

**ANNUAL
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2018



**Ministry of Health
Sri Lanka**

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Preface

Annual Health Bulletin - 2018 is the 33rd of the series of Annual Health Bulletins, published by the Ministry of Health of Sri Lanka, which is being published since 1980. It provides comprehensive information of government health sector in Sri Lanka. It is expected that the information needs of policy makers, health planners, researchers and others interested in the field of health development as well as information for monitoring and evaluation purposes are met by this publication.

As the Annual Health Bulletin (AHB) played a significant role in the health planning process, it was necessary to improve the quality and coverage of the health statistics as well as the methodology of presentation of the information in AHB. Therefore the AHB was restructured from the year 2016 to meet the needs of health service planners and other sectors using health data. The new structure presents health information on four major areas; Health Status of the country, Health Risk Factors among the population, Health Service Coverage and Health System inputs and outputs. In addition to that, AHB contains data of four major areas; morbidity, mortality, resource availability and provision of services.

The officials who have given their generous support by providing data of their institutions, programs and surveys are greatly appreciated and it is expected their continuous support in the future as well. My sincere appreciation is extended to the staff of Medical Statistics Unit for their dedication and commitment in preparation of this publication.

Dr. S. H. Munasinghe
Secretary
Ministry of Health

Message from the Director General of Health Services

Annual Health Bulletin (AHB) is one of the main and an important publication of the Ministry of Health, published annually since 1980. Annual Health Bulletin provides comprehensive information on the state health sector in Sri Lanka to meet the information needs of policymakers, health planners, researchers and other interested stakeholders.

Annual Health Bulletin was restructured by the Ministry of Health, since 2016, based on stakeholder inputs to provide more strategic information to support policy formulation and programme decision-making. The initiative was widely welcomed and accepted by the stakeholders. Hence it was decided to publish the Annual Health Bulletin - 2018 also as the 3rd in the restructured series of bulletins.

AHB - 2018 presents an overview of the country's health status, the risk factors, details of service coverage and information on the health system which facilitated the provision of health services. It is expected that the information and data in the AHB will be used by the policy makers, health planners, health administrators and the development partners as the main reference for strategic decision-making.

Medical Statistics Unit of the Ministry of Health is responsible for collecting and compiling the health data and presenting in the Annual Health Bulletin in a meaningful way. I highly appreciate the valuable service and dedication rendered by the staff of Medical Statistics Unit. Meanwhile I thank all the Directors and other health staff, who gave their support by sharing the data, information and the write-ups for this publication without which it would not have a success. An editorial board was appointed to reorganize the write-ups received by various institutions and their effort is also highly appreciated. I hope that readers will provide their feedback to make this valuable publication more useful.

Dr. Asela Gunawardena
Director General of Health Services

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List of Abbreviations

A & E	Accident and Emergency
ACAS	Australian Council for Accreditation Standards
ADB	Asian Development Bank
ADC	Adolescent Dental Clinics
AFC	Anti Filaria Campaign
AFP	Acute Flaccid Paralysis
AHB	Annual Health Bulletin
AICU	Adult Intensive Care Unit
AIDS	Acquired Immune Deficiency Syndrome / Acquired Immunodeficiency Syndrome
AIT	Asian Institute of Technology
ALC	Anti-Leprosy Campaign
AMC	Anti-Malaria Campaign
AMR	Antimicrobial Resistance
ANC	Antenatal Care
APACHE	Acute Physiological and Chronic Health Evaluation
APC	Aerobic Plate Count
APHNH	Association of Private Hospitals and Nursing Homes
ARC	Alcohol Rehabilitation Centre
ARI	Acute Respiratory Infections
ART	Antiretroviral Therapy/Antiretroviral Treatment
ARV	Antiretroviral (drugs)
ASRH	Adolescent Sexual and Reproductive Health
BCC	Behaviour Change Communication
BCG	Bacille Calmette–Guerin
BES	Biomedical Engineering Services
BH-A	Base Hospital - Type A
BH-B	Base Hospital - Type B
BHT	Bed Head Tickets
BIA	Bandaranaike International Airport
BMI	Body Mass Index
BMICH	Bandaranaike Memorial International Conference Hall
BOM	Board of Management
CBR	Crude Birth Rate
CCP	Consultant Community Physician
CCSCH	Codex Committee on Spices and Culinary Herbs
CDC	Community Dental Clinics
CDR	Crude Death Rate

CDS	Central Drug Store
CFR	Case Fatality Rate
CIM	Cancer Institute - Maharagama
CIMIC	Civil - Military Cooperation
CIN	Cervical Intraepithelial Neoplasia
CKD	Chronic Kidney Disease
CKDU	Chronic Kidney Disease of Unknown Aetiology
CL	Cutaneous Leishmaniasis
CMC	Colombo Municipal Council
CMR	Child Mortality Rate
CNTH	Colombo North Teaching Hospital
CPR	Contraceptive Prevalence Rate
CRS	Congenital Rubella Syndrome
CSTH	Colombo South Teaching Hospital
CTICU	Cardiothoracic Intensive Care Unit
CVD	Cardiovascular Diseases
DAPH	Department of Animal Production and Health
DDG	Deputy Director General
DF	Dengue Fever
DGH	District General Hospital
DGHS	Director General of Health Services
DHF	Dengue Haemorrhagic Fever
DHIS2	District Health Information Software 2
DHQS	Directorate of Healthcare Quality and Safety
DHS	Demographic and Health Survey
DMFT	Decayed Missing Filled Teeth
DMH	De Soyza Maternity Hospital
DNA	Deoxyribonucleic Acid
DNAP	District Nutrition Action Plan
DNMS	District Nutrition Monitoring System
DS	Dental Services
DSS	Dengue Shock Syndrome
DT	Diphtheria, Tetanus
DTC	Drug and Therapeutic Committee
DTU	Technical University of Denmark
e - PIMS	Electronic Patient Information Management System
ECG	Electro Cardiography
EEG	Electro Encephalographer
eIMMR	Electronic Indoor Morbidity & Mortality Reporting
EIMS	Electronic Information Management System
ELISA	Enzyme-linked Immunosorbent Assay

eMHMIS	e-based Mental Health Management Information System
EMTCT	Elimination of Mother to Child Transmission
ENAP	Every Newborn Action Plan
ENMR	Early Neonatal Mortality Rate
ENND	Early Neonatal Deaths
EOH & FS	Environment, Occupational Health and Food Safety
EPI	Expanded Programme on Immunization
EPTB	Extra Pulmonary Tuberculosis
eRHMIS	electronic Reproductive Health Management Information System
ERL	Enteric Reference Laboratory
ET & R	Education Training and Research
ETCICU	Emergency Treatment Care Intensive Care Unit
ETU	Emergency Treatment Unit
EUH	Estate and Urban Health
FAC	Food Advisory Committee
FAO	Food and Agriculture Organization
FBS	Fasting Blood Sugar
FC	Finance Commission
FCAU	Food Control Administration Unit
FDI	Food and Drug Inspectors
FHB	Family Health Bureau
fIPV	fractional Inactive Polio Vaccine
FRC	Frozen Red Cell
GA	Government Analyst's Department
GAP	Good Agriculture Practices
GBV	Gender-Based Violence
GC/MS	Gas Chromatography/Mass Spectrometry
GF	Global Fund
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GICU	General Intensive Care Unit
GIS	Geographic Information System
GLASS	Global Antimicrobial Resistance Surveillance System
GMP	Good Manufacturing Practices
GN	Grama Niladhari Division
GNI	Gross National Income
GoSL	Government of Sri Lanka
Hb	Hemoglobin Concentration
HbA1c	Hemoglobin A1c
HC	Health Communication
HDC	Health Development Committee
HDU	High Dependency Unit

HE	Health Education
HEB	Health Education Bureau
HEO	Health Education Officer
HI	Health Information
HIV	Human Immunodeficiency Virus
HLA	Human Leukocyte Antigen
HLC	Healthy Life Style Centres
HMIS	Health Management Information System
HP	Health Promotion
HPB	Health Promotion Bureau
HPLC	High Performance Liquid Chromatography
HPV	Human Papilloma Virus
HQ	Head Quarter
HQ & S	Health Quality and Safety
HRCoD	Human Resource Coordination Division
HRH	Human Resources for Health
HRM	Human Resource Management
HRMIS	Human Resource Management Information System
HRO	High Reliable Organizations
HSEP	Health Sector Enhancement Project
HSV	Herpes Simplex Virus
HTC	Hospital Transfusion Committees
IARC	International Agency for Research on Cancer
ICD	International Classification of Diseases
ICEAP	Institute of Continuing Education for Animal Production
ICTA	Information & Communication Technology Agency of Sri Lanka
ICU	Intensive Care Unit
IDH	Infectious Disease Hospital
IEC	Information, Education and Communication
IgM	Immunoglobulin M
IHA	Inbound Health Assessment
IHR	International Health Regulations
ILI	Influenza Like Illness
IMMR	Indoor Morbidity and Mortality Return
IMR	Infant Mortality Rate
INFOSAN	International Food Safety Authorities Network
IOM	International Organization for Migration
IPTP	Intermittent Preventive Therapy for Malaria during Pregnancy
IPV	Inactive Polio Vaccine
IQR	Inter Quartile Range
IRS	Indoor Residual Spraying

ISH	International Society of Hypertension
ITI	Industrial Technology Institute
ITNs	Insecticide Treated Nets
IUGR	Intrauterine Growth Restriction
IVM	Integrated Vector Management
JEE	Joint External Evaluation
KAP	Knowledge, Attitude and Practices
LAB	Laboratory
LIMS	Laboratory Information Management System
LJEV	Live Attenuated Japanese Encephalitis Vaccine
LKR	Sri Lankan Rupees
LPEP	Leprosy Post-Exposure Prophylaxis
LRH	Lady Ridgeway Hospital
LS	Laboratory Services
LSCS	Lower (uterine) Segment Caesarean Section
LTBI	Latent TB Infection
MAM	Moderate Acute Malnutrition
MB	Multi-bacillary
MCH	Maternal and Child Health
MCN	Maternal and Child Nutrition
MCV	Measles Containing Vaccine
MD	Doctor of Medicine
MDR	Multi Drug-Resistant
MDSR	Maternal Death Surveillance and Response
MF	Microfilaria
MFA	Ministry of Foreign Affairs
MIC	Minimal Inhibitory Concentration
MICU	Medical Intensive Care Unit
MIM	Malaysian Institute of Management
MLT	Medical Laboratory Technologist
MMR	Maternal Mortality Ratio
MMR	Measles, Mumps and Rubella
MNH	Maternal and Neonatal Health
MO	Medical Officer
MO/MCH	Medical Officer/ Maternal and Child Health
MO/NCD	Medical Officer/ Non-Communicable Diseases
MOH	Medical Officer of Health
MoH	Ministry of Health
MRI	Medical Research Institute
MRL	Maximum Residue Limits
MRSA	Methicillin-resistant Staphylococcus Aureus

MS	Medical Services
MSc	Master of Science
MSD	Medical Supplies Division
MSG	Mother Support Groups
MSM	Medical Supplies Management
MSMIS	Medical Supplies Management Information System
MSU	Medical Statistics Unit
NAITA	National Apprentice and Industrial Training Authority
NAPHS	National Action Plan for Health Security
NARA	The National Aquatic Resources Research and Development Agency
NAT	Nucleic Acid Testing
NATA	National Alcohol and Tobacco Authority
NBC	National Blood Centre
NBTS	National Blood Transfusion Services
NCCP	National Cancer Control Programme
NCD	Non-Communicable Diseases
NCI	National Cancer Institute
NDCU	National Dengue Control Unit
NFP	National Focal Points
NGO	Non-Governmental Organization
NHA	National Health Accounts
NHDC	National Health Development Committee
NHPF	National Health Performance Framework
NHSL	National Hospital of Sri Lanka
NHWA	National Health Workforce Accounts
NIC	National Influenza Centre
NICS	National Intensive Care Surveillance
NIHS	National Institute of Health Sciences
NIID	National Institute of Infectious Diseases
NIP	National Immunization Programme
NISS	National Injury Surveillance System
NMDAR	N-methyl-D-aspartate Receptor (Encephalitis)
NMMR	National Maternal Mortality Reveiws
NMRA	National Medicines Regulatory Authority
NNMR	Neonatal Mortality Rate
NNSS	National Nutrition Surveillance System
NOHPP	National Oral Health Promotion Program
NPTCCD	National Programme for Tuberculosis Control & Chest Diseases
NRL	Neisseria Reference Laboratory
NRR	National Renal Registry
NSACP	National STD and AIDS Control Programme

