditure as a share of GDP (%), 2000–2016

Source: World Health Organization, 2020
Government expenditure on health and education from 2011 to 2016 as a percentage of GDP is depicted in Figure 7.3. Spending has been higher for education than for health throughout the years. During the same period, the state income has not increased as a percentage of GDP and the debt servicing has increased as a percentage of GDP, signifying the lack of fiscal space for greater government investment in health care.

**Figure 7.3**  
**Government expenditure on health and education as a share of the GDP (%), 2011–2016**

![Figure 7.3](image)

*Source: Central Bank of Sri Lanka, 2018*

Figure 7.4 shows government spending on health from 2000 to 2016, where a decline in GGHE as a percentage of GGE from 2004 to 2009 is seen. This has remained around 8% from 2009 to 2016.

**Figure 7.4**  
**General government health expenditure as a share of general government expenditure (%), 2000–2016**

![Figure 7.4](image)

*Source: World Health Organization, 2020*

Comparing Sri Lanka with other countries (Figure 7.5), it is observed that Thailand has the highest government spending on health while Bangladesh
has the lowest. In Malaysia and Philippines, the percentage GGHE is seen to be increasing from 2012 onwards while a decline is seen in Viet Nam over the same period.\textsuperscript{16}

**Figure 7.5** Comparison of GGHE-D as a share of GGE (%) among selected Asian countries, 2012–2015

![Figure 7.5](image)

Source: World Health Organization, 2020a

Figure 7.6 shows OOPE as a percentage of CHE from 2000 to 2016. From 2007 onwards, the OOPE as a percentage of CHE has been more than 45% and the trend is seen to be rising.

**Figure 7.6** Share of OOPE as percentage of CHE, 2000–2016

![Figure 7.6](image)

Source: World Health Organization, 2020a

\textsuperscript{16} Figure 3.3 demonstrates the same trend over a longer period.
The share of the OOP as a percentage of CHE for the same comparison countries is presented in Figure 7.7. OOPE for Thailand is seen to be the lowest (12.1%) while that of Bangladesh is seen to be the highest (71.9%). Over the past 16 years, two countries have reduced their OOPE. Thailand shows a steady decline and has been able to decrease the OOPE by nearly 65% from the value in 2000. Sri Lanka, on the other hand, demonstrates the highest percentage increase over the same period, an increase of 25% from the year 2000 value of 40%. The increase in state spending on health has reduced the OOPE in Thailand, while an increase in social/government spending on health has not had the desired reduction in OOPE in Viet Nam and Philippines.

Figure 7.7 Share of OOPE (%), selected countries, 2000–2016

In Sri Lanka, OOP payments are high and are mainly utilized for: private outpatient care [general and specialized care], payment for pharmaceuticals [self-prescribed or physician prescribed], payment for private hospitals and payment for laboratory investigations [Figure 7.8]; the top three areas of spending were for private doctors, 33%; pharmaceuticals, 27% and private hospitals, 16% [Department of Census and Statistics, 2018b]. The payments made for a GP consultation often include the cost of medication provided by the GP from the internal pharmacy maintained by the practice. This means that the payments listed as for the GP given in the HIES may be an overestimation while the pharmaceutical cost is an underestimation.

Source: World Health Organization, 2020a
Figure 7.8  Health services obtained through OOP payments, 2016

Private doctors 33%
Ayurvedic practitioners 2%
Specialist consultations 6%
Laboratory services 9%
Private hospitals 16%
Pharmaceuticals 27%
X-ray & scans (CT, US etc) 3%
Other 4%

Sources: Department of Census and Statistics, 2018a

Figure 7.9 shows OOP payments for health made by households according to expenditure quintiles for the year 2016. The OOPE on health as a proportion of total household expenditure and non-food expenditure increases by quintiles. The first quintile spends about 2.2% of their household expenditure on health while the richest quintile spends almost 3.7%. OOPE is highest in the wealthiest quintile (SLR 4717.30) and nearly 13 times that of the poorest quintile (SLR 366.41). The wealthiest quintile paid approximately two thirds of the entire OOPE of the country. Almost similar findings have been reported from the Household Income and Expenditure Survey (HIES) 2012/2013 and by others (Govindaraj et al., 2014).

Figure 7.9  OOP payments by households by expenditure quintiles, 2016

When considering the structure of OOP payments by income quintile, the richest spend around 24% of OOP payments on private practitioners, 28% on private hospital care and 23% on drugs (Figure 7.10). The poorest spend around 51% on private practitioners, around 3% on private hospitals and 32% on drugs. Despite the state health sector offering health care free at the point of service delivery, some of even the poorest quintile utilizes the private sector for health due to reasons of convenience, i.e. more convenient hours, shorter waiting times, choice over selection of doctor and perceived shortage of medication and investigations in the state sector.

**Figure 7.10  Structure of OOP health payments by expenditure quintile, 2016**

OOP spending that pushes households below the poverty line is termed impoverishment and that is minimal in Sri Lanka. Though OOPE is increasing, financial protection coverage in Sri Lanka is at a satisfactory level. Financial protection coverage denotes the proportion of the population with a large household expenditure on health as a share of the total household expenditure or income. According to the HIES 2015/2016, 6.4% of households in Sri Lanka spent more than 10% of their total household budget on health and 1.1% of households spent more than 25% of their total household budget on health (Figure 7.11). The catastrophic health expenditure at both 10% and 25% are lowest in Q3 and highest in Q5, as observed in Figure 7.12.
As the country is currently facing demographic and epidemiological transitions, adequate and sustainable health financing is an immediate need for the following reasons: rising demand and need for more costly treatment methods and citizens’ expectation of higher service quality; increased medical technology advancement – diagnostics, treatment and medicines, greater need for health and social services by an ageing population, and catering to emerging and re-emerging disease conditions and NCDs, which place a higher economic strain on individuals due to their chronic nature and tendency for leaving residual disabilities (Institute of Policy Studies, 2016).
7.2.2 Equity in financing

In the Sri Lankan context, a health system comprising publicly financed government service provision, free at the point of care, with inadequate public funding to meet the increased demand for health, has resulted in a high level of OOPE in the private sector; thus achieving UHC and, in particular, ensuring financial risk protection is, at best, a difficult challenge.

The Sri Lankan health-care system is recognized as one that has achieved good health at low cost. Figure 7.13 shows that, despite having moderate pooled funds for health, the UHC index is comparatively high, at almost 70%, reflecting a high level of health systems endowment.

**Figure 7.13 Universal health coverage financing frontier**

![Universal health coverage financing frontier](image)

The main source for state sector health expenditure is through contributions of the Central Government through budget allocations to the MoH. In addition, provincial departments of health, local governments, other government entities, the President’s Fund, and the Employees Trust Fund (ETF) also make contributions annually.

Source: Institute for Health Metrics and Evaluation, 2018: p.89
Approximately 75% of the government health budget is through the Ministry of Finance, where resource allocation is mainly based on infrastructure and staffing, a method that has been followed for decades (Ministry of Finance, 2016). When considering the distribution across different geographical regions, CHE shows an equitable distribution across most districts, the Western Province being the most notable exception with an outstandingly high level (Figure 7.14). The Western Province houses nearly a quarter of the population and has a majority of the national referral hospitals as well as training facilities that may have contributed to this outcome.

**Figure 7.14** Comparison of total and per capita CHE by provinces and districts, 2013

Funds allocated to the provincial departments of health by the Central Government is based on a formula developed using principal components analysis (PCA) thereby ensuring equity. The socioeconomic indicators used for the PCA analysis are: population, provincial GDP, poverty head count ratio, median per capita income of the province, persons per MO and the number of...
candidates qualified for universities in the science stream from the province (Financial Commission of Sri Lanka, 2017). However, there is significant dependence of allocations on the previous years, approved civil servant cadres and thus the requirement is not based on the principle of meeting needs alone. Thus, the mechanism for allocating funds among provinces could be better matched with population need (Smith, 2018).

In certain instances, it is observed that provinces that need a higher allocation may not necessarily receive it, i.e. a disproportionate share of government health spending is allocated to certain provinces; for example, Eastern and Northern have the lowest per capita allocations in the country (Figure 7.15). However, it should also be noted that per capita financial allocation should not be the only criterion to decide on equity as other factors such as geographical extent or the size of the province as well as the availability of a road network leading to problems in accessibility also play a role when deciding on equity in finance allocation.

**Figure 7.15** Estimated per capita spending of the government by provinces and districts, 2013

![Graph showing estimated per capita spending of the government by provinces and districts, 2013.](image)

Source: Health Economics Cell, 2016: p.38
In addition to provincial disparities, inequity also exists in several key domains with regard to allocation of limited financial resources. Disparities in allocation between curative and preventive health care and in allocation to different levels of curative institutions are the main issues in this context. In Sri Lanka, approximately 91% of the CHE was utilized for curative health care while only 4.5% was utilized by the preventive services in 2013. NCDs utilized 35%, while 22% of the CHE was on infectious and parasitic diseases. Nearly 10% of the expenditure was for reproductive health services and 7.7% for injuries (Health Economics Cell, 2016).