NSICU	Neuro Surgery Intensive Care Unit
NTD	Neglected Tropical Diseases
NTICU	Neuro-Trauma Intensive Care Unit
NTRL	National Tuberculosis Reference Laboratory
OCP	Oral Contraceptive Pills
OD	Organizational Development
OGP	Open Government Partnership
OIC	Officer In-charge
OPD	Out Patient Department
OPMD	Oral Potentially Malignant Disorder
OPV	Oral Polio Vaccine
PAP	Papanicolaou (Papanicolaou smear)
PCI	Percutaneous Coronary Intervention
PCR	Polymerase Chain Reaction
PCU	Preliminary Care Unit
PEPSE	Post Exposure Prophylaxis following Sexual Exposure
PET	Protocol for Anti-Rabies Post-Exposure Therapy
PG	Post Graduate
PGH	Provincial General Hospital
PGIM	Post Graduate Institute of Medicine
PHA	Public Health Authorities
PHEIC	Public Health Emergency of International Concern
PHFO	Public Health Field Officer
PHI	Public Health Inspector
PHLT	Public Health Laboratory Technician
PHM	Public Health Midwife
PHNS	Public Health Nursing Sister
PHR	Personal Health Record
PHS	Public Health Services
PHSD	Private Health Sector Development
PHSRC	Private Health Services Regulatory Council
PHVS	Public Health Veterinary Services
PI	Pathogen Inactivation of Platelets
PICU	Pediatrics Intensive Care Unit
PIH	Pregnancy Induced Hypertension
PLHIV	People Living with HIV/AIDS
PMCI	Primary Medical Care Institutions
PMCU	Primary Medical Care Unit
PMI	Private Medical Institution
PND	Perinatal Deaths
PNMR	Perinatal Mortality Rate

PoE	Points of Entry
PPE	Personal Protective Equipment
PPHI	Principal Public Health Inspector
ppm	part per million
PPV	Pneumococcal Polysaccharide Vaccine
PRA	Panel Reactive Antibodies
PrEP	Pre Exposure Prophylaxis
PSM	Professions Supplementary to Medicine
PTB	Pulmonary Tuberculosis
PTFD	Task Force on Dengue Prevention
PVV	Pentavalent Vaccine
PWID	Persons Who Inject Drugs
PWUD	Persons Who Use Drugs
QA/QC	Quality Assurance and Quality Control
RAFU	Regional Anti Filariasis Unit
RASFF	Rapid Alert System for Food and Feed
RCT	Rank Container Terminal
RDHS	Regional Director of Health Services
RDQA	Routine Data Quality Assessment
RDT	Rapid Diagnostic Test-kits
RE	Regional Epidemiologist
RFU	Regional Filariasis Unit
RGD	Registrar General's Department
RHMIS	Reproductive Health Management Information System
RMNCAYH	Reproductive, Maternal, New-born, Child, Adolescent and Youth Health
RMNCAYHP	Reproductive, Maternal, New-born, Child, Adolescent and Youth Health Programme
RMO	Registered Medical Officer
RMSD	Regional Medical Supplies Division
SAARC	South Asian Association for Regional Cooperation
SARA	Service Availability and Readiness Assessment
SARI	Severe Acute Respiratory Tract Infections
SBR	Still Birth Rate
SBSC	Sirimavo Bandaranaike Specialized Children Hospital
SDC	School Dental Clinics
SDG	Sustainable Development Goals
SDT	School Dental Therapists
SEAR	South East Asian Region
SGS	General Society of Surveillance
SICU	Surgical Intensive Care Unit
SLAAS	Sri Lanka Association for the Advancement of Science
SLDA	Sri Lanka Dental Association

SLENAP	Sri Lanka Every New-born Action Plan
SLIDA	Sri Lanka Institute of Development Administration
SLSI	Sri Lanka Standard Institute
SMI	School Medical Inspection
SOP	Standard Operation Procedures
SPC	State Pharmaceutical Corporation
SPHI	Supervising Public Health Inspector
SPHID	Supervising Public Health Inspectors at District Level
SPHM	Supervising Public Health Midwife
SPS	Sanitary and Phytosanitary
STD	Sexually Transmitted Disease
STEMI	ST Elevation Myocardial Infarction
STI	Sexually Transmitted Infection
TB	Tuberculosis
TCS	Tertiary Care Services
TFR	Total Fertility Rate
TH	Teaching Hospital
TORCH	Toxoplasmosis, Other (syphilis, varicella-zoster, parvovirus B19), Rubella, Cytomegalovirus (CMV) and Herpes
TOT	Training of Trainers
TRIPS	Trade-Related Aspects of Intellectual Property Rights
TTI	Transfusion Transmissible Infections
U.N.	United Nations
U5MR	Under-five Mortality Rate
UHC	Universal Health Coverage
UNDP	United Nations Development Programme
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund (United Nations International Children's Emergency Fund)
UNIDO	United Nations Industrial Development Organization
VDRL	Venereal Disease Research Laboratory
VIP	Very Important Person
VL	Viral Level/Viral Load
VPD	Vaccine-Preventable Diseases
WEBIIS	Web-Based Immunization Information System
WFP	World Food Programme
WHO	World Health Organisation
WHO/ISH	World Health Organisation and International Society of Hypertension
WP	Western Province
WTO	World Trade Organization
WWC	Well Women Clinic
YED	Youth, Elderly and Disability

Key Health Indicators

Indicator	Year	Data	Source	
Total population (in thousands)	2018*	21,670	Registrar General's Department	
Land area (sq. km)	1988	62,705	Survey General's Department	
Population density (persons per sq. km)	2018*	346	Registrar General's Department	
Crude birth rate (per 1,000 population)	2018*	15.1	Registrar General's Department	
Crude death rate (per 1,000 population)	2018*	6.4		
Urban population (%)	2012	18.2	Census of Population & Housing, 2012	
Sex ratio (No. of males per 100 females)	2012	93.8		
Child population (under 5 years) (%)	2012	8.6		
Women in the reproductive age group (15-49 years) (%)	2012	51.0		
Average household size (Number of persons per family)	2012	3.8		
Socio-economic Indicators				
GNI per capita at current prices (Rs.)	2018*	648,731	Department of Census & Statistics	
Human development index	2018	0.78	UNDP, Human Development Indices and Indicators: 2019 Statistical Update	
Unemployment rate	Total	2018	4.4	Department of Census & Statistics
	Female		7.6	
	Male		3.0	
Dependency ratio	Total	2012	60.2	Census of population & Housing, 2012
	Old-age (60 years and more)		19.8	
	Young (under 15 years)		40.4	
Literacy rate (%) (10 years or more)	Total	2012	95.7	Census of population & Housing, 2012
	Female		94.6	
	Male		96.9	
Pupil teacher ratio in	Government Schools	2018*	17.0	Ministry of Education
	Private Schools		20.4	
	Pirivenas		8.9	
Singulate mean age at marriage (years)	Female	2012	23.4	Census of population & Housing, 2012

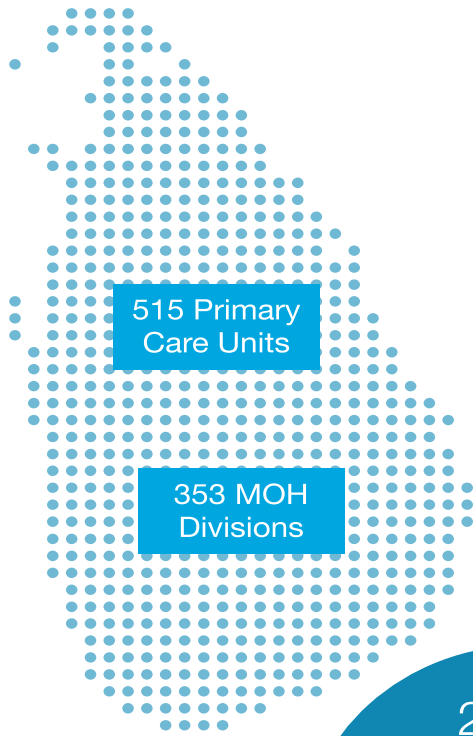
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Indicator	Year	Data	Source	
Health and Nutrition Indicators				
Life expectancy at birth (years)	Female	2011-	78.6	Department of Census and Statistics (Life Tables for Sri Lanka 2011-2013 by District and Sex)
	Male	2013	72.0	
Neonatal mortality rate (per 1,000 live births)	2015*	6.0	Registrar General's Department	
Infant mortality rate (per 1,000 live births)	2015*	8.5		
Under-five mortality rate (per 1,000 live births)	2015*	10.1		
Average No. of children born to ever married women in Sri Lanka	2012	2.4	Census of Population & Housing, 2012	
Maternal mortality ratio (per 100,000 live births)	2014*	25.7	Registrar General's Department	
Low-birth-weight per 100 live births in government hospitals %	2018	16.1	Medical Statistics Unit	
Percentage of under five children	2016		Demographic and Health Survey, 2016	
Underweight (weight-for-age)		20.5		
Wasting (Acute undernutrition or weight-for-height)		15.1		
Stunting (Chronic malnutrition or height-for-age)		17.3		
Primary Health Care Coverage Indicators				
Percentage of pregnant women attended by skilled personnel	2016	99.5	Demographic and Health Survey, 2016	
Percentage of live births occurred in government hospitals	2018	91.5	Medical Statistics Unit	
Current contraceptive usage of currently married women age 15-49 years (%)	Modern method	2016	53.6	Demographic and Health Survey, 2016
	Traditional method		11.0	
Population with access to safe water (%)	2012	81.1	Census of Population & Housing, 2012	

Contd.

Indicator	Year	Data	Source
Health Resource Indicators			
Government health expenditure as a percent of GNP	2018	1.67	Central Bank of Sri Lanka - Annual Report 2018, Department of National Budget - Budget Estimate 2019, Ministry of Finance and Planning, Sri Lanka - Annual Report 2018, Department of state Accounts, General Treasury - Financial Statements for the year ended 31st December 2018, Ministry of Health, Nutrition & Indigenous Medicine - Appropriation Account - 2018
Government health expenditure as a percent of total government expenditure	2018	5.92	
Per capita health expenditure (Rs.)	2018	10,840	
Medical Officers per 100,000 population	2018	91.0	Medical Statistics Unit
Population per Medical Officer	2018	1,098.9	
Dental Surgeons per 100,000 population	2018	7.2	
Nurses per 100,000 population	2018	212.4	
Supervising Public Health Midwives/Public Health Midwives per 100,000 population	2018	28.4	
Number of hospitals	2018	641	
Number of hospital beds	2018	84,728	
Hospital beds per 1,000 population	2018	3.9	
Number of Medical Officer of Health (MOH) Divisions	2018	353	

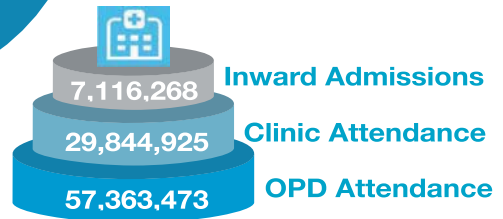
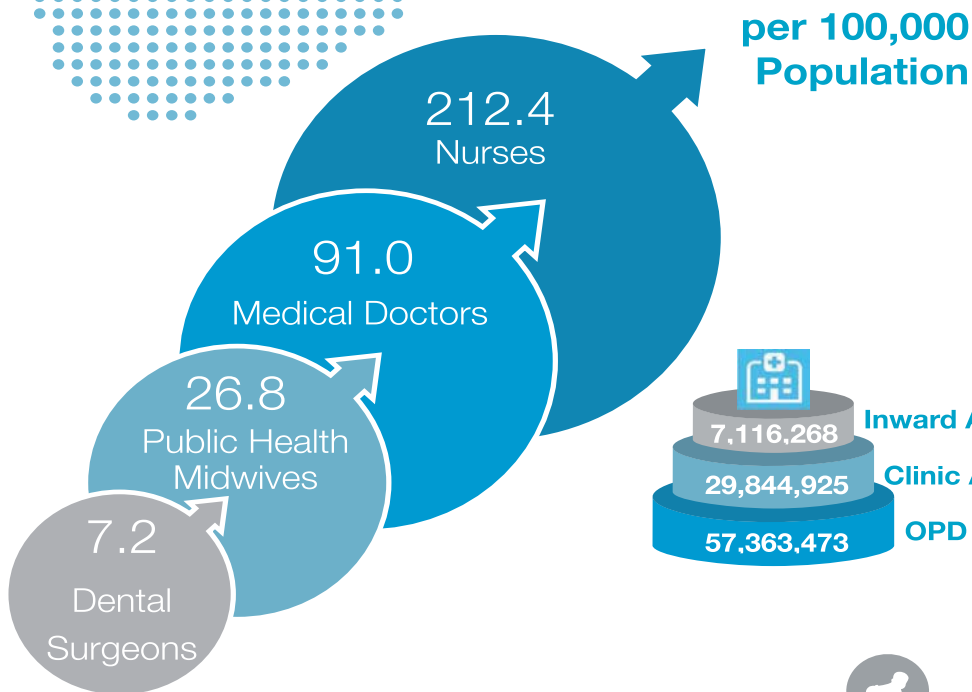
* Provisional



641 Hospitals

84,728 Hospital Beds

3.9 Beds for 1,000 Population



1,794 Still Births

63 Maternal Deaths

302,134 Live Births

53,171 Total Hospital Deaths

1. Country Profile

1.1. Background

Sri Lanka, officially known as the Democratic Socialist Republic of Sri Lanka, is an island situated off the Southern coast of India in the northern Indian Ocean of South Asia, separated from the Indian sub-continent by a narrow strip of shallow water known as Palk Strait. Sri Lanka lies between northern latitudes 50 55' - 90 50' and eastern longitudes 790 42' - 810 52'. It has a total area of 65,610 square kilometres, including 2,905 square kilometres of inland water.

The island has a central mountainous region, 'Hill country' with peaks as high as 2,524 metres above the sea level and is surrounded by a plain known as 'Low country' which is narrow in East, West and South, broadens in the North. A number of rivers spring up from the mountain peaks and flow towards the sea through low lying plains following a radial pattern. These topographical features affect the wind pattern, rainfall, temperature, humidity and other climatic features.

The climatic condition of the country is also affected by its proximity to the equator as well as the elevation above sea level and the monsoons. The mean temperature ranges from 26.50C to 28.50C (79.70F to 83.30F) in the low country and from 140C to 240C (580F to 750F) in the hill country. Sri Lanka receives an average 2,000 mm of rain annually, amounting to about 130 billion cubic meters of water. The hill country as well as the South West region, receives sufficient rain.

The rest of the island, mainly the North, North Central and Eastern parts, remain dry for a considerable period of the year.

Sri Lanka has a parliamentary democratic system in which the sovereignty of the people and legislative powers are vested in Parliament. The executive authority is exercised by a Cabinet of Ministers presided over by the Executive President.

For the purpose of administration, Sri Lanka is divided into 9 provinces, 25 districts and 331 divisional secretary areas (Annexure I : Detailed Table 1). The provincial administration is vested in the Provincial Councils. Local government which is the lowest level of government in Sri Lanka is responsible for providing supportive services for the public.

In the year 1931, Universal Franchise was granted to all Sri Lankan citizens above the age of 18 years and the free education system was established in the year 1938. Following independence, the country adopted a free health policy and provided free health care for all Sri Lankans and it helps to reach a higher Human Development Index than all other countries in the South Asian region.

1.2. Population Size and Growth

The fourteenth national Census of Population and Housing (CPH) which covered the entire island after a lapse of 31 years since 1981 was conducted by the Department of Census and Statistics on 20th March 2012. Data were collected from persons according to their place of usual residence. According to the final results of the census, the enumerated population was 20,359,439. The first Census of Population in Sri Lanka was held in the year 1871 and the population was 2.4 million. So, the Sri Lankan population has grown nine times since the year 1871.

The estimated mid-year population of Sri Lanka for the year 2018 is 21.670 million (Annexure I: Detailed Table 2).

As shown in Figure 1.1, according to Registrar General's Department, the annual population

growth rate was 1.05 percent during the year 2018, which added around 226,000 persons during 2018 to the total population, due to natural increase.

The first significant decline in Crude Birth Rate (CBR) began in 1950s; fertility decline gathered momentum in the 1960s through to the year 2000 and has been relatively flat since then (Figure 1.2). CBR was 15.1 per 1,000 persons in 2018 (provisional).

The rapid mortality decline observed during the post-World War II period in Sri Lanka and gradual decrease can be seen up to 1980s. Crude Death Rate (CDR) was somewhat steady during the last few decades with small fluctuations and CDR in 2018 was 6.4 deaths per 1,000 population (provisional).

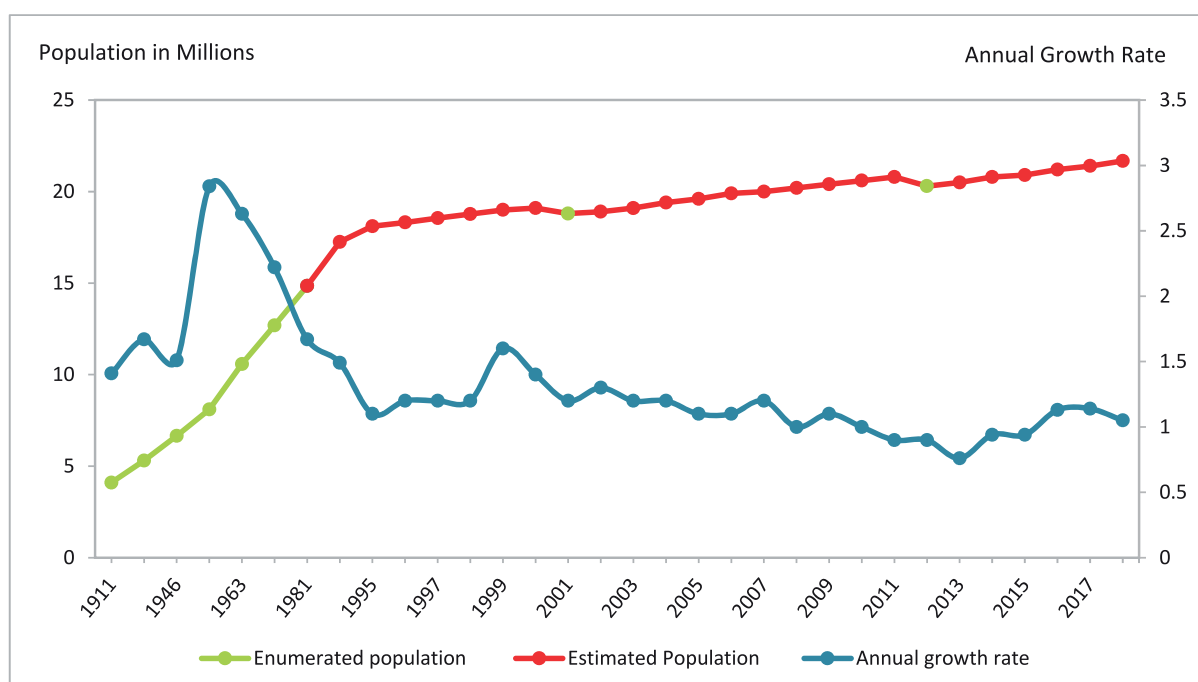


Figure 1.1 : Population Size and Annual Growth Rate, 1911 - 2018

Source: Department of Census and Statistics, Registrar Generals' Department

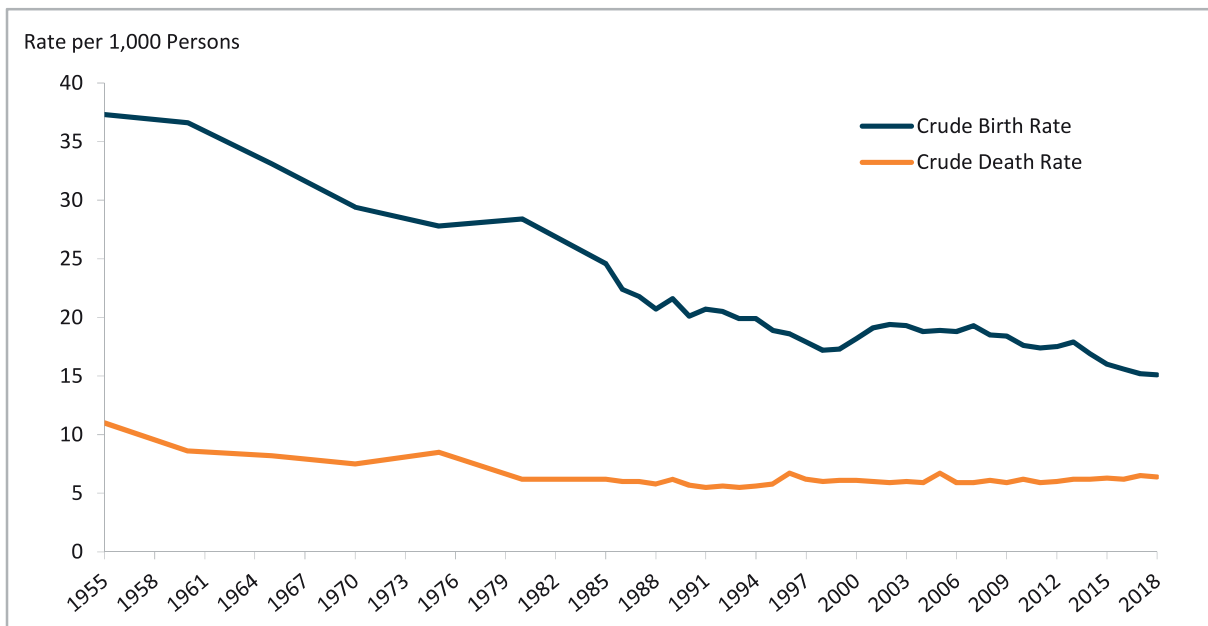
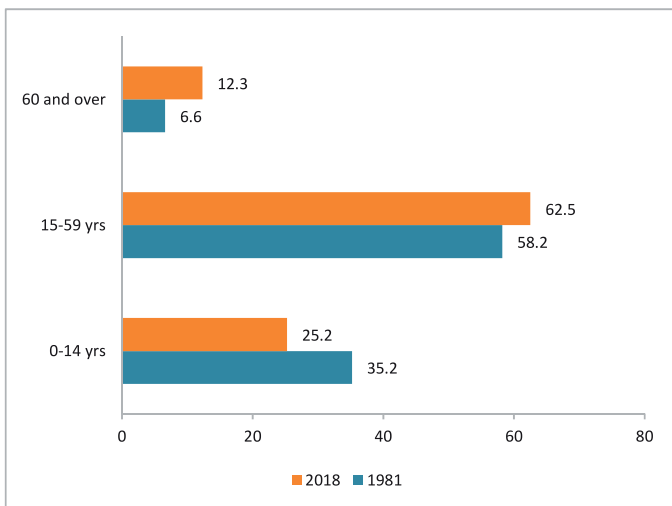


Figure 1.2 : Crude Birth and Death Rates, 1955 - 2018

Source: Registrar General's Department

As a result of declining overall mortality and infant mortality rates, life expectancy has continuously risen. At the same time, low

fertility rates and high life expectancy involves in declining share of children and increasing share of elderly.



Percentage of elderly population has almost doubled during the period from 1981 to 2018

Figure 1.3 : Population by Broad Age Groups, 1981 and 2018

Source: Department of Census and Statistics and Registrar General's Department

Accordingly, the percentage of child population (<15 years) in the year 2018 shows a significant decline compared to the year 1981 and at the same-time working-age population as well as elderly population present an increase. Therefore, the population of Sri Lanka is gradually shifting older. (When estimating population for the year 2018, it was assumed that the age structure of the year 2018 remained as same age structure of the last

Census of Population & Housing which was held in the year 2012).

According to the report of the Census of Population & Housing, 2012, the median age of the population was 31 years which means that half of the population was below the age of 31 years. The median age was around 21 years until 1981.

Table 1-1 : Percentage Distribution of Population by Broad Age Groups, Aging Index and Dependency Ratio

Year	0 - 14 Years (A)	15 - 59 Years (B)	60 Years and over (C)	Aging Index (C/A)*100	Dependency Ratio (A+C)/B*100
1911	40.9	54.8	4.3	10.5	82.5
1946	37.2	57.4	5.4	14.5	74.2
1971	39.0	54.7	6.3	16.2	82.8
1981	35.2	58.2	6.6	18.8	71.8
2001 ¹	26.3	64.5	9.2	35.0	55.0
2012 ²	25.2	62.4	12.4	49.2	60.3
2018 ³	25.2	62.5	12.3	48.8	60.0

¹ Excludes Northern Province, Batticaloa and Trincomalee districts in Eastern province

² Census of Population and Housing – 2012

³ Estimated mid-year population – Registrar General's Department

Aging Index defined as the ratio between the 60 years and over population to 0-14 year population in a given year has increased from 18.8 percent in 1981 to 48.8 percent in 2018. Shifting of median age and increasing trend of aging index are also referring to aging of Sri Lankan population.

It is noticeable that the dependency ratio, which is an approximation of the average number of dependents that each person of working age group must support, has decreased from 71.8 in 1981 to 60.0 in 2018, due to the relative decline in the proportion of children.

It is important to note that working-age population is 62.5 percent in 2018 and shows an increase from 58.2 percent in 1981. It can be seen that the working-age population is significantly larger than the dependent population.