The most critical gaps identified in the present health-care financing system in Sri Lanka are due to inadequacies of resource mobilization, allocative inefficiencies and weaknesses in financial management. Possible solutions are (i) generate more fiscal space for health through reforming taxation systems, ensuring tax and government revenue as % GDP, and strong political and financial commitment to increase the fiscal space for health (GGHE, as %GGE), (ii) improve allocative efficiency through investment in cost-effective interventions, primary prevention of NCDs such as best buy interventions, effective coverage of key interventions, and (iii) improve effective financial management.

The ultimate goal may be to improve equity by enhancing access across all wealth quintiles. To improve access and utilization by upper wealth quintiles, there has to be marked improvement in the “hotel” facilities within government institutions. However, this is a feature that has been compromised in trying to achieve universal access while keeping costs low.

### 7.3 User experience and equity of access to health care

#### 7.3.1 User experience

Sri Lankans can obtain services at any hospital in the country as there is no clear referral policy from primary- or secondary- to the tertiary-care level. The majority of hospitals do not have an appointment system as there is no systematic registration process of patient information with easy retrieval. Patients with acute health care needs are seen by doctors at the outpatient department and they may prescribe medicine/investigations or admit if required (or demanded), regardless of bed status. Any patient with a condition that requires specialist attention is referred to a consultant clinic in the outpatient department and is required to get an appointment from the relevant consultant clinic. Tertiary hospitals have the services of dedicated specialists for the outpatient department, but the majority of the hospital’s clinics are conducted by the specialist and his/her staff attached to a ward.
Sri Lanka records some of the highest patient consultations (5.2 visits per person per year) and number of hospital admissions (24 admissions per 100 persons per year). The bed occupancy rates are found to be very high in tertiary care hospitals, up to 3.9 days. Many PHC facilities are staffed by a medical doctor with a minimum qualification of MBBS. In the state sector, there is a waiting list for high-end investigations as well as planned surgical procedures. Still, the country lacks equitable access to some specialized care services such as cardiothoracic surgery, dialysis, renal transplantation and cancer care (Ministry of Health, Nutrition and Indigenous Medicine, 2018e). Persons who need these services will require registration on a waiting list and some tend to seek care from the private sector within the country as well as overseas. This may result in catastrophic health-care spending for some of these households.

Since there is no easily retrievable patient records system in many of the outpatient departments, follow up of these patients is difficult. In most clinics, patients carry their own clinic record books in which doctors enter the status and drug prescriptions. In the case of admissions to hospital, a diagnosis card containing a detailed discharge summary, including the management plan for follow up, is provided to the patient. The ward notes are kept in the hospital records room but on subsequent admissions, the diagnosis card from the previous admission is needed for retrieval. The onus is on the patient to remember to bring his or her diagnosis card and clinic record book whenever they attend hospital. The absence of an electronic patient health record that can be easily retrieved poses problems in the follow up of patients as well as in providing continuity of care for those who need it, in particular, for the management of chronic NCDs. The limited HIS currently in place at most of these facilities lacks the capability to provide details of the numbers who are on medication and are being followed up. This information is critical for assessing the effective coverage of interventions.

Private hospitals offer specialist consultation as well as inward care services. The possibility of direct consultation of specialists of their choice, obtaining services at a time convenient to the clients and at a relatively affordable price, and the possibility of being referred to the state services by the specialist seeing the patient seem to create a demand for services from private facilities.

Sri Lanka is still in the process of institutionalizing a routine mechanism to measure user experience surveys in the country. A national-level survey is yet to be carried out by the MoH. However, a few limited surveys provide information on satisfaction with services provided by the government health services.
Russel and Gilson (2006) studying an urban population in Sri Lanka found that, irrespective of income group, people relied on the government sector for technical competence, especially in receiving inpatient care. But government sector service providers were found to lack soft skills and interpersonal skills so that high-income populations and even a considerable proportion of middle-income persons resorted to seeking private sector care for moderate or less severe illnesses. Children with high-risk symptoms were taken to government sector institutions whereas the children with low-risk symptoms were taken to the private sector.

The quality of public sector outpatient primary care in Sri Lanka is generally considered high for a low- middle-income country, and was seen to be better than the private sector in many areas (Rannan-Eliya et al., 2015a). Studies have shown that the quality of the public sector diagnosis and management aspects of care is similar to the private sector. However, the private sector allows patient choice of a provider and better quality care in non-clinical aspects (Rannan-Eliya et al., 2015b).

The patients’ personal information is usually not accessible to the public except through a legal order in case of medicolegal questions. This information, written on paper-based bed head tickets (BHTs) and outpatient department consultation forms, is stored with health institutions once the patient is discharged from the institution. The records are kept secure in the medical records room and are not made accessible even to health-care providers unless prior written permission is taken from the head of the institution. Patients have their own individual clinic records in the form of clinic books/notes with them.

Patients are usually informed of their conditions when taking treatment for chronic diseases. They are aware of the conditions that they are being treated for. Patients’ involvement in deciding on the type of prescription or drugs is minimal in the public sector. Usually the prescription is solely at the discretion of the treating physician. In situations requiring major procedures/ surgery, patients are informed of the need for the procedure prior to obtaining written informed consent. However, the opportunities that patients get to discuss alternative treatment options are limited.

One aspect of quality of care is time spent on a consultation. Rannan-Eliya et al. found that the average consultation time for outpatient visits was 3.1 minutes in state sector health-care institutions and 7.8 minutes in private health-care institutions. As the doctors working in both sectors are largely the same, the same study found a similar quality of clinical care provided in both the public and private sectors (2015b).
7.3.2 Equity of access to health care

The distribution of health workers and facilities across the population

The preventive health-care service has a defined package of MCH services that are delivered by the MOH and a team of health-care professionals to a geographically defined population. This package is universally provided and is available to all, irrespective of the geographical location in the country. Very high coverage indicators are evident with minimal geographical inequalities (Department of Census and Statistics, 2018a).

In addition to the MCH packages of service, the MOH provides screening for NCDs. The Well Woman Clinics conducted by the MOH provide screening services to women above 35 years for the common NCDs – diabetes, hypertension, breast and cervical cancer. In addition, the HLCs attached to primary curative care institutions offer screening services to both men and women for common NCDs. These services are equitably distributed and are open from 8.00 am to 4.00 pm on specified days of the week. However, it has been noted that attendance for screening by working age men is low (male: female 2.9:7.1), highlighting the need for making services available at times convenient to the working population, especially those in the informal sector.

The same cannot be stated in relation to the curative care service of the country. Each district would have at least one tertiary-care facility and one or more secondary-care facility and a number of primary curative care facilities some with beds and others providing only OPD services. Despite having the desired level of care at each district level, many services are seen to be having an inequitable distribution. Several districts are seen to lack the full range of specialized services, and the optimal staff size to deliver these services on a 24x7 basis such as for Obstetrics, Neonatology and Anaesthesiology (Ministry of Health, Nutrition and Indigenous Medicine, 2018e).

Further, it is noted that despite the availability of free health-care services, many people are not using these services appropriately. The estate sector is seen to have significantly poorer health outcomes than the urban and rural sectors in Sri Lanka. Almost all health indicators are seen to be lagging behind in the estate sector, including MCH indicators, nutritional indicators and psychosocial indicators (Department of Census and Statistics, 2018a). Another group with poor utilization and access to state-managed health services seems to be the working population. Male participation/utilization is seen to be poor, especially in the working age groups. The STEPS survey in 2015 reports that nearly a third of the adult population had never been screened for hypertension and diabetes. This is attributed to the fact
that services are not usually available at times convenient to the working population. The majority of outpatient facilities offer services to the public from 08.00 to 16.00 hours on weekdays, 08.00–12.00 hours on Saturdays and 08.00–10.00 hours on Sundays.

Difficulty in accessing health-care facilities (difficult terrain in the estate sector), restriction due to overlapping working hours of the health sector with that of the normal working population (normal working hours from 08.00 to 16.00 for all categories) are important barriers to access, especially for some groups. Not having a regular supervision and monitoring mechanism for the curative care system similar to that of the preventive arm of the services, is a deficiency that needs to be rectified.