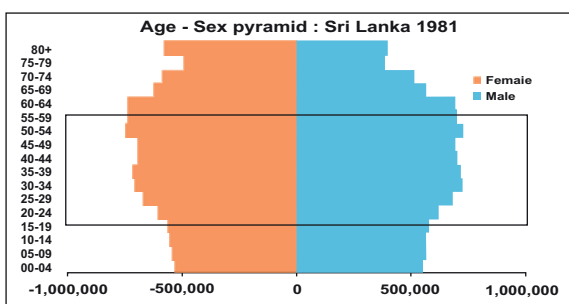
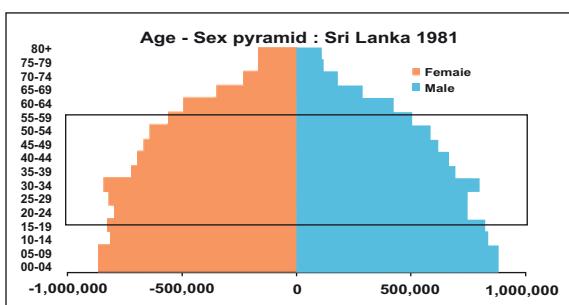
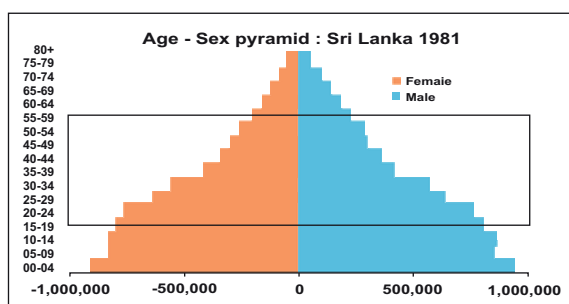


Figure 1.4 : Population Trends for Sri Lanka by Age and Sex, 1981, 2012 and 2041

Source: Census of Population and Housing 2012 – Key Findings, Department of Census and Statistics

Age-Sex Composition Trends

During the past decades, Sri Lankan population has changed significantly in size, as well as in age and sex structure. The shape of the age-sex pyramid in the past, current and future is shown in Figure 1.4. A detailed age-sex breakdown is given in Annexure I : Detailed Table 3.

In 1981, the base is broad representing a large number of children in the population

Working age population has increased compared to the child population in 2012

Expected structure in 2041 shows that growing of elderly population with fewer number of child population

Demographic Transition

Demographic transition is a transition from an undesirable state of the slow growth of population where mortality and fertility rates are high to a desirable state of slow population growth with low fertility and mortality levels. As discussed above, changes in Sri Lankan population size, growth, fertility, mortality and the age structure reveal that Sri Lanka is undergoing a phase of demographic transition. Each country undergoes a period known as a “window of opportunity” during the age structure transition.

The demographic window is defined by U.N. Population Department as the period when the proportion of children and youth under 15 years falls below 30 percent and the proportion of people who are 65 years and older is below 15 percent. Sri Lanka currently has the “window of opportunity” or in other words, “demographic dividend” or “demographic bonus” to achieve rapid economic growth with a larger working-age population compared to the population in non-working age groups (dependents).

The continuation of aging will lead to a decline of working-age population and an increase in dependents. According to the Department of Census and Statistics the window of opportunity for Sri Lanka is expected to last about 40 years from the early 1990's to the early 2030's.

Trends in Age-Specific Sex Ratio

The sex ratio is the indicator that describes the sex composition of the population.

The sex ratio, defined as the number of males per 100 females, is 93.9 in Sri Lanka for the year 2018. It indicates an excess of females over males, i.e. population is female-biased. When comparing the sex ratios in 1981, 2001 and 2018, it shows a decreasing trend. (Table 1-2)

The age-specific sex ratios in 2018 are declining gradually as age increases with fluctuations in some age groups. This indicates more females than males in older age groups.

However, the sex ratio under 4 years is 101.8 for the year 2018, which reflects more males among children less than 4 years of age. According to Registrar General's Department, sex ratio at birth is 103.6 males per 100 females (provisional) for the year 2018.

According to Department of Census and Statistics, the window of opportunity for Sri Lanka is expected to last about 40 years from the early 1990's to the early 2030's

Table 1-2 : Age Specific Sex Ratios in 1981, 2001 and 2018

Age Group in Years	Sex Ratio (No. of Males per 100 Females)		
	1981 ¹	2001 ^{1,2}	2018 ³
All Ages	103.9	97.9	93.9
Under 1	104.1	104.5	101.8
1 - 4	103.8		
5 - 9	103.6	103.1	101.8
10 - 14	104.1	104.5	102.3
15 - 19	102.7	103.6	99.3
20 - 24	100.3	98.0	93.8
25 - 29	99.8	93.8	91.8
30 - 34	102.0	95.4	94.5
35 - 39	100.6	95.2	94.9
40 - 44	106.0	96.6	94.9
45 - 49	102.0	97.1	92.7
50 - 54	111.1	95.9	91.0
55 - 59	110.2	92.8	89.0
60 - 64	116.2	92.7	86.4
65 - 69	111.0	88.0	81.1
70 - 74	115.7	85.0	78.8
75 and Over	107.3	84.6	67.9

¹ Census of Population & Housing

² Excludes Northern Province, Batticaloa and Trincomalee districts in Eastern Province

³ Estimated mid-year population – Registrar General's Department

Sex ratio is 93.9 in Sri Lanka for the year 2018, which is an excess of females over males. Up to age 14, sex ratio is over 100, and afterwards all age groups have a female biased population. In other words, younger age groups and older age groups have more females.

Population Density

Population density is defined as the number of persons in a unit area. It is vital to study population density by districts, as overcrowding might lead to many health hazards.

Population density for the year 2018 is 346 persons per square kilometre which shows an increase of 50 percent from 230 persons per square kilometre in 1981.

Population densities among districts show marked regional variations. Colombo district shows the highest density of 3,608 persons per square kilometre in 2018. The next highest density of 1,796 is recorded from the adjoining district; Gampaha.

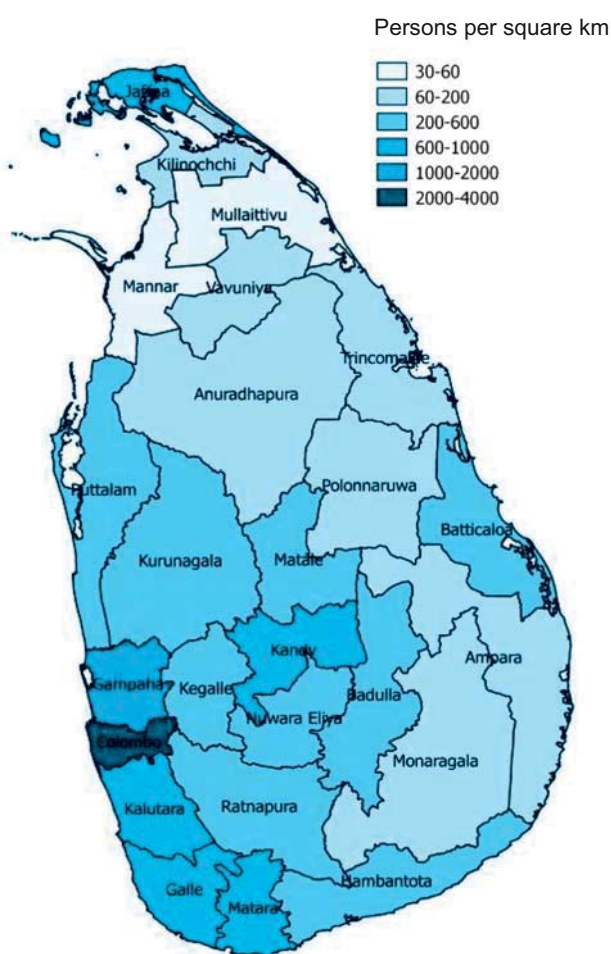


Figure 1.5 : Population Density by District, 2018

Source: Registrar General's Department

Over half of the population is concentrated in the Western, Central and Southern provinces, which jointly cover less than one fourth of the total land area of the country

1.3. Trends in Life Expectancy

Life expectancy is the average number of years a person would live under the current pattern of mortality.

Gender differences can be seen in Sri Lanka's life expectancy at birth. "Life Tables for Sri Lanka 2011 - 2013 by District and Sex" published by the Department of Census and Statistics shows that life expectancy at birth was 72 years for males and 78.6 years for females during 2011 - 2013.

Life expectancy for both males and females has been increased for the past decades.

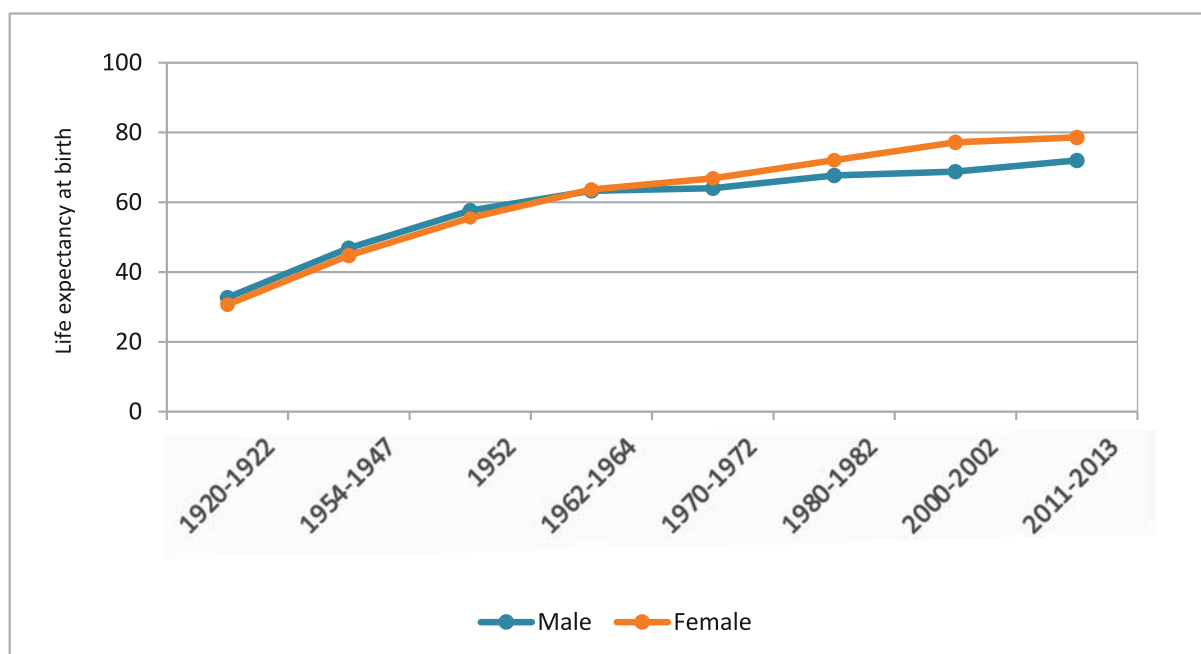


Figure 1.6 : Life Expectancy at Birth by Sex, 1920 - 2013

Source: Department of Census and Statistics

1.4. Trends in Fertility Rates

Total Fertility Rate (TFR), of a population is the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age-specific fertility rates through her lifetime and she were to survive from birth through the end of her reproductive life.

Table 1-3 reveals that the TFR declined steadily from 2.8 in the year 1987 to 1.9 in the year 2000, which was below the replacement level of fertility (replacement level of fertility is defined as an average of 2.1 children per woman). Afterward it increased to above the replacement level of fertility during the period 2003 to 2012. Currently, TFR is 2.2 children per woman according to the Demographic and Health Survey (DHS) 2016.

Table 1-3 : Age-Specific Fertility Rates (per 1,000 Women) and Total Fertility Rates, 1987 - 2016

Age Group (Years)	2013-2016 DHS 2016	CPH 2012	2004-2007 DHS 2006/07	1995-2000 DHS 2000	1988-1993 DHS 1993	1982-1987 DHS 1987
15 - 19	21	36	28	27	35	38
20 - 24	86	107	101	83	110	147
25 - 29	143	147	145	118	134	161
30 - 34	115	118	121	98	104	122
35 - 39	55	58	54	40	54	71
40 - 44	10	16	13	8	14	23
45 - 49	1	2	1	1	4	3
TFR	2.2	2.4	2.3	1.9	2.3	2.8

Source: Department of Census & Statistics

1.5. Introduction to Sri Lankan Health Sector

The Sri Lankan health system comprises of different systems of medicine; Traditional, Western, Ayurvedic, Unani, Sidha, Homeopathy and Acupuncture. Of these, Western or Allopathic medicine is the leading sector catering to the needs of the majority.

Allopathic medicine is provided through both public and the private sector but the share of care is different for inpatients and outpatients. The public sector provides the bulk of inpatient care, providing a safety net to citizens.

Over 7 million hospitalizations and over 57 million outpatient visits occurred in 2018 in the public sector. The public sector has an extensive network of health care institutions and has a system for Ayurvedic care. The private sector provides access to almost all types of care at a cost while the public sector provides free health services at the point of care.

The public health sector is organized into two parallel streams:

- community health services focusing mainly on promotive and preventive health
- curative care services ranging from non-specialized primary care to specialized care delivered through a variety of hospitals

Ministry of Health of the central government is the leading agency providing stewardship to health service development and regulation. It is also responsible for ensuring resources for health such as trained human resources, drug supply and major health infrastructure developments. The delivery of care in the public sector is decentralized and management of primary care in some specialized Allopathic hospitals is by the provincial health authorities.