**Availability of pharmaceuticals**

Sri Lanka considered 42 essential medicines as a proxy for assessing the availability of essential medicines and commodities for the SARA survey in 2017. This survey demonstrated that all public health-care institutions and 95.3% of private health-care institutions had more than 50% of the essential medicines specified. In addition, 82% of public health-care institutions and 80% of private health-care institutions had more than 75% of the essential medicines available. However, only 21% and 53% of public and private health-care institutions, respectively, had stock levels of more than 90% of essential medicines, highlighting that there is room for further improvement in ensuring equitable access to medicines. In particular, 6.7% of public primary care (DHs Type A/B/C) had more than 90% of these essential medicines. The findings of the survey are summarized in Table 7.1 below.
Table 7.1  Availability of essential medicines and commodities by type of hospital, 2017

<table>
<thead>
<tr>
<th>Facility type</th>
<th>Facilities with 50% of tracer items (except for PMCU) (%)</th>
<th>Facilities with 75% of tracer items (except for PMCU) (%)</th>
<th>Facilities with 90% of tracer items (except for PMCU) (%)</th>
<th>Facilities with all tracer items (except for PMCU) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>99.05 81.77 27.82 6.35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public tertiary care hospitals</td>
<td>100.00 100.00 92.68 46.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National hospital</td>
<td>100.00 100.00 100.00 0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching hospitals</td>
<td>100.00 100.00 83.33 27.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provincial general hospitals</td>
<td>100.00 100.00 100.00 33.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District general hospitals</td>
<td>100.00 100.00 100.00 68.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public secondary care hospitals</td>
<td>100.00 100.00 77.70 11.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base hospitals [A &amp; B]</td>
<td>100.00 100.00 77.70 11.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public primary care hospitals</td>
<td>100.00 77.87 6.65 0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divisional hospitals Type A/B/C</td>
<td>100.00 77.87 6.65 0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private hospitals</td>
<td>95.29 80.26 53.07 13.29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major private hospitals</td>
<td>100.00 100.00 79.68 34.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor private hospitals</td>
<td>94.06 75.11 46.14 7.84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f

It is generally assumed that as health care is free in the state sector, there is equitable access across the population; irrespective of gender, age, education, wealth, etc. The DHSs in 2007 and 2016 assessed the demand for family planning services and satisfaction with the use of modern methods. Comparison of the two surveys demonstrates that there is greater equity between the sectors but lesser equity when the districts are compared (Figure 7.16). This indicates that equity has improved by place of residence (urban, rural and estate setting) but disparities have widened across districts.
Figure 7.16 Equity analysis of demand for family planning services and satisfaction with the use of modern methods

![Equity Analysis Graph]

Sources: Department of Census and Statistics, 2009 and 2017

The MoH has identified the reorganization of PHC as the means of achieving UHC and specifically as a means of addressing the growing burden of NCDs. Improved supply chain management, laboratory services, improved skill mix, personalized health records and follow-up care with proper referral pathways are envisioned in this reorganization (Ministry of Health, Nutrition and Indigenous Medicine, 2018e). It is anticipated that once the proposed shared care cluster system is introduced, the accessibility of health-care services will be further increased.17

**Equity of the HRH situation in Sri Lanka**

Almost all the health-care professionals in Sri Lanka are nationals. Other than MOs, almost all other cadres are trained in Sri Lanka, reflecting self-sufficiency in health professional training. Like many other countries, medical graduates are recruited to the system from all local medical faculties and from recognized medial universities in other countries. The MoH operates a system through which these health cadres are recruited, trained, deployed and also provided with an opportunity to transfer within the system every 4–5 years based on seniority.

The distribution of staff by district for the five main categories of care is presented in Table 7.2. The rate for the five main categories as well as an index (district index as compared with the national average) is presented in the table. There is equitable distribution in many of the districts, except the

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17 Further explained in Chapter 6.3
districts that have superspecialized referral and training facilities, such as Colombo, Kandy and Galle districts, and those that are served by the estate sector (Nuwara Eliya) and where access is remote (Puttalam).

Table 7.2  Distribution of staff categories by district per 100 000 population in 2016

<table>
<thead>
<tr>
<th>District</th>
<th>Medical officers</th>
<th>Nursing officers</th>
<th>Public health midwives</th>
<th>Pharmacists</th>
<th>Medical laboratory technologists</th>
<th>Five selected cadres</th>
<th>HRH index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuwara-Eliya</td>
<td>40.1</td>
<td>55.1</td>
<td>43</td>
<td>2.8</td>
<td>2.5</td>
<td>143.5</td>
<td>0.50</td>
</tr>
<tr>
<td>Puttalam</td>
<td>59.8</td>
<td>75.8</td>
<td>23.6</td>
<td>5.1</td>
<td>4.5</td>
<td>168.8</td>
<td>0.59</td>
</tr>
<tr>
<td>Gampaha</td>
<td>86.1</td>
<td>99.6</td>
<td>19.3</td>
<td>4.9</td>
<td>4.6</td>
<td>214.5</td>
<td>0.75</td>
</tr>
<tr>
<td>Killinochchi</td>
<td>88.5</td>
<td>73.8</td>
<td>46.7</td>
<td>4.1</td>
<td>3.3</td>
<td>216.4</td>
<td>0.76</td>
</tr>
<tr>
<td>Rathnapura</td>
<td>58.9</td>
<td>115.4</td>
<td>32.4</td>
<td>5.6</td>
<td>4.4</td>
<td>216.7</td>
<td>0.76</td>
</tr>
<tr>
<td>Mullaitivu</td>
<td>72.6</td>
<td>94.7</td>
<td>45.3</td>
<td>3.2</td>
<td>4.2</td>
<td>220.0</td>
<td>0.77</td>
</tr>
<tr>
<td>Kalutara</td>
<td>65.5</td>
<td>109.8</td>
<td>37.2</td>
<td>4.3</td>
<td>6.3</td>
<td>223.1</td>
<td>0.78</td>
</tr>
<tr>
<td>Monaragala</td>
<td>66.2</td>
<td>105.8</td>
<td>40.3</td>
<td>5.6</td>
<td>5.4</td>
<td>223.3</td>
<td>0.78</td>
</tr>
<tr>
<td>Trincomalee</td>
<td>74.3</td>
<td>103.7</td>
<td>38.1</td>
<td>7.2</td>
<td>5.4</td>
<td>228.7</td>
<td>0.80</td>
</tr>
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<td>Kegalle</td>
<td>59.8</td>
<td>127.5</td>
<td>30.8</td>
<td>6.1</td>
<td>5.2</td>
<td>229.4</td>
<td>0.80</td>
</tr>
<tr>
<td>Kurunegala</td>
<td>63.4</td>
<td>130.7</td>
<td>27.1</td>
<td>5</td>
<td>5</td>
<td>231.6</td>
<td>0.81</td>
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<tr>
<td>Matale</td>
<td>75</td>
<td>114.6</td>
<td>32.1</td>
<td>5.9</td>
<td>4.5</td>
<td>232.1</td>
<td>0.81</td>
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<tr>
<td>Batticaloa</td>
<td>78.5</td>
<td>113.5</td>
<td>34.4</td>
<td>6</td>
<td>5.6</td>
<td>238.0</td>
<td>0.83</td>
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<td>Jaffna</td>
<td>97.8</td>
<td>105.8</td>
<td>29.1</td>
<td>8</td>
<td>5.6</td>
<td>246.3</td>
<td>0.86</td>
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<td>Anuradhapura</td>
<td>62.4</td>
<td>147.1</td>
<td>25.6</td>
<td>5.9</td>
<td>5.7</td>
<td>246.7</td>
<td>0.86</td>
</tr>
<tr>
<td>Matara</td>
<td>69.8</td>
<td>135.6</td>
<td>32.1</td>
<td>6.3</td>
<td>5.3</td>
<td>249.1</td>
<td>0.87</td>
</tr>
<tr>
<td>Hambantota</td>
<td>66.6</td>
<td>148.2</td>
<td>32.7</td>
<td>6.1</td>
<td>5.2</td>
<td>258.8</td>
<td>0.90</td>
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<tr>
<td>Badulla</td>
<td>71.8</td>
<td>138.8</td>
<td>34.5</td>
<td>7.3</td>
<td>6.7</td>
<td>259.1</td>
<td>0.91</td>
</tr>
<tr>
<td>Mannar</td>
<td>98.1</td>
<td>106.6</td>
<td>55.7</td>
<td>5.7</td>
<td>5.7</td>
<td>271.8</td>
<td>0.95</td>
</tr>
<tr>
<td>Polonnaruwa</td>
<td>92.9</td>
<td>140.5</td>
<td>28.9</td>
<td>9.9</td>
<td>6.1</td>
<td>278.3</td>
<td>0.97</td>
</tr>
<tr>
<td>Vavunia</td>
<td>125.8</td>
<td>101.1</td>
<td>48.4</td>
<td>1.6</td>
<td>8.2</td>
<td>285.1</td>
<td>1.00</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>89.5</td>
<td>152.5</td>
<td>29.5</td>
<td>7.3</td>
<td>7.4</td>
<td>286.2</td>
<td>1.00</td>
</tr>
<tr>
<td>Galle</td>
<td>81.5</td>
<td>188.6</td>
<td>28.1</td>
<td>7.3</td>
<td>6.7</td>
<td>312.2</td>
<td>1.09</td>
</tr>
<tr>
<td>Ampara</td>
<td>104.8</td>
<td>165.4</td>
<td>41.8</td>
<td>9</td>
<td>9.6</td>
<td>330.9</td>
<td>1.16</td>
</tr>
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<td>Kandy</td>
<td>126.4</td>
<td>234.2</td>
<td>30.7</td>
<td>9.6</td>
<td>9.1</td>
<td>410.0</td>
<td>1.43</td>
</tr>
<tr>
<td>Colombo</td>
<td>188.5</td>
<td>330.7</td>
<td>18</td>
<td>16.4</td>
<td>20.8</td>
<td>574.4</td>
<td>2.01</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018g
The district distribution of selected health workers is presented in Figure 7.17. It is evident that the number of pharmacists and MLTs per 100 000 population is minimal and does not show any significant difference between districts. The number of PHMs mostly remains the same without much fluctuation while the highest district differentials are shown by the numbers of MOs and nursing officers, both categories being higher in districts where superspecialized, specialized and teaching facilities are located, such as in the districts of Colombo, Kandy, Galle and where two health districts are represented within the same administrative district of Ampara.