Health Status

In 2018...

Only
30-40 %
of registered
Deaths
occurred in government hospitals



Most of the newly reported
HIV
infections occur among males
& most of these infections are due to
Male to Male
sexual relationships.

Number of people with
Mental & Behavioural
disorders have
Increased
during the past year



2X

The overall (age standardized)
Cancer Incidence Rates
in Sri Lanka have
doubled
during the last 29 years

Health Status

2. Morbidity and Mortality

Morbidity

Morbidity refers to the state of being diseased or unhealthy within a population. Information on morbidity is one of the main useful information to measure country's health condition which reflects the development of the country. Incidence rates and prevalence rates are major morbidity indicators. Morbidity data is collected according to the disease type, gender, age and area of hospitalization.

Mortality

In demography, mortality usually refers to the incidence of death or the number of deaths in a population. It plays a vital role in determining the size, growth and structure of population. It is considered as the most striking demographic event all over the world.

Mortality trends reflect health conditions of any country. Mortality statistics are used in areas such as public health administration to identify health sector needs and to evaluate the progress of public health programmes in different areas.

Furthermore, collection and analysis of mortality information helps:

- a) to identify levels and trends of mortality
- b) to identify patterns and trends in the causes of death and their impact on mortality
- c) to observe age patterns of mortality
- d) to compare the mortality patterns between sub populations
- e) to identify the demographic, social, economic, behavioral and environmental factors which influence levels and trends in mortality
- f) to compare mortality levels between different populations

Various indicators are computed using both morbidity and mortality information such as Cause-Specific Death Rates, Case Fatality Rates, Crude Death Rate, Maternal Mortality Ratio, Child Mortality Rate, Standardized Mortality Rates and Age Specific Mortality Rates, etc.

In Sri Lanka, both morbidity and mortality information is collected using the IMMR (Indoor Morbidity and Mortality Return) from each government hospital and processed by the Medical Statistics Unit (MSU). This system has been collecting morbidity and mortality data since 1985. However, the mortality data provided by IMMR is based only on government hospitals. It is important to note that, among the total deaths occur in the country, more than 70% occur in the non-hospital setting.

Mortality information is also collected from the vital registration system which was established in 1867 and that system consists of all the deaths registered in Sri Lanka, irrespective of the place of occurrence.

The main mortality indicators computed are age-sex specific mortality rates and the number of deaths.

2.1. Hospital Morbidity and Mortality

In Sri Lanka, morbidity data is available only on patients seeking treatment as inpatients from government hospitals providing Western medicine. Morbidity data of patients attending the outpatient departments of government hospitals are not available.

Steps to initiate the data collection in government Ayurveda institutions have been taken. There are some other limited information collecting systems through surveys and registers maintained by special campaigns and programmes for control of diseases such as TB, Cancer and Leprosy, etc.

The Indoor Morbidity and Mortality Return (IMMR) is the main source of morbidity data. This return is collected quarterly by the Medical Statistics Unit (MSU) from all government hospitals with indoor facilities. Since 1996, the IMMR is based on the 10th revision of the

International Classification of Diseases (ICD-10th version). Since 2012, MSU has introduced a web-based system called eIMMR to collect morbidity and mortality data.

Hospitals that have computer and internet facilities can send their data through eIMMR. Accurate, detailed and timely data collected through eIMMR from more than five hundred hospitals are processed and published in this report.

2.2. Hospital Morbidity

Data Collection Methodology

The final diagnosis, as mentioned in the Bed Head Tickets (BHT's) of the patients, are recorded in a formal register, and then summarizes to complete the IMMR return. Hospitals which send data through eIMMR can directly enter the final diagnosis of a patient into the system and the system generates the IMMR report. It is a duty to be performed by a Medical Recording Officer in the Hospital Record Room or the Hospital Statistics Unit. However, since there is a limited number of qualified Medical Recording Officers in the system, other staff categories such as Medical Recording Assistants, Planning and Programming Officers, Planning and Programming Assistants and Development Officers are involving in the said activity.

Registered/Assistant Medical Officers or sometimes Medical Officers, also engage in the compilation of inpatient statistics in the hospitals. Though these officers are mainly employed to attend the patient care, they perform the statistical activities as an additional duty.

It should be noted that repeat visits, transfers and multiple admissions of the same patient for the same disease are reflected in the morbidity data as additional cases. Therefore, the morbidity data available in Sri Lanka should be interpreted with caution, considering the above limitations.

In 2018, 4.2% of the live discharges and 7.1% of the deaths are reported as undiagnosed or un-coded.

Trends in Hospital Morbidity and Mortality

Annexure I : Detailed Table 17, gives trends in hospital morbidity and mortality by broad disease groups for the period 2010 - 2018.

When comparing morbidities with 2017, it can be seen that morbidities due to all the disease groups except for the group of certain infectious and parasitic disease (A00-B99) have increased in 2018.

Number of cases per 100,000 population related to following disease groups have shown their highest value in 2018. Neoplasms (C00-D48), Diseases of the blood & blood-forming organs & certain disorders involving the immune mechanism (D50-D89), Endocrine, nutritional and metabolic diseases (E00-E90), Mental and behavioral disorders (F00-F99), Diseases of the nervous system (G00-G99), Diseases of the ear and mastoid process (H60-H95), Diseases of the circulatory system (I00-I99), Diseases of the digestive system (K00-K93), Diseases of the musculoskeletal system and connective tissue (M00-M99), Diseases of the genitourinary system (N00-N99), Pregnancy, childbirth and the puerperium (O00-O99), Certain conditions originating in the perinatal period (P00-P96), Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified (R00-R99) and Injury, poisoning and certain

other consequences of external causes (S00-T98) are those disease groups.

Mortalities due to Neoplasms (C00-D48), Diseases of the circulatory system (I00-I99), Diseases of the respiratory system (J00-J99), Diseases of the digestive system (K00-K93), Diseases of the genitourinary system (N00-N99), Certain conditions originating in the perinatal period (P00-P96) and Injury, poisoning and certain other consequences of external causes (S00-T98) show considerable increase in 2018 in comparison with 2017.

But mortalities due to certain infectious and parasitic diseases (A00-B99), Endocrine, nutritional and metabolic diseases (E00-E90), Diseases of the skin and subcutaneous tissue (L00-L99) have been decreased than 2017.

In spite of the efforts taken to improve the quality of the final diagnosis in the patient records, the morbidities and mortalities for the group named "symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified" (R00-R99) have been increased.

For the year 2018, 7,063,097 live discharges and 53,171 deaths were recorded in government hospitals. Fifty percent out of the live discharges and 58% out of the deaths are males. (Figure 2.1)

As shown in Figure 2.2 gender difference is high in live discharges as well as in deaths due to traumatic injuries. When concerning total live discharges due to traumatic injuries, 67 percent are males and out of total deaths due to traumatic injuries 78 percent are males.

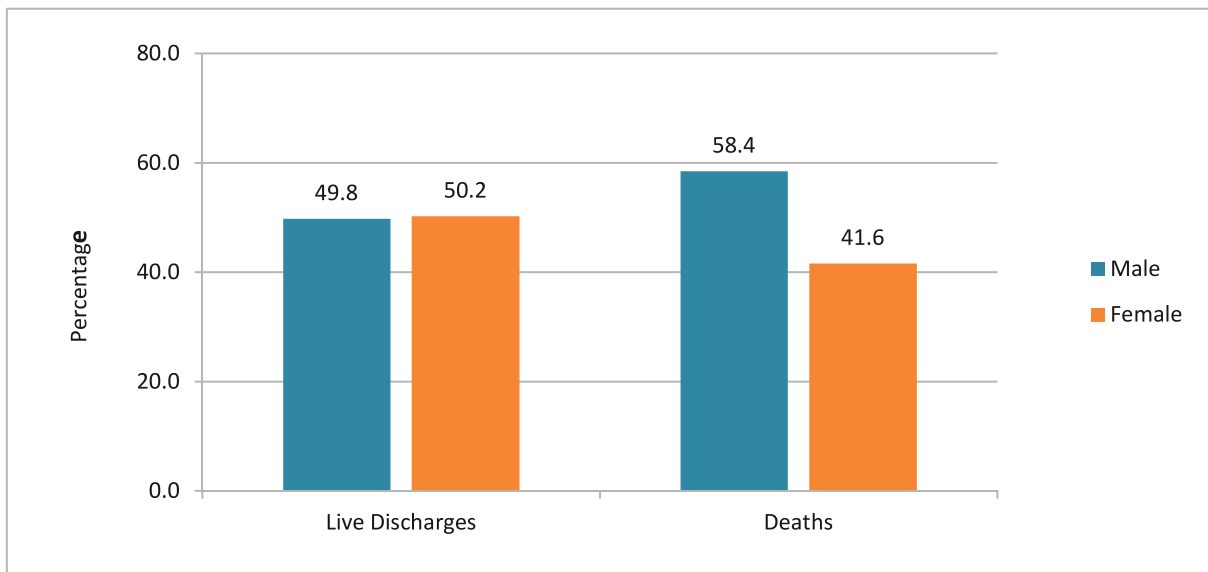


Figure 2.1 : Percentage of Hospital Live Discharges and Deaths by Gender, 2018

Source: Medical Statistics Unit, Ministry of Health

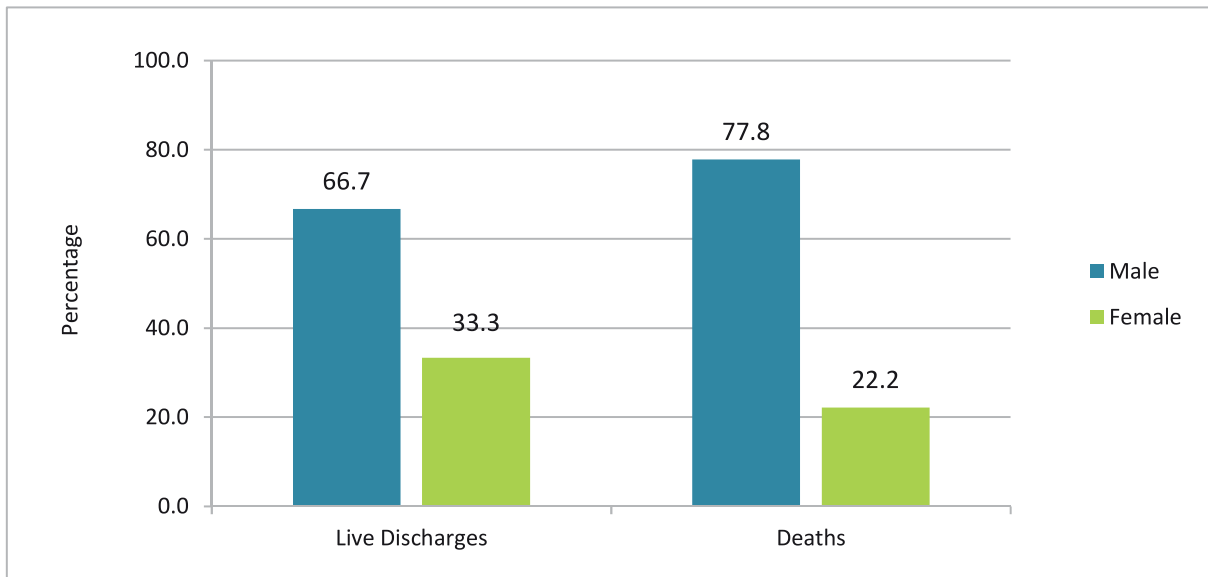


Figure 2.2 : Distribution of Hospital Live Discharges and Deaths to Traumatic Injuries by Gender, 2018

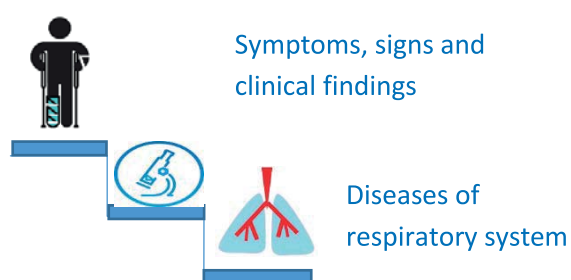
Source: Medical Statistics Unit, Ministry of Health

Annexure I : Detailed Table 18 shows the trends of some selected diseases. An increasing trend is shown in hospitalizations due to following diseases over the last seven years.

- Ischemic heart disease (455.4 in 2011 and 630.8 in 2018 per 100,000 population)
- Septicemia (17.7 in 2011 and 63.3 in 2018 per 100,000 population)

Leading Causes of Hospitalization

Traumatic Injuries



Annexure I : Detailed Table 19 gives the leading causes of hospitalization in the country in 2018 and Annexure I : Detailed Table 23 indicates the district profile of the same. Annexure I : Detailed Table 21 presents trends in leading causes of hospitalization during the period 2009-2018.

Traumatic injuries is the top leading cause of hospitalization as usual. Symptoms, signs and abnormal clinical and laboratory findings have been the second leading cause of hospitalization from 2009 to 2018. Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza have become the third leading cause since 2009 up to 2018 except for the year 2017. Hospitalization due to diseases of the gastro-intestinal tract is the fourth leading cause from the year 2014 except for the year 2017.

Diseases of the urinary system are being an important cause of hospitalization and it is ranked as fifth in 2018. Viral diseases were the third leading cause of hospitalization in the country in 2017. But it is ranked as sixth in 2018.

Hospitalizations due to diseases of the eye and adnexa remain as the tenth leading cause since 2012. The rank of Neoplasms is unchanged with the last year and remaining as the 11th leading cause.

Graphical representation of the leading causes of hospitalization is given in Figure 2.3.

Traumatic injuries (S00-T19, W54) have been the major cause of hospitalization with 1,130,084 cases reported in 2018. Fortunately, the percentage of deaths due to traumatic injuries is only 0.17% among the hospitalizations.

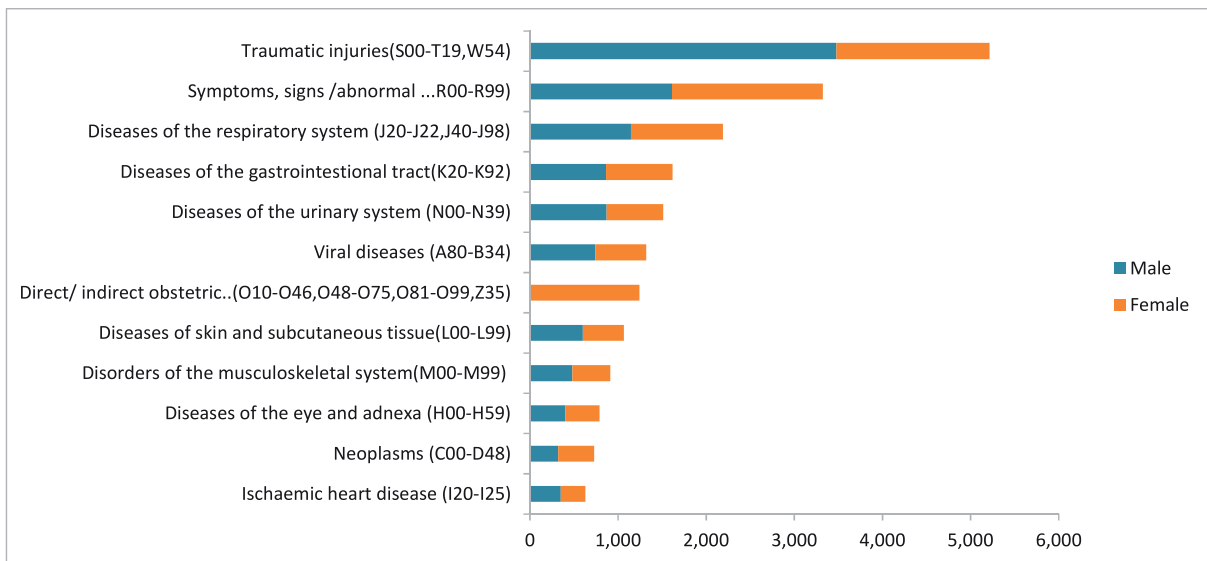


Figure 2.3 : Leading Causes of Hospitalization, 2018
 Source: Medical Statistics Unit

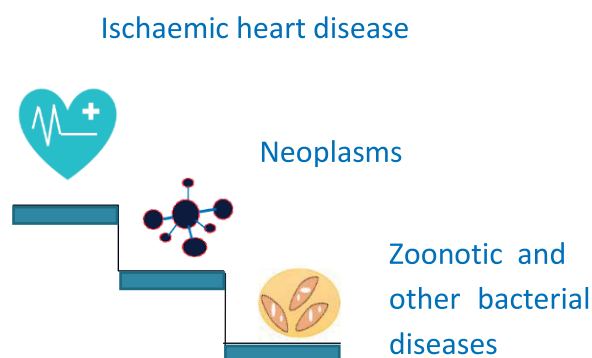
2.3. Hospital Mortality

Mortalities related to Neoplasms (C00-D48), Diseases of the nervous system (G00-G99), Diseases of the circulatory system (I00-I99), Diseases of the respiratory system (J00-J99), Diseases of genitourinary system (N00-N99), Diseases of the digestive system (K00-K93), Pregnancy, childbirth and the puerperium (O00-O99), Certain conditions originating in the perinatal period (P00-P96), Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99), Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified (R00-R99), Injury, poisoning and certain other consequences of external causes (S00-T98) have increased in 2018 in comparison with 2017. (Annexure I : Detailed Table 17)

It is estimated that only 30-40 percent of registered deaths occur in government hospitals.

Only 30-40 percent of registered deaths occur in government hospitals

2.3.1. Leading Causes of Hospital Deaths



Deaths per 100,000 population for the top ten causes are shown in the Figure 2.4. There is a considerable gender variation in the number of deaths per 100,000 population according to the Figure 2.4. Male deaths are relatively higher than corresponding female deaths for most of the major leading causes of deaths.

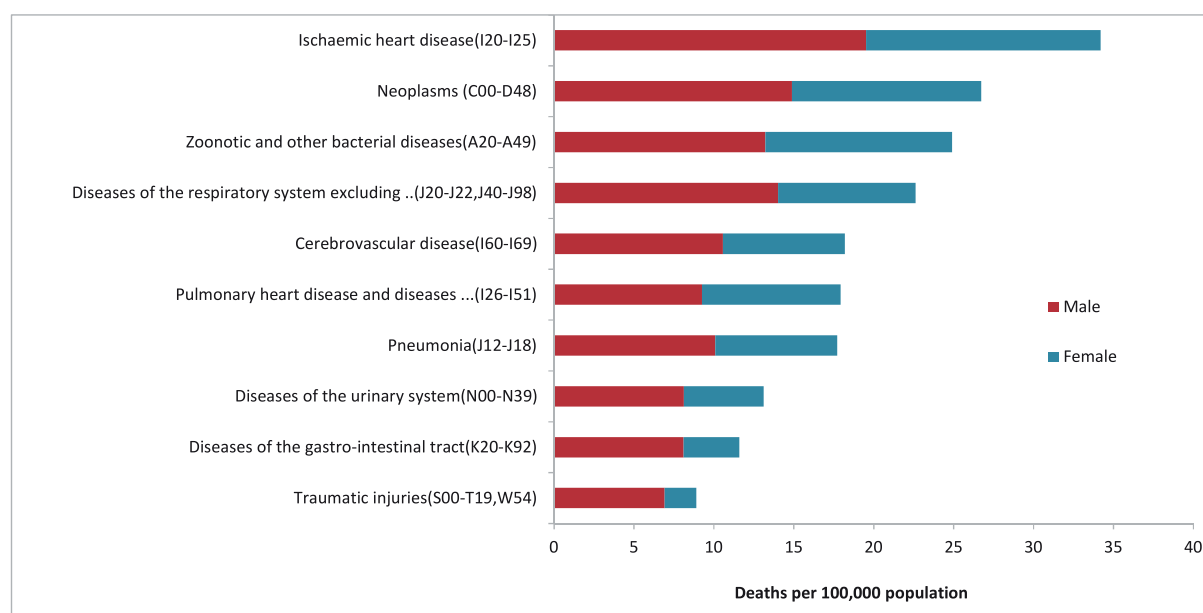


Figure 2.4 : Leading Causes of Hospital Deaths, 2018

Source: Medical Statistics Unit

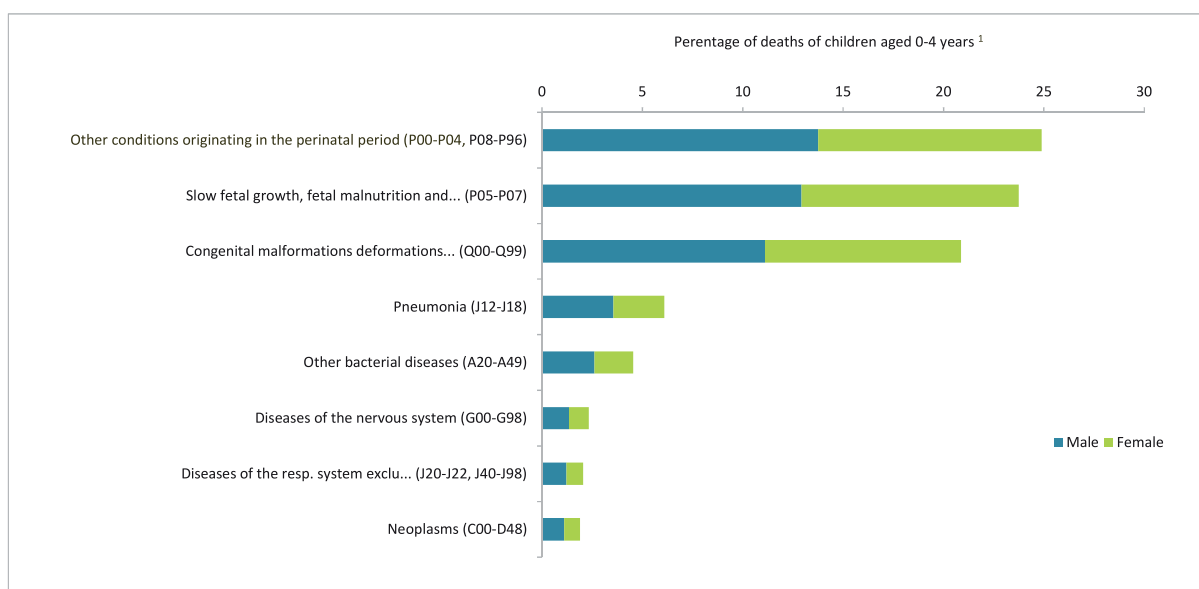
Ischaemic heart disease is the main leading cause of death in Sri Lanka. Neoplasms is ranked as the second leading cause of death in 2018. Higher number of deaths associated with neoplasms in Colombo, Kandy, Galle, Jaffna, Kurunegala, Anuradhapura, Badulla and Rathnapura districts is a result of cancer patients being transferred to the Teaching Hospitals in Maharagama (Colombo district), Kandy, Karapitiya, Jaffna, Anuradhapura,

Rathnapura and Provincial General Hospitals in Kurunegala and Badulla where advance facilities for the treatments of neoplasms are available.

Zoonotic and other bacterial diseases was ranked as the sixth leading cause of death from 2010 to 2013 and the third leading cause of death from 2014 to 2016. In 2017, it became the second leading cause of death in Sri Lanka. But again it is at third rank in 2018.

Cerebrovascular disease which was the third leading cause of death in 2013 ranked as fifth in the year 2014 and fell to be the sixth leading cause of death in 2015 and 2016. It was ranked as the seventh leading cause of death in 2017 and has become fifth in 2018.

Leading causes of death for children in the age group of 0 to 4 years are presented in the following figure.



¹ Analysed all deaths excluding undiagnosed/uncoded

Figure 2.5 : Leading Causes of Hospital Deaths for Children Aged between 0-4 Years, 2018

Source : Medical Statistics Unit

As shown in figure 2.5, Other conditions originating in the perinatal period (P00-P04, P08-P96) is the leading cause of death of 0-4 year old children and slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight (P05-P07) is the second leading cause of death of that group. Nearly 22% of total deaths of that group are due to congenital malformations deformations and chromosomal abnormalities (Q00-Q99).

The major leading cause of death for children (0-4 years) is other conditions originating in the perinatal period (P00-P04, P08-P96)

2.3.2. Case Fatality Rate

According to 2018 hospital statistics, septicemia case fatality rate has been reported as the highest rate which is 37.6 deaths per 100 cases and it has a decreasing trend from 2016. (Annexure I : Detailed Table 27). Case fatality rate of pneumonia is continuously increasing from 2014 to 2017 and it has a slight reduction in 2018. It is remaining as the second highest case fatality rate from 2014 up to 2018 among

the selected diseases. Other than that case fatality rates of liver diseases, septicaemia, hypertensive diseases, ischemic heart diseases, pneumonia and asthma have been decreased in 2018 compared to 2017. Graphical representation of the trends in case fatality rates of some selected diseases are given in Figure 2.6.