**Figure 7.17  District distribution of selected health worker categories per 100 000 population, 2016**

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018g

### 7.4 Health outcomes, health service outcomes and quality of care

When considering the return on investment for the health sector, Sri Lanka has achieved good health outcomes in many fields, including MCH, attendance at birth by skilled health-care personnel and control of VPDs at a comparably low cost. The population coverage of many vaccines of the national Expanded Programme on Immunization is between 96.2% and 99.2% (Department of Census and Statistics, 2018a).

The country managed to achieve most of the Millennium Development Goals and has already achieved some of the targets identified in SDGs such as the maternal, under-five and neonatal mortality rates that are due to be achieved
Polio, neonatal tetanus, malaria and lymphatic filariasis have been eliminated and the country is on target to achieve elimination of rabies and mother-to-child transmission of HIV and syphilis.

During 2017, Sri Lanka experienced outbreaks of several communicable diseases, including dengue (868 cases per 100 000 population), influenza, which caused 89 influenza-related deaths, and leptospirosis (48 related deaths). There is also a considerably high prevalence of NCDs in the country, a high prevalence of hypertension, diabetes and high blood cholesterol reported in the Colombo district (Central Bank of Sri Lanka, 2018). The high levels observed in the Colombo district may be real or may be due to having more opportunities to be diagnosed or both. Chronic kidney disease of unknown aetiology (CKDu) needs continuing attention from health-care providers, academics and policy-makers due to its adverse socioeconomic impact, especially on low-income households. According to the DHS 2016, the prevalence of CKD was 0.6% in the country (Central Bank of Sri Lanka, 2018). Given the multifactorial nature of CKDu, which may be related to one or more environmental agents, changes in agricultural practices, provision of safe drinking water and occupational safety precautions are recommended (Rajapakse et al., 2016).

With the rapid ageing of the population and the success in combating major communicable diseases, the disease burden has started shifting rapidly towards NCDs, including mental health conditions, accidents and injuries. Furthermore, while the nutritional status has improved, undernutrition remains a problem throughout the life cycle, with increasing obesity and overweight and micronutrient problems. These are some of the areas that need to be improved in order to achieve UHC and attain Goal 3 of the SDGs.

**7.4.1 Population health**

The maternal mortality ratio in Sri Lanka is closer to that of developed countries and this success story has been attributed to many strategies carried out over the years, including implementation of strong preventive health-care services. The MOH and team of public health staff provide comprehensive pre-pregnancy, antenatal, postnatal and childcare packages at clinics close to the residence of the patient and through domiciliary visits. Improved clinical care is provided through the availability of comprehensive emergency obstetric care 24x7 and specialized neonatal and paediatric care services across the country. Free education leading to high literacy rates among women has contributed to the near-universal utilization of these

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18 Refer to Table 1.7.
services by women for themselves and their children. Despite the success in maternal, neonatal and child health (MNCH), the past few years have seen NCDs emerge as the leading causes of hospital deaths in Sri Lanka; i.e. ischaemic heart disease, neoplasms, cerebrovascular disease, pulmonary heart disease and diseases of the pulmonary circulation (Ministry of Health, Nutrition and Indigenous Medicine, 2018).

The WHO NCD risk factor (STEPS) survey conducted in 2015 reported that 45.7% of men and 5.3% of women were current users of some form of tobacco products. The survey further showed that 34.8% of men were current alcohol users (drank in the past 30 days), while 40.2% were lifetime abstainers. When considering women, 96.5% were lifetime abstainers. Nearly 29% of adults were estimated to be overweight or obese, 24.6% in men and 34.3% among women. Only 27% of men and 28% of women were consuming adequate amounts of five or more servings of fruits and/or vegetables per day. The survey also showed that 22.5% of men and 38.4% of women did not meet the WHO recommendations of engaging in physical activity for at least 150 minutes per week.

Limited studies are available on cancer survival. A retro-prospective study, conducted using all breast cancer patients who had sought immunohistochemistry services of the Department of Pathology, Faculty of Medicine, University of Ruhuna from May 2006 to December 2012, concluded that the overall 5-year breast cancer-specific survival rate was 78.8%, whereas the 5-year survival in the UK is 86.6% and in Malaysia, 43.5% (Peiris et al., 2017; Ibrahim et al., 2012).

A study conducted to assess the survival of cervical cancer patients diagnosed in 2008 in the Western Province of Sri Lanka revealed that one-, three- and five-year survival rates were 86%, 70% and 62.5%, respectively (Vithana et al., 2018). There are no follow-up studies or previous studies to compare whether survival rates of these cancers have improved over the years. The 5-year survival of cervical cancer patients in Malaysia was 71.1% and in the UK it was 64.4% (Muhamad et al., 2015). The percentage of cervical cancer diagnosed at the third and fourth stages in Sri Lanka is 48.6% and 4.5%, respectively. Imaging facilities for breast cancer screening are limited and not equitably distributed. Although facilities for Pap smears for cervical cancer are available in all MOH clinics, it is noted that the uptake is variable and still low, though improving.

At present, population-based health data are limited to surveys. It is expected that the envisaged information system linked to the primary curative care reforms would provide population-based morbidity and mortality data.
Experiences on disease registries from various countries are useful for monitoring treatment outcomes, such as survival and quality of life (Parkin and Sanghvi, 1991).

### 7.4.2 Health service outcomes and quality of care

Health service outcomes are assessed using a set of indicators. OECD indicators compare the performance of health systems across countries using indicators on mortality such as life expectancy at different ages, causes of mortality, maternal and infant mortality, potential years of life lost; morbidity indicators such as perceived health status by different stratifications, low birth weight, communicable diseases, cancer; health-related lifestyles such as tobacco and alcohol consumption, body weight; total health and social employment, including health human resources; physical and technical resources; immunization; screening, etc. (OECD, 2020). Comparison of indicators in the identified countries is difficult due to lack of data from a comparable source. Immunization coverage for childhood illnesses can be considered as a dimension of the quality of preventive care.

As shown in Table 7.3, the coverage of childhood vaccination programmes is very high, ranging from 96.0% (polio 3) to 99.2% (BCG) in Sri Lanka (Department of Census and Statistics, 2018a).

**Table 7.3  Percentage of children protected through childhood vaccination programmes, 2016**

<table>
<thead>
<tr>
<th>Type of Vaccine</th>
<th>Coverage as a %</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>99.2</td>
</tr>
<tr>
<td>DPT 3</td>
<td>97.0</td>
</tr>
<tr>
<td>Polio 3</td>
<td>96.0</td>
</tr>
<tr>
<td>MCV 1</td>
<td>97.1</td>
</tr>
<tr>
<td>Tetanus toxoid</td>
<td>96.2</td>
</tr>
</tbody>
</table>

*Source: Department of Census and Statistics, 2018a*

Another indicator to assess the quality of care is in-hospital mortality. Figure 7.18 gives the proportion of hospital deaths out of admissions to hospitals from 2010 to 2016. It is apparent from Figure 7.18 that the mortality rates are low for diabetes and asthma but there is no improvement in the mortality rates over time. However, mortality rates due to ischaemic heart disease (IHD) has slightly declined from 2014 (Ministry of Health, Nutrition and Indigenous Medicine, 2018g).
Figure 7.18  Percentage of hospital deaths out of hospital admissions for selected diseases 2010-2016

IHD: ischaemic heart disease

Sources: Annual health bulletins, 2010–2016

The country has developed a manual as well as guidelines for accident and emergency care services. Standard treatment protocols are in place for surgical, medical, paediatric, obstetric, gynaecological, ENT and psychiatric emergencies with algorithms. Standards for infrastructure, human resources, equipment, drugs have been identified for government health institutions, though quality indicators have yet to be introduced.

The SARA survey conducted in 2017 assessed the readiness score for standard precautions for infection prevention and control (IPC) among health facilities; the readiness score obtained was 76 out of 100. It is seen that the private sector has performed well compared to the public sector regarding readiness for IPC. According to the SARA survey 2017, the availability of
guidelines and clinical protocols in both public and private hospitals was not optimal, and deficiencies are more apparent in the private sector (Table 7.4).

Table 7.4  Availability of selected guidelines in health facilities

<table>
<thead>
<tr>
<th>Guidelines and clinical protocols</th>
<th>Availability in the facility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
</tr>
<tr>
<td>Management of stroke and myocardial infarction</td>
<td>16%</td>
</tr>
<tr>
<td>Management of diabetes</td>
<td>53%</td>
</tr>
<tr>
<td>Best practices, protocols for surgical management</td>
<td>31%</td>
</tr>
<tr>
<td>Appropriate use of blood and safe transfusion practices</td>
<td>67%</td>
</tr>
<tr>
<td>National guidelines on maternal care</td>
<td>12%</td>
</tr>
<tr>
<td>National guidelines on newborn care</td>
<td>18%</td>
</tr>
<tr>
<td>Emergency obstetric care</td>
<td>37%</td>
</tr>
<tr>
<td>National immunization guidelines</td>
<td>95%</td>
</tr>
<tr>
<td>HIV testing</td>
<td>80%</td>
</tr>
<tr>
<td>Post-exposure prophylaxis against HIV</td>
<td>83%</td>
</tr>
<tr>
<td>Antiretroviral therapy (ART)</td>
<td>73%</td>
</tr>
<tr>
<td>Management of cardiovascular risk by primary care providers</td>
<td>54%</td>
</tr>
</tbody>
</table>

Source: Ministry of Health, Nutrition and Indigenous Medicine, 2018f

According to the same survey, the readiness for standard precautions for IPC among health facilities is summarized in Table 7.5. The readiness observed in private facilities is seen to be better than in public facilities.

Table 7.5  Readiness for standard precautions for infection prevention and control among health facilities

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Public</th>
<th>Private</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines for standard precautions</td>
<td>32%</td>
<td>37%</td>
<td>32%</td>
</tr>
<tr>
<td>Soap and water or alcohol-based hand rub</td>
<td>88%</td>
<td>98%</td>
<td>89%</td>
</tr>
<tr>
<td>Availability of latex gloves</td>
<td>92%</td>
<td>100%</td>
<td>92%</td>
</tr>
<tr>
<td>Appropriate storage of infectious waste</td>
<td>45%</td>
<td>87%</td>
<td>48%</td>
</tr>
<tr>
<td>Appropriate storage of sharps waste</td>
<td>89%</td>
<td>93%</td>
<td>90%</td>
</tr>
<tr>
<td>Availability of disinfectant</td>
<td>82%</td>
<td>90%</td>
<td>83%</td>
</tr>
<tr>
<td>Availability of disposable or auto-disable syringes</td>
<td>88%</td>
<td>100%</td>
<td>89%</td>
</tr>
<tr>
<td>Safe final disposal of sharps waste</td>
<td>85%</td>
<td>93%</td>
<td>85%</td>
</tr>
<tr>
<td>Safe final disposal of medical waste other than sharps</td>
<td>79%</td>
<td>90%</td>
<td>80%</td>
</tr>
</tbody>
</table>
One aspect of quality care is the time spent by a patient at the health institution. One study found that the average consultation time for outpatient visits was 3.1 minutes in state sector health-care institutions and 7.8 minutes in private sector ones (Rannan-Eliya et al., 2015b). As the doctors working in both sectors are largely the same, the same study found a similar quality of clinical services provided in both the public and private sectors.

7.4.3 Equity of outcomes

UHC can be considered as a proxy indicator for equity of services and outcomes. The UHC index is a composite index of sixteen indicators.

Figure 7.19 Comparison of the UHC index of selected countries

When comparing the UHC index with other countries, Sri Lanka is seen as a country with an average performance. However, when UHC tracer indicators of Sri Lanka are compared with other lower-middle-income countries, as shown in Table 7.6, it is apparent that, apart from treatment coverage of conditions such as hypertension, diabetes and antiretroviral therapy for HIV, Sri Lanka is performing well.
Table 7.6 Comparison between Sri Lanka and other lower-middle-income countries on UHC indicators

<table>
<thead>
<tr>
<th>Tracer UHC indicators</th>
<th>Sri Lanka (%)</th>
<th>Average of lower-middle-income countries (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prevention and health promotion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family planning</td>
<td>68</td>
<td>46</td>
</tr>
<tr>
<td>Antenatal care</td>
<td>99</td>
<td>86</td>
</tr>
<tr>
<td>Skilled birth attendance</td>
<td>99</td>
<td>74</td>
</tr>
<tr>
<td>DPT3 immunization</td>
<td>99</td>
<td>86</td>
</tr>
<tr>
<td>Tobacco non-use</td>
<td>85</td>
<td>78</td>
</tr>
<tr>
<td>Access to improved water</td>
<td>94</td>
<td>83</td>
</tr>
<tr>
<td>Access to improved sanitation</td>
<td>92</td>
<td>59</td>
</tr>
<tr>
<td><strong>Treatment coverage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antiretroviral therapy</td>
<td>19</td>
<td>29</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>86</td>
<td>82</td>
</tr>
<tr>
<td>Hypertension</td>
<td>21</td>
<td>27</td>
</tr>
<tr>
<td>Diabetes</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>

*Source: World Development Indicators, 2018*

Selected UHC tracer indicators have been further evaluated on their equitable coverage by assessing them against selected equity stratifiers.

The antenatal care coverage and demand for family planning services met with modern methods are compared by wealth quintiles (poorest and richest) for 2006/2007 and 2016. Inequalities between the poorest quintile and the highest wealth quintiles on antenatal care coverage is seen to be almost non-existent while gaps between rich and poor in the demand for family planning services being met have decreased over the years. It is noted that the poorest quintiles have a higher satisfaction rate than the richest quintiles (Figure 7.20).

Figure 7.20  Antenatal care coverage and demand for family planning satisfied according to wealth, 2006/2007 and 2016

Q: quintile

*Sources: Department of Census and Statistics, 2009 and 2017*
Under-5 mortality is considered a good indicator for assessing the equity of health outcomes. The national average decreased from 21 in 2006 to 11 per 1000 live births in 2016. As shown in Figure 7.21, the urban–rural–estate and rich–poor gaps have reduced over this period, reflecting gains in more equitable outcomes.

**Figure 7.21** Equity analysis of under-5 mortality in Sri Lanka, 2006 and 2016

Similarly, the geographical disparity in child mortality across provinces varies between 5.7 in the Sabaragamuwa province and 13.3 in the Northern province, showing more than a twofold gap (Figure 7.22).

**Figure 7.22** Under-5 mortality rates across provinces of Sri Lanka, 2016

Sources: Department of Census and Statistics, 2009 and 2017
When chronic malnutrition in children under 5 years of age is considered, measured as “proportion of children under 5 years who are stunted”, no improvement could be observed in the national average during the 13-year period (17.3% in 2003 and 2016). However, disparities regarding place of residence, mothers’ educational status and wealth quintiles have reduced. But geographical disparity among districts decreased in 2016 (Figure 7.23).

**Figure 7.23  Equity analysis of stunting among children under 5 years**

Sources: Department of Census and Statistics, 2009 and 2017
7.4.4 Disaster risk management for health

Sri Lanka is prone to disasters, both natural and human induced, and health sector preparedness and responses are critical. Climate change and extreme weather conditions are becoming increasingly important. The human cost in relation to morbidity, mortality and population displacement needs to be managed effectively and appropriately by the health sector with the support of other relevant stakeholders.

The Health Sector Disaster Management (DM) Framework was developed in 2015 in alignment with the Disaster Management Act no. 13 of 2005 and the National Disaster Management Framework. This Act was initiated based on the tsunami of 2004 and the lessons learnt from the tsunami catastrophe. A dedicated focal unit, the Disaster Preparedness and Response Division (DPRD), was established to coordinate all health sector disaster management activities in collaboration with other relevant sectors. Technical guidance to the DPRD is provided through the National Advisory Committee for Health Sector Disaster Management, led by the Secretary of the MoH.

The DPRD is under the supervision of the Secretary (Medical Services) of the MoH and is headed by a national coordinator. The DPRD coordinates closely with the Ministry of Disaster Management, which is the lead agency for all disaster management activities in the country. This ensures that health sector activities are in line with the national policies, strategies and frameworks. The DPRD rolls out disaster risk management activities through a network of focal points at the provincial and regional directorate levels, as well as through the main hospitals in the country.