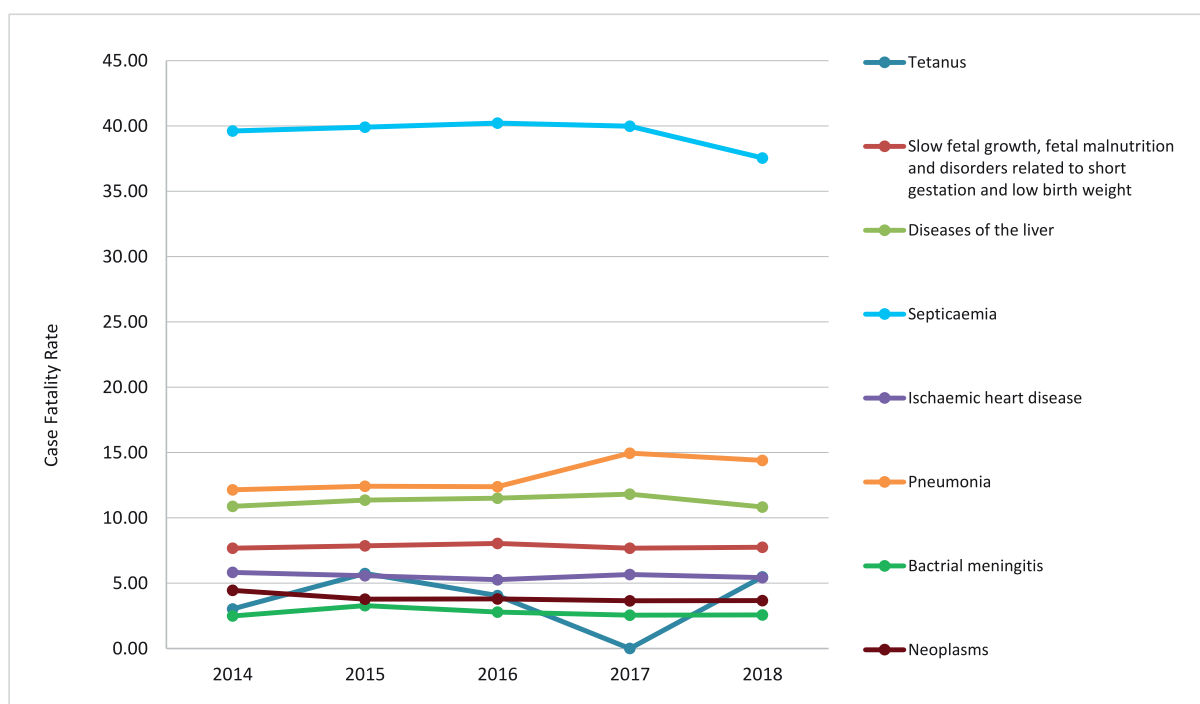


Figure 2.6 : Trends in Case Fatality Rates of Selected Diseases, 2014 - 2018

Source: Medical Statistics Unit

2.4. Registration of Deaths

In Sri Lanka 80 percent of registrars who register deaths, are non-medical registrars. The cause of death given by the non-medical registrars may not be as accurate as desired. This is evident by the large number ascribed to symptoms, signs and ill-defined conditions. What is disturbing is

the relatively large number of such causes of deaths among the urban deaths, which are predominantly medically confirmed or at least medically examined.

3. Health Related Sustainable Development Goals (SDG)

In 2016, countries adopted the 2030 agenda for Sustainable Development and 17 Sustainable Development Goals.

SDG 3 is concerned with health which is to ensure healthy lives and promote wellbeing for all at all ages. There are 13 targets to be achieved in SDG 3.

Sri Lanka has Identified and finalized 46 indicators. Thirteen core indicators of SDG 3 had been subdivided into 38 health indicators. The remaining 8 indicators are non-SDG 3 but related to health. A common set of seven stratifiers, namely age, sex, sector, educational level, marital status, wealth and subnational level was selected to report data.

To make the people of the country aware about the SDG 3 indicators and the baseline values of the indicators, an online dashboard was launched on the World Health Day 2018. It is intended to update the data of the dashboard periodically.

Health SDG profile for Sri Lanka for the year 2017 was also developed and published by WHO Southeast Asia Regional Office (SEARO) based on local data supplied by the Ministry of Health and WHO Country Office.

Two workshops (26th and 28th June, 2018) with the participation of all stakeholders to discuss targets for 2030 were held and was followed by a National Consensus achieving meeting on 12th July, 2018, under the WHO Biennial Action Plan to set targets for the SDG indicators which came as a recommendation of the National Steering Committee.

Data was collected in the year 2017 in relation to the indicators to be reported annually to monitor the progress. The baseline values and the targets set for 2030 for the SDG 3 indicators are given in Table 3-1.

It is planned to issue a circular with regard to SDG indicators with baseline values and targets in 2019. It is also planned to develop the strategic framework and action plans to achieve the targets set for 2030 in 2019.

Table 3-1 : Baseline Values, Targets Set for 2030 and the Current Values for the SDG 3 Indicators

Global Target		Indicator Number	Indicator	Baseline	Target 2030	Current Value (2018)
1	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1	Maternal mortality ratio	33.7 per 100,000 live births (2015)	16 per 100,000 live births	32 per 100,000 live births (FHB)
2		3.1.2	Births attended by skilled health personnel	99.5% (2016)	100%	99.9% (FHB)
3	3.2 By 2030, end preventable deaths of new-borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1	Children under-five mortality rate	9.8 per 1,000 live births (2013)	5 per 1,000 live births	10.6 per 1000 live births (FHB)
4		3.2.2	Neonatal mortality rate	5.9 per 1,000 live births (2013)	2.2 per 1,000 live births	6.5 per 1000 live births (FHB)
5	3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3.1	HIV incidence rate	0.03 per 1000 population (2015)	<0.01 per 1000 population	0.01 per 1000 population
6		3.3.2	TB incidence rate	65 per 100,000 population (2015)	13 per 100,000 population	40.1 per 100,000 population
7		3.3.3	Malaria incidence per 1,000 population	Zero	Maintain zero indigenous malaria incidence	0 (AMC)
8		3.3.4	Hepatitis B incidence per 100,000 children 5-years of age (This is being revisited at global level)			
9		3.3.5	Number of people requiring interventions against Neglected Tropical Diseases (NTD)			
			1. Dengue - Number receiving treatment for dengue per year	41, 819 (Average of 2012 - 2015)	21,000	54,532 (DCP)
			2. Rabies - Number of deaths due to human rabies	23 (2017)	Zero human rabies deaths	25 (PHVS)

Contd.

Global Target		Indicator Number	Indicator	Baseline	Target 2030	Current Value (2018)
			3. Filariasis - Number of new lymphedema cases due to filaraisis receiving treatment per year	753 (2016)	Zero number of new lymphedema cases	736 (AFC)
			4. Leprosy - Number receiving treatment for leprosy per year	1,973 (2016)	1,000	1,821 (ALC)
			5. Leishmaniasis - incidence of reported cases of leishmaniasis per year	7.2 per 100,000 population (2016)	<1 per 100,000 populaion	3,273
10	3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	3.4.1	Mortality between 30 and 70 years of age from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases	17.7 (2015)	25% reduction from the baseline value	
11		3.4.2	Suicide mortality rate	14.5 per 100,000 population (2015)	11.6 per 100,000 population	15.1 per 100,000 population
12	3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	3.5.1	Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders - No global decision on this indicator			
13		3.5.2	Total alcohol per capita (age 15+ years) consumption	4.3 litres per person (2016)	3.6 litres per person	3.88 litres per person
14	3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1	Mortality rate from road traffic injuries	13.43 per 100,000 population (2015)	Reduce by 20%	14.54 per 100,000 population

Contd.

Global Target		Indicator Number	Indicator	Baseline	Target 2030	Current Value (2018)
15	3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	3.7.1	Percentage of currently married women of reproductive age (15-49 years) who desire either to have no (additional) children or to postpone the next child and who are currently using any modern method	74.2% (2016)	81%	58.4% (FHB)
16		3.7.2	Annual number of births to women aged 15–19 years per 1000 women in that age group (as 10-14 is not relevant to Sri Lanka) Adolescent fertility rate	30 per 1,000 women in the 15-19 years age group (2016)	20 per 1,000 women in the 15-19 years age group	
	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8.1.1 (3.7.1)	<u>Family Planning</u> : Percentage of women of reproductive age (15–49 years) who are married or in union who have their need for family planning satisfied with modern methods (SDG indicator 3.7.1)	74.2% (2016)	81%	
17		3.8.1.2	<u>Pregnancy and delivery care</u> : Percentage of women aged 15-49 years with a live birth in a given time period who received antenatal care four or more times (Antenatal care coverage – at least four visits (%))	98.8% (2016)	100%	
18		3.8.1.3	<u>Child immunization</u> : Percentage of infants receiving three doses of diphtheria-tetanus-pertussis containing vaccine	DPT3 - 97% (2016)	100%	BCG - 96% Penta1 - 97% OPV 1 - 97% Fipv 1 - 97% Penta 2 - 97% FIPV2 - 97% Penta3 - 97% OPV3 - 97% MMR 1-2 - 97% LJE - 97% DPT - 95% OPV 4 - 95% DT - 98% OPV 5 - 98% ATD - 95%

Contd.

Global Target		Indicator Number	Indicator	Baseline	Target 2030	Current Value (2018)	
19		3.8.1.4	<u>Child treatment:</u> Percentage of children under 5 years of age with suspected pneumonia (cough and difficult breathing not due to a problem in the chest and a blocked nose) in the two weeks preceding the survey taken to an appropriate health facility or provider (Care-seeking for symptoms of Acute Respiratory Infections (ARI))	52.3% (2016)	Yet to be decided		
20		3.8.1.5	<u>Tuberculosis:</u> Percentage of incident TB cases that are detected and successfully treated	84.6 % (2016)	> or = 90 %	84.10%	
21		3.8.1.6	<u>HIV/AIDS:</u> Percentage of people living with HIV currently receiving antiretroviral therapy (Antiretroviral therapy (ART) coverage)	15.3% (spectrum software) (2016)	> 90.0 %	44.53%	
22		3.8.1.8	Water and sanitation				
			Percentage of population using improved sanitation facilities (Population using safely managed sanitation services)	91.2% (2016)	98%		
23		3.8.1.8	Population using safely managed drinking-water service	90.4 % (2016)	100%		
24		3.8.1.9	<u>Hypertension:</u> Age-standardized prevalence of non-raised blood pressure (systolic blood pressure <140 mm Hg or diastolic blood pressure <90 mm Hg) among adults aged 18 years and older (Hypertension treatment coverage)	57.7 % (2015)	85%		

Contd.

Global Target	Indicator Number	Indicator	Baseline	Target 2030	Current Value (2018)
25	3.8.1.10	<u>Diabetes:</u> Age-standardized mean fasting plasma glucose (mmol/L) for adults aged 25 years and older (Diabetes treatment coverage)	69.5 % (2015)	85%	
27	3.8.1.12	<u>Tobacco:</u> Age-standardized prevalence of persons aged 18-69 years not currently using tobacco products	Males - 54.3% (2015), Females - 94.7% (2015), Both - 74.2% (2015)	90%	
28	3.8.1.13	<u>State hospital beds per capita</u> , relative to a maximum threshold of 18 per 10,000 population	100% (MSU data - 38.5) (2016)	Maintain at same level	100% (MSU data - 39.1)
29	3.8.1.14	<u>Health worker density and distribution</u> - Health professionals in the state sector (physicians, psychiatrists, and surgeons) per capita, relative to maximum thresholds for each cadre (part of SDG indicator 3.c.1) Thresholds Physicians - 0.9 per 1000 population Psychiatrists - 1 per 100,000 population Surgeons - 14 per 100,000 population	Physicians - 0.895 per 1000 population (99.45%) Psychiatrists - 0.3 per 100,000 population (30%) Surgeons - 2.3 per 100,000 population (16.4%) (2016)	Physicians - 1.79 Psychiatrists - 1.2 Surgeons - 3.8	Physicians - 0.91 per 1000 population Psychiatrists - 0.4 per 100,000 population Surgeons - 2.42 per 100,000 population
	3.8.1.16 3.d.1	<u>International Health Regulations (IHR) core capacity index</u> , which is the average percentage of attributes of 13 core capacities that have been attained	43% (2018)	70%	
30	3.8.2	<u>Financial protection coverage</u> - Proportion of population with large household expenditure on health as a share of total household expenditure or income	>10% - 0.06 >25% - 0.01 (2013)	Maintain at the same level	

Contd.

Global Target		Indicator Number	Indicator	Baseline	Target 2030	Current Value (2018)
31	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1	Mortality rate attributed to household and ambient air pollution	89 per 100,000 population (2016)	75 per 100,000 population	NA
32		3.9.3	Mortality rate attributed to unintentional poisoning	0.63 per 100,000 population (2013)	Maintain at the same level	
33	3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate	3.a.1	Age-standardized prevalence of current tobacco use among persons aged 18-69 years	25.8% (2015)	10%	
34	3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.	3.b.1	Proportion of the target population covered by all vaccines included in their national programme	BCG (99.2%)	BCG (100%)	BCG - 96%
35				3.b.2	Total net official development assistance to medical research and basic health sectors	0.984 USD (2016)
				DPT 3 (97%)	DPT 3 (100%)	Penta 1 - 97%
				Polio 3 (96%)	Polio 3 (100%)	OPV 1 - 97%
				MCV 2 (16.3%)	MCV 2 (100%)	FIPV 1 - 97%
				Tetanus toxoid (96.2%)	Tetanus toxoid (100%)	Penta 2 - 97%
				HPV 2 (0%)	HPV 2 (100%)	FIPV 2 - 97%
				Vaccination started in 2017		Penta 3 - 97%
						OPV 3 - 97%
						MMR 1-2 - 97%
						LJE - 97%
						DPT - 95%
						OPV 4 - 95%
						DT - 98%
						OPV 5 - 98%
						ATD - 95%

Contd.