The Strategic Plan for Health Sector Disaster Preparedness, developed based on international guidelines and frameworks, guides the activities of the health sector in relation to disaster preparedness and response. The initial Strategic Plan for Health Sector Disaster Preparedness was developed in 2011 based on the Hyogo Framework for Action. In 2015, the Sendai Framework for Disaster Risk Reduction, which follows a more “proactive” rather than “reactive” path, was adopted globally and, accordingly, the Strategic Plan for Health Sector Disaster Preparedness of the country was revised.

A key feature of the revised Strategic Plan is the Safe Hospitals and Health Facilities Initiative advocated by WHO, which promotes the structural, non-structural and functional integrity of health facilities through disasters. Improving human resources, promoting multi-stakeholder coordination, improving information support, knowledge management and research, enhancing community participation, and integrating results-based
monitoring and evaluation with health sector disaster management are some of the strategies specified.

7.5 Health system efficiency

7.5.1 Allocative efficiency

Allocative efficiency is said to occur when limited resources are used to purchase an appropriate mix of health services.

In 1985, the Rockefeller Foundation indicated that Sri Lanka is one of the countries that achieves good health at low cost (Halstead et al., 1985). The country is globally recognized for its health outcomes comparable to developed countries despite the relatively low levels of spending. Government spending on health has remained at around 8% for the past 10 years and CHE on health at around 3% of the GDP (World Health Organization, 2017). Despite the fact that the Sri Lankan health system is considered to be a highly efficient system, there is a need for (i) mobilizing additional resources for the health sector to match the increased demand for health services by the population and reduce OOP payment in the private sector; and (ii) improving health systems efficiency (Ranan Eliya and Sikurajapathy, 2009).

Disproportionately high hospital spending and low spending on primary care

Sri Lanka has consistently followed the historical precedence of allocating the largest share of its budget to the hospital sector (between 75% and 85% of the total budget) and, within that, to inpatient care services. Preventive and public health spending has averaged 25% or less of the budget and has been less than 12% during the past decade. The emphasis on hospital care has been a feature of the system since the 1950s (Ranan Eliya and Sikurajapathy, 2009).

Figure 7.24 shows the percentage of government spending according to the type of health-care institution in 2013. The highest amount of government spending is on secondary and tertiary hospitals while primary care hospitals and preventive care received only 13% and 10% of government spending, respectively.
According to Rannan-Eliya et al., this strategy made sense for two reasons: first, the key goal of health policy in the country, and benefiting the poor the most, has been protection against catastrophic risk; and second, government hospitals are an efficient way of delivering primary care owing to economies of scale [Institute of Policy Studies, 2016].

With the epidemiological and demographic transition, the system must adapt to the increasing burden of NCDs, mental health problems, ageing and injuries, among others. The new policy on health-care delivery for UHC will be implemented mainly to strengthen the PHC system of the country. An essential services package to be delivered through a shared cluster of PHC facilities includes a referral system, which is expected to result in some efficiency gains and better quality of care.

**Priority-setting not systematically undertaken and resource allocation based on historical trend**

The MoH has established the Health Economics Cell to generate evidence on the cost-effectiveness of interventions.

The health budget is mainly managed by the central ministry and allocated based on the historical pattern related to infrastructure and staffing. According to a study, "there is a lack of an objective and transparent measure of population needs for the allocation of provincial funds and there is no clear link between the level of financing, performance and outcome" [Institute of Policy Studies, 2016].
7.5.2 Technical efficiency

Sri Lanka spends less in absolute (such as CHE per capita) and relative terms (such as GGHE as % GGE and CHE as % GDP) compared to countries with a similar level of development but achieves better health indicators than some countries with similar income levels. According to Smith (2018), there are several likely reasons for the relative efficiency of the system, starting with low input prices. Half of government spending is for the payrolls of the health workforce, which receives modest compensation. This is supplemented by their private practice, low pharmaceutical prices due to a strong procurement agency and reliance on line item budgets and salaries for provider payment. Relatively low compensation may result in poor morale and poor responsiveness in the public services. Also, it may minimize performance such as through off-hour private practices (dual practice, which is legal). However, due to the increase in NCDs, which require a considerably large amount of resources, the allocation for health will have to be substantially increased to maintain a well-performing health-care system.

High outpatient and inpatient utilization rates

Based on consumer surveys, the average number of annual outpatient visits per capita is 5 and hospital discharges per 1000 population is 274, higher than in neighbouring countries (Smith, 2018).

Figure 7.25 Annual doctor consultations per capita of selected countries, latest available year

Source: OECD/WHO, 2016
The high outpatient visit rate may suggest unnecessary care or low-quality care requiring repeated visits. It may also be a result of the free health-care policy, where people seek health-care often, including when they want social/emotional support and reassurance. The high inpatient rate may be affected by the definition of “admission”—in Sri Lanka, an individual is taken as an admission even if they spend only a few daytime hours at the hospital (Smith, 2018).

Based on visits to government hospitals and clinics, the average annual consultations per doctor is 5930, this is equivalent to 22 visits per day, given 22 working days per month; which suggests a high level of output per doctor. However, this patient flow may be too high to give adequate and high-quality care to outpatients. In a study conducted by Rannan-Eliya et al. (2015b), the average consultation time in a government hospital in the Western Province was 3.1 minutes, compared to the National Health Service (NHS) in the United Kingdom (UK), which is over nine minutes (Smith, 2018). In the same study, it was noted that the average consultation time in the private sector was 7.8 minutes. Nevertheless, the same study found the clinical aspects of care to be of high quality in the government sector. Figure 7.27 provides the number of annual consultations per doctor in selected countries. Sri Lanka is the second highest.

Source: OECD/WHO, 2016
Treatment and hospitalization at a higher-level hospital than medically necessary due to non-functioning referral system (Ministry of Health, Nutrition and Indigenous Medicine, 2017c)

Overall, there has been a considerable improvement in the infrastructure and facilities of hospitals, both in the line Ministry as well as in the PHD. However, the referral system is not functioning optimally and is not routinely enforced. Hence, patients bypass small medical institutions, resulting in underutilization of lower-level health-care institutions and overcrowding at higher-level health-care institutions (Ministry of Health, Nutrition and Indigenous Medicine, 2018g). Overcrowding results in a potentially poor quality of consultations, limited consultation time and inadequate non-pharmacological interventions for NCDs, such as advice on changes in lifestyle.

In the private sector, a gradual increase in the utilization of outpatient care could be observed among high-income customers; whereas the opposite could be seen in the public sector where there were fewer members of high-income groups. Around 90% of inpatient care is delivered by public hospitals. The utilization of state and private sector facilities by expenditure quintiles are presented in Figure 7.28. This clearly demonstrates that people of all income groups utilize the state facilities for inpatient care while the richest quintiles increasingly utilize the private sector, the tax-funded public health services have limited policy levers to enforce referral and prevent patients from bypassing primary hospitals and going to tertiary-care ones.
Low average length of stay in hospitals

Sri Lanka has a low average duration of stay in hospital relative to other countries in the region and OECD countries (Smith, 2018). This may reflect the low level of severity in the case mix of admissions, as discussed in section 7.5.2, e.g. for reassurance and other reasons beyond clinical indications.

As expected, the longest duration of stay is observed in specialized hospitals for conditions that require long-term observation (the leprosy hospital followed by psychiatric hospitals). A decreasing trend could be observed in the average duration of stay in all hospitals over time. This may suggest
an improvement in technical efficiency over the years, although in some instances, overcrowding may also stimulate a high rate of turnover.

Table 4.4 of Chapter 4 indicates the average duration of stay among different types of hospitals from 2004 to 2016. A decreasing trend has been observed in the average duration of stay in all hospitals over time. Except for a few unanswered questions such as indications for a high admission rate, an overall assessment of the system suggests that it is efficient in its use of resources. The points mentioned should be analysed to see the gaps and areas where efficiency can be improved. A good HIS will facilitate patient information reporting, prevent duplication of investigations/services, allow for disaggregation of data, analysis and monitoring of services. Currently, data cannot be tracked due to a lack of proper recording and information system at PHC facilities. Special efforts/measures in the reform process would be necessary to attract patients who use health care in an ad-hoc manner to these facilities.

7.6 Transparency and accountability

In Sri Lanka, a top–down approach is mainly seen in health policy formulation. The persons involved in managing the relevant public health agencies, along with professional colleges and UN agencies for technical inputs, support the policy development process, mainly upon request. However, once the policy is drafted, it goes through a process of public hearing as well as relevant stakeholder consultations.

All draft policies must be advertised to the public on the MoH website prior to subsequent approval, implementation and adaptation. However, public consultations do not occur routinely. The public is made aware of the policies through publication on the website of the MoH as well as through gazette notification, in the case of an Act.

The public sector financial allocation, service provision and service utilization in health care are documented regularly in the Annual Health Bulletin and the National Health Accounts published by the MoH. These documents, published on the website of the MoH and other relevant websites of government departments, are freely accessible to the public. In addition to this, the health coverage indicators, health condition and risk factor survey reports are also made available to the public. As these are technical reports, the public may lack the technical knowhow to understand these. Advocacy briefs and short reports in simple language are seen to be lacking for the public. Although annual reports include hospital statistics, there is no reporting of hospital
performance to the public in the form of a report. Hospital statistics are made available to the public through a notice board maintained by hospital and ward staff.

The AR (administrative regulations) and FR (financial regulations), as they are known, govern most of the administrative procedures within the state sector, including that of the MoH. According to the AR and FR, there is a system for lodging a complaint and an auditing system embedded within the health system. An independent panel appointed by the MoH will investigate any complaints submitted in writing to the health authorities. There are AR and FR related to the issues of procurement, false claims, leakage, wastage and financing mechanisms, which are adhered to accordingly.

The paper-based HIS maintained at the health-care facilities in Sri Lanka are considered as legal documents and thus maintained at these institutions under strict protection. The medical records are not made available to the public and are kept for a period of five years at the hospital medical records archives. These are produced only under the orders of the judiciary. Currently, there are plans to introduce an electronic medical record (EMR) with the current PHC reorganization. However, handling of EMRs pose considerable legal challenges in relation to privacy and confidentiality, quality of records and tort-based liability. While the Sri Lankan legislation recognizes electronic records as legally valid in most instances, it does not provide sufficient legal backing when it comes to sensitive personal health data (Ratnayake, 2013).

To monitor the performance of the health system in both the public and private sectors, the MoH has developed the National Health Performance Framework. In addition, the state has also endorsed the SDG framework where the MoH has agreed to monitor and keep track of some 46 health-related indicators. The baselines for these indicators have been assessed and the sources identified for extracting the values serially. The need to get the people empowered and to transform the health system from the current hospital-centred care model into a “people-centred” system has been recognized in the envisaged PHC reorganization.

A tracker has been developed with the technical support of WHO for monitoring SDG-related information, while the Annual Health Bulletin and National Health Statistics will monitor the other performance indicators. Performance is reviewed both at national and subnational levels regularly. The MoH initiated the production of the National Health Accounts as an in-house publication since 2016 with the publication of the SL – NHA 2013. The National Health Accounts describe from where the health system was financed and how the financing was done. It is possible to assess the efficacy
of the system when coupled with the effectiveness and coverage indicators of diseases. Several national-level surveys are conducted by the Department of Census and Statistics such as the DHS and the HIES, which too feed into the performance monitoring framework.

The state passed a Right to Information Act (Parliament of the Democratic Socialist Republic of Sri Lanka, 2016), which ensures that people get access to any public information. This Act was passed to increase the accountability of the government to the public as well as to increase the people’s engagement in the governance process. This Act has come into effect since 2017. The impact of this on the health system has yet to be assessed.

The pharmaceutical industry, diagnostics, private health-care industry as well as the food and beverages, tobacco and alcohol industries are directly related to the health care of the people. Many instances of conflicts of interest have been identified in relation to the influence of these industries on the MoH or its personnel, which have been documented. The case of marketing of breast milk substitutes within the hospital setting was one such instance where the MoH totally prohibited such marketing practices and endorsed the “baby-friendly hospital initiative”. This is an example where the state intervened to prevent any conflict of interest from arising. A similar case can also be made with pharmaceutical industry marketing within the hospital premises.

The MoH’s efforts to curb the use of tobacco and alcohol through introduction of taxes, pictorial warnings, sale of single sticks and standard plain packaging in line with the WHO FCTC have come across stiff resistance from these industries.
8. Conclusions

**Achievements**

Sri Lanka has been able to achieve a relatively high level of health on a modest budget, despite being a low-income/lower-middle-income country. The state health-care system is acknowledged as being efficient and equitable.

Life expectancy at birth has increased steadily for both sexes, and women currently live 6.7 years longer than men. Healthy life expectancy also has improved over time, but at a much lower rate than life expectancy, thus widening the difference between the two measures over time.

Significant improvements have been made in the crude death rate and infant and child mortality rates. The MMR continues to decline, albeit at a slower pace during the past five years. The country has been able to eliminate malaria, filariasis, polio and neonatal tetanus (World Health Organization, 2018a) and is set to eliminate other VPDs such as measles and congenital rubella syndrome and other infectious diseases such as lymphatic filariasis and leprosy.

The main drivers of these health gains have been policies that ensured widespread and easy access to medical care, free at the point of delivery. The demand for services was fuelled by the early granting of universal franchise and the introduction of democratic politics and resultant voter pressure. This induced successive governments to continuously expand free state health services into hitherto unserved and underserved areas. Vital registration systems drew the attention of politicians and health planners to common causes of mortality and their differentials. Thus, not only did democracy serve to establish a widespread government health infrastructure, but also acted to ensure its survival even under difficult fiscal conditions. The high value placed on female education, together with societal norms that enabled empowerment of women and community-based methods of service delivery such as the MOH system, resulted in increasing access to services, especially MCH services. The expansion of coverage enabled the service to incorporate selected advances in global medical technology, resulting in rapid and substantial reductions in mortality. Importantly, the expansion also
led to reductions in urban–rural health inequalities. Income and food subsidy programmes, which provided a safety net for those in need, were other supportive social factors contributing to the health gains.

The government allopathic health-care delivery system consists of two distinct strands, namely, curative services and preventive and promotive services, a dichotomy that has been present from the inception of allopathic health development. Curative services are provided by an extensive network of institutions ranging from teaching hospitals, provincial, district general and base hospitals with varying levels of specialties, to divisional hospitals (outpatient care and inward care) and PMCU's offering only outpatient care. This extensive network has resulted in a high level of physical access. The preventive health-care system provides a comprehensive package of care mainly focused on MCH services, sanitation, food and water hygiene, and prevention and control of communicable diseases through a network of 354 health units, each unit serving a geographically demarcated area and its catchment population. Each such area is served by a team of health-care professionals led by doctors, and includes nursing sisters, PHMs and PHIs. A key strength of this system has been the strong supportive supervision and monitoring mechanisms that extend through the system.

Patterns of utilization of services indicate that many persons access both the government and private sectors, and that even the lower wealth quintiles access the private sector for outpatient services. As the health delivery system is universal and there is no explicit targeting of the poor, the utilization patterns suggest an implicit targeting because the higher wealth quintiles opt out of the public system, which is unable to meet their service expectations such as choice of provider, absence of or shorter waiting times and better “hotel facilities” that are available in the private sector. However, studies have shown that the quality of diagnosis and management of outpatient care is similar in both sectors (Rannan-Eliya et al., 2015). Comparison of the quality of inpatient care between the two sectors showed that the overall quality scores were better in the public sector and that they performed better in those indicators that are not constrained by resource limitations. Quality was comparable in clinical assessment and investigation, but the public sector performed better in treatment and management (70% vs 62%) and drug prescribing (68% vs 60%) but was modestly worse in terms of outcomes (92% vs 97%) (Rannan-Eliya et al., 2015).

The Sri Lankan experience suggests that a tax-based and public system of provision of health care, the model of “publicly financed public services, literally free at the point of service delivery” can be an appropriate model for providing UHC, especially in a country where a large percentage of the
population lives in rural areas and where the majority are employed in the informal sector.

**Challenges**

Although much has been achieved in eliminating or reducing morbidity and mortality from VPDs, communicable diseases such as dengue, leptospirosis, pandemic influenza threats and TB still remain important causes of morbidity. Currently, NCDs, injuries and mental illness form the bulk of the disease burden, while ischaemic heart disease, CVD and diabetes constitute the leading causes of DALYs lost. It is estimated that nearly 75% of deaths in the country are due to NCDs.

The prevalence of NCD risk factors is high. It is estimated that 90% of Sri Lankan adults (18–69 years) have at least one of the NCD risk factors, and that 73.5% have one to two risk factors (World Health Organization, 2015). The risk factors contributing to most DALYs in Sri Lanka are high fasting plasma glucose, dietary risks, high blood pressure, high body mass index and tobacco use. Alcohol and drug abuse have shown an increase despite implementation of a package of interventions (Institute for Health Metrics and Evaluation, 2020).

There is an increase in sedentary occupations and lifestyles, access to high-fat and high-density foods, and high salt and sugar consumption. Continuing high levels of low birth weight and childhood malnutrition, especially in the first two years of life, are factors adding to NCD risks in later life. Indoor air pollution from the use of firewood for cooking still remains a problem; only 28% of the population are primarily using clean fuels (World Health Organization, 2019c), as against the South-East Asia Regional average of 45%.

The epidemiological transition is compounded by a demographic transition resulting in a rapidly ageing population. The population over 65 years increased from 3.7% in 1970 to 10.1% in 2017. An important feature is that 56% of the elderly are women, and this proportion increases to 61% among those 80 years and over. A large percentage (45%) of those 60 years and over have an NCD, the common illnesses being cardiovascular diseases, cancer, diabetes, arthritis, depression, dementia and Alzheimer disease (United Nations Population Fund, 2017).

Although the public sector curative care facilities are organized in a hierarchical manner that is conducive to a referral system, such a system is not implemented effectively. Clear referral policies and clearly demarcated catchment areas for institutions are lacking, and all institutions provide
primary care facilities in their outpatient sections. This results in individual care seekers often bypassing primary-level institutions and seeking first-contact care at higher-level institutions, even across district and provincial boundaries. This situation, where PHC cannot serve as a gatekeeper, is not ideal for the continuity of care needed to meet the emerging burden of NCDs. However, it has imparted a degree of equity within the system. Studies have shown that the phenomenon of bypassing is based on people’s perceptions of better facilities, availability of medicines and quality of care and provider competency. It has been shown that patients with better social support and stable incomes tend to bypass the closest health facilities (Perera and Weerasinghe, 2015).

Until recently, the MoH’s response to this bypassing has been to enhance resource allocation to secondary- and tertiary-care institutions to meet the increased demand at these levels. However, recognizing the complexity of providing lifelong monitoring and treatment needed for the management of NCDs, the MoH has shifted its focus to improving and reorganizing primary care services. This will make available quality services closer to patients’ homes, i.e. “close-to-client services”, providing continuity of care and referral when needed. The planned reform is expected to address inequities as well as reduce the current high levels of OOPE.

**Increases in the cost of health-care provision**

The state investment on health has remained low compared with the global average, around 1.7% of GDP or lower throughout the past decade. OOPE has shown a steady increase and now accounts for more than half of the CHE. Despite this, catastrophic health-care spending has remained at a low level (6.4% at a 10% threshold and 1.1% at a 25% threshold), with only a small percentage going into impoverishment compared to economically similar and regional countries. This is mainly because the majority of OOP spending is made by the wealthiest quintile and public sector health-care utilization of indoor services, which account for a majority of the high-cost items.

The stagnant investment in the health sector, the increasing OOPE and the demographic and epidemiological transitions suggest that the meagre health budget of 1.7% of GDP being currently provided by the state is not adequate to meet the increased healthcare needs of the population. The need to increase spending by the state on health, as well as strategic allocation of the available limited financial resources to achieve maximum health outcomes are critical if the past gains are to be sustained in the face of growing challenges in the future.
**Human resources for health**

Despite being able to achieve the minimum numbers of the health workforce in relation to requirements in the main categories of service providers (doctors, dentists, nurses, midwives, pharmacists and laboratory technicians), their distribution, retention in PHC settings and the skill mix still pose considerable challenges, especially in view of the planned primary care reforms. The policy of allowing state-employed medical personnel to engage in private practice outside official work hours and off government premises has had a significant impact on rural retention of doctors. During the period 1970–1977 when this concession was abolished, the distribution of government MOs to rural areas was seen to suffer (Rannan-Eliya and Sikurajapathy, 2009). Evaluation of the impact of this policy on service provision and effective and comprehensive interventions to support rural retention of the health workforce is urgently required (World Health Organization, 2010). The country will not only need more numbers of medical personnel, but also require them to possess clinical and public health competencies, be more equitably distributed and provide an extended range of services to the people.

**Information system**

Health-care services can only be as good as the HIS. Preventive health care has a time-tested information system that spans a range from the national aggregated values to the most granular data at the household level. This is currently being converted into a digital information system with real-time tracking. The state curative care sector has many fragmented information systems where data interoperability across different platforms is a major challenge. The country is in the process of integrating and harmonizing these into a uniform HIS linked through unique citizen identifiers, where each person will be accounted for accurately and patient records can be retrieved whenever needed from any place within the health system.

**Gaps in service provision**

It is seen that the health system has not evolved in a manner appropriate to meet the changing demands of the demographic, epidemiological and social transitions. Although overall utilization of services is high, access is poor among working-age men. This is mainly due to the fact that service hours at outpatient departments other than accident and emergency services coincide with the general working hours of the population. User-unfriendly service hours is a root cause of private sector utilization and OOP payment.
The rate of decline in the MCH indicators has slowed down, necessitating a re-examination of the current strategies. The present curative care system is ill-equipped to deal with the long-term chronic ailments of an ageing population. Taking into consideration the rapidity of the ageing process observed, the active promotion of healthy ageing at younger ages is an important intervention.

HLCs attached to primary care units were an innovation to promote primordial and primary prevention of NCDs. At present, the main function of these centres appears to be screening of healthy adults in the age group of 40–65 years for NCDs. Attendance is noted to have a clear female bias. Part of the problem has been identified as the inconvenient hours, particularly for working men, inadequacy of appropriately skilled staff to man these centres, inadequate access to laboratory facilities and the current paper-based system of record-keeping (De Silva and Weerasinghe, 2018).

Primary preventive strategies for the prevention of road traffic accidents, pre-hospital care and ambulance transport of accident victims are areas that need more attention. Continuity of care in chronic diseases needs to be strengthened further. Improving the overall quality of services to meet the changing expectations of the people is another challenge facing the services. Given the current financial constraints, these appear to be daunting challenges.

**Addressing the challenges**

The MoH has identified the reorganization of the government primary curative health-care services, while protecting the current strengths, as a means of addressing NCDs as well as achieving UHC. Each primary curative care institution will be allocated a defined population and a package of essential services for the management of NCDs and other common morbidities in the community.

This would ensure patient-centred continuity of care at a centre close to home. It is envisaged that care services would be extended to the patient’s home, in particular, to home- and bed-bound individuals as needed. An important part of this process would be population engagement and empowerment of individuals to take responsibility for their own health, and help in oversight of the health-care system. Such a service is expected to reduce the iniquitous and ever-increasing OOP expenses for medical care.

There is a need for a rational analysis of future service needs and HR requirements in terms of numbers, quality and mix to meet these service projections for both the state and private sectors. In HR production, the
expansion of numbers, reviewing and updating the curricula to improve the quality of education and establishment of standards, accreditation mechanisms for training programmes, continuing professional development and appropriate revalidation processes, as recommended by WHO, would be essential (World Health Organization, 2013). HR planning, management and periodic audits will have to be institutionalized, as well as continuing processes that can anticipate and respond to emerging health needs.

The current paper-based HIS would be replaced by an electronic system, including a personal health record with a unique identification number. Technological advances and innovations would be used judiciously for this process.

Addressing the stagnant MCH indicators may need special targeted interventions. Mothers at risk of a low birthweight baby, infants and young children at risk of growth failure, and small groups such as migrant populations who currently do not appear to benefit from the services provided, need to be identified and innovative approaches considered to meet these challenges, including safety nets.

These improvements to the health-care system will require increased government spending on the health sector, as the domestic GGHE has been around 9% of GGE. Also needed are transformative educational approaches for capacity-building of health personnel, supported by a more effective stewardship role by the MoH. Improving the health of the population requires addressing the social determinants of morbidity and mortality in a comprehensive manner rather than with a narrow focus on delivery of health services alone. This entails ensuring equity in social and economic policies, addressing environmental issues and concentrated efforts to change the personal behaviour of people.
9. Appendices

9.1 References


9.2 HiT methodology and production process

HiTs are produced by country experts in collaboration with an external editor and the Secretariat of the Asia Pacific Observatory based in the WHO Regional Office for South-East Asia in New Delhi, India.

HiTs are based on a template developed by the European Observatory on Health Systems and Policies that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The template has been adapted for use in the Asia Pacific region and is available online at: http://www.who.int/iris/handle/10665/208276

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Data are drawn from information collected by national statistical bureaux and health ministries. Furthermore, international data sources may be incorporated, such as the World Development Indicators of the World Bank. In addition to the information and data provided by the country experts, WHO supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the Global Health Observatory (GHO) data and Global Health Expenditure Database. HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

The quality of HiTs is of real importance since they inform policy-making and meta-analysis. HiTs are subject to wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to the following.

- A rigorous review process consisting of three stages. Initially, the text of the HiT is checked, reviewed and approved by the Asia Pacific Observatory Secretariat. It is then sent for review to at least three independent experts, and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health, or appropriate authority, and policymakers within those bodies to check for factual errors.
- There are further efforts to ensure quality while the report is finalized that focus on copy-editing and proofreading.
- HiTs are widely disseminated (hard copies, electronic publication,
translations and launches). The editor supports the authors throughout the production process and, in close consultation with the authors, ensures that all stages of the process are taken forward as effectively as possible.
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