Global Target		Indicator Number	Indicator	Baseline	Target 2030	Current Value (2018)
37	3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing states	3.c.1	Health worker density and distribution	Physicians - 0.895 Dental Surgeons - 0.09 Midwives/Nurses - 2.428 Pharmacists - 0.142 (per 1000 population) (2016)	Physicians - 1.790 Dental Surgeons - 0.140 Midwives/Nurses - 3.820 Pharmacists - 0.470 (per 1000 population)	Physicians - 0.910 Dental Surgeons - 0.09 Midwives /Nurses - 2.53 Pharmacists - 0.159 (per 1000 population)
38	3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks	3.d.1	International Health Regulations (IHR) capacity and health emergency preparedness	43% (2018)	70%	43%

4. Reproductive, Maternal, New-born, Child Adolescent and Youth Health

4.1. Maternal and Child Health

4.1.1. Maternal Mortality Ratio

Outcome of Maternal Death Surveillance and Response, 2018

Maternal Mortality Ratio (MMR) is calculated as the number of maternal deaths per 100,000 live births. MMR is an overall quality index of a country's socio-economic development and healthcare.

Sri Lanka reported an MMR of 1,694 per 100,000 live births in the year 1947 and gradually reduced the same over the last few decades to achieve the best MMR in the South Asian Region.

Maternal death Notification Criteria: All female deaths (15 – 49 years), irrespective of the cause, during the pregnancy period and until one year after termination of pregnancy.

In the year 2018, the field health staff catered for 3,909,165 eligible families all over the country and registered 363,336 pregnant mothers. Antenatal care was provided to 95.6% of them and 99.9% of women were delivered in a hospital.

For the year 2018, National Maternal Mortality Reviews (NMMR) in all 26 health regions were conducted and a review of all deaths (100%) was completed by November 2019.

A preliminary review of all probable maternal deaths (n=196) reported during the year identified 105 deaths as maternal deaths giving a national maternal mortality ratio of 32 per 100,000 live births. Live births reported by the Registrar General's Department for the year 2018 was taken as the denominator (328,112). It is notable that there was an increment of 2,060 live births in the denominator (2017 - 326,052).

Maternal Deaths	=	105
Live Births	=	328,112
MMR	=	32.0
(per 100,000 live births)		

Figure 4.1 illustrates the number of reported and confirmed maternal deaths from 2001 – 2018. Though there is a gradual reduction in the number of maternal deaths over the years, the number has been almost stagnant during the period 2014 - 2016.

A significant rise was noted in the year 2017 mainly due to a higher number of Dengue Haemorrhagic Fever (n=21) contributing to the maternal death profile. It is noteworthy the substantial reduction of maternal deaths in the year 2018.

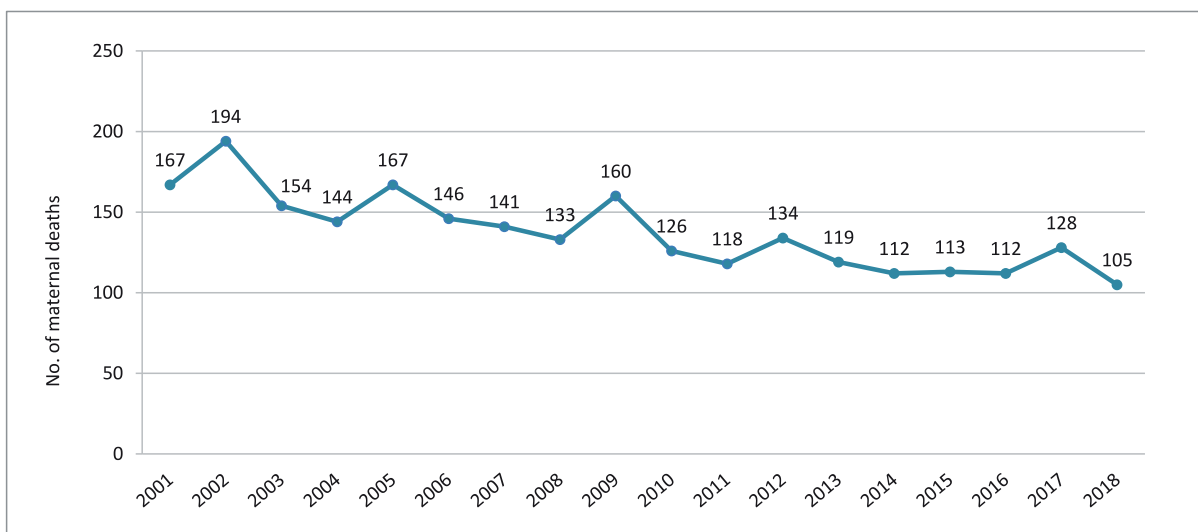


Figure 4.1 : Number of Maternal Deaths, 2001 - 2018

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

Sri Lanka's MMR is well below the rate of other South Asian counterparts and is on par with high-income countries. Figure 4.2 depicts the declining trend of MMR over the years from

1995 – 2018. However, similar to the number of maternal deaths, the MMR also has been stagnant since 2010.

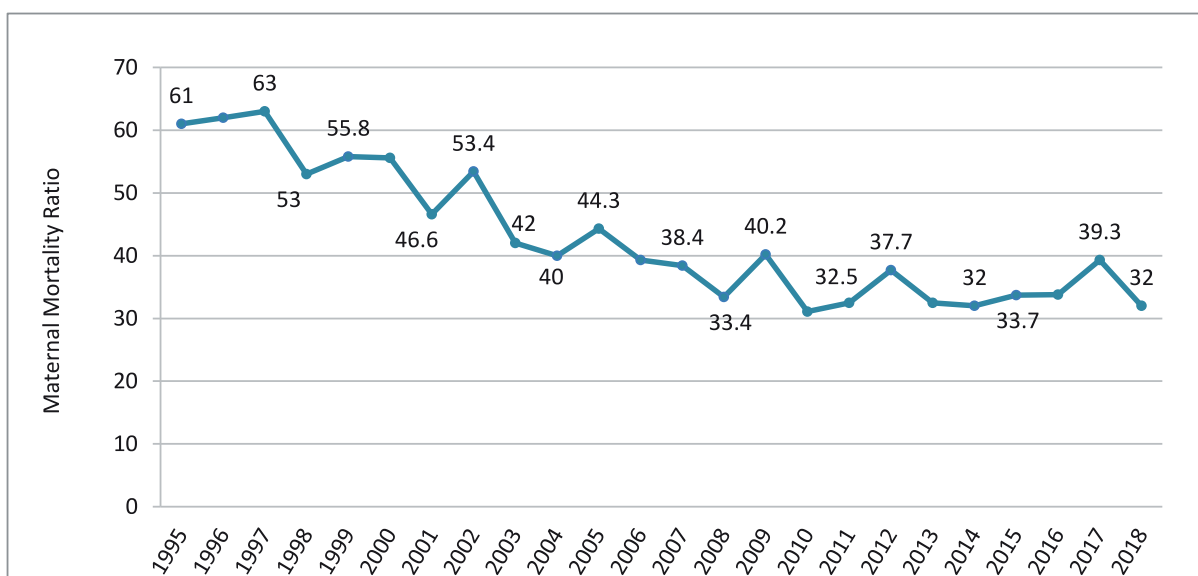


Figure 4.2 : Maternal Mortality Ratio, 1995 - 2018

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

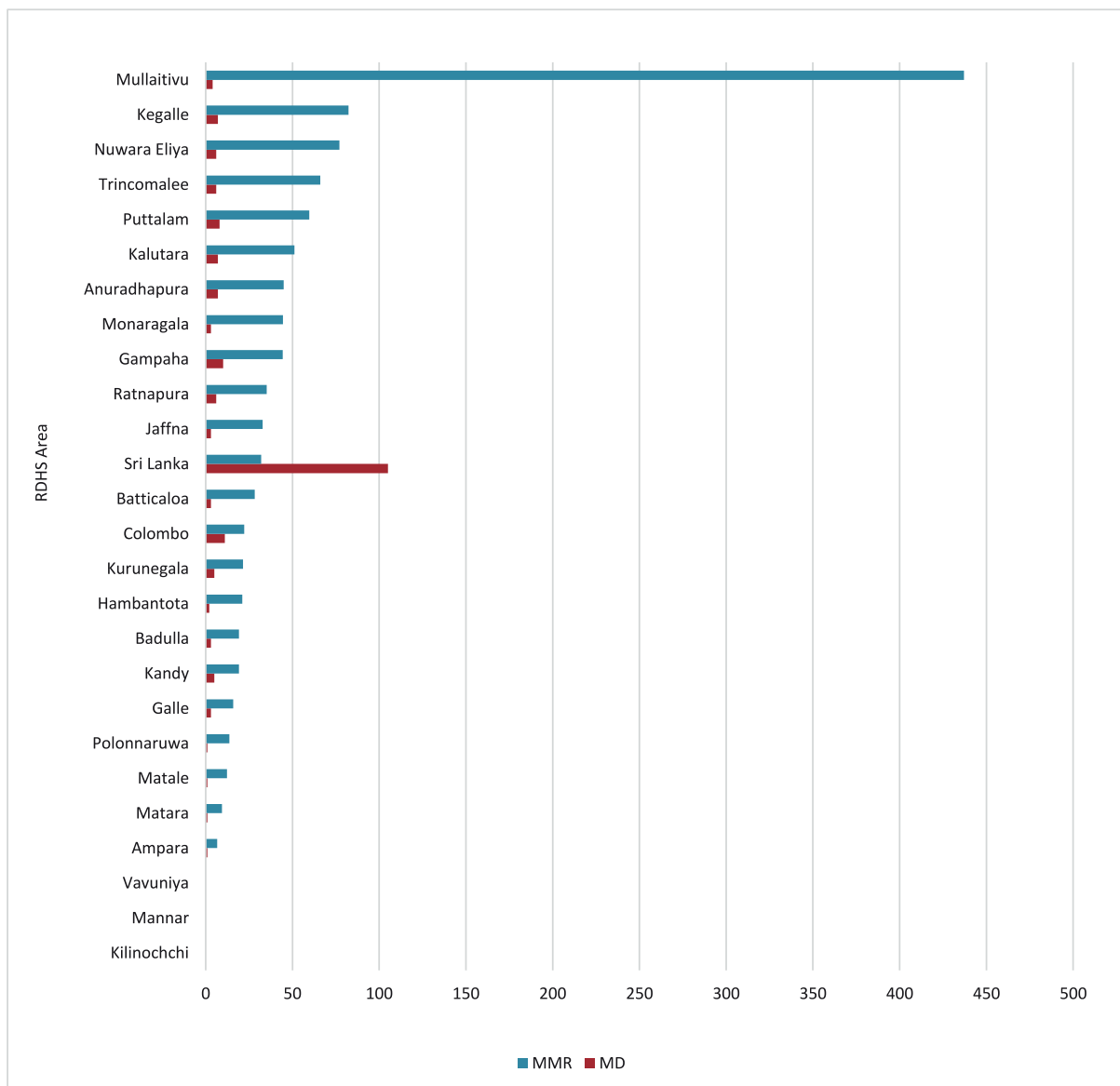


Figure 4.3 : Number of Maternal Deaths and Maternal Mortality Ratio by District, 2018

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

The analysis of district-level number of deaths and MMR based on live births reported for each district by the Registrar General's Department shows a wide variation (Figure 4.3). Eleven districts have their district MMR above the national value. The highest MMR was reported from the Mullaitivu district (437.2 per 100,000 live births). Other leading districts are Kegalle, Nuwara Eliya, Trincomalee and Puttlam. The highest number of maternal deaths was reported from Colombo and Gampaha districts.

More than half (52%) of the deaths were direct maternal deaths while 47% were indirect and 1% were uncertain. Causes of the maternal deaths reported in 2018 are indicated in Figure 4.4. The leading causes were obstetric haemorrhage (n=20), respiratory disease (n=15) and heart disease (n=15). These three causes were rotating over the past few years as the leading causes of maternal deaths in the country.

Of the 20 maternal deaths due to obstetric haemorrhage, three deaths each had been reported from uterine rupture and vaginal/cervical/perineal tear and two due to either placenta praevia or placenta accrete. Eleven of the deaths reported from the respiratory diseases had been due to influenza virus infections. Cardiomyopathy (n=5) and rheumatic heart disease (n=4) were the leading heart diseases.

It is noteworthy that the large reduction of abortion-related deaths and liver disease in the index year. It should be noted that there were 38 maternal suicides reported in the year 2018. However, only indirect and direct cases which fulfil the maternal death definition were included in the analysis.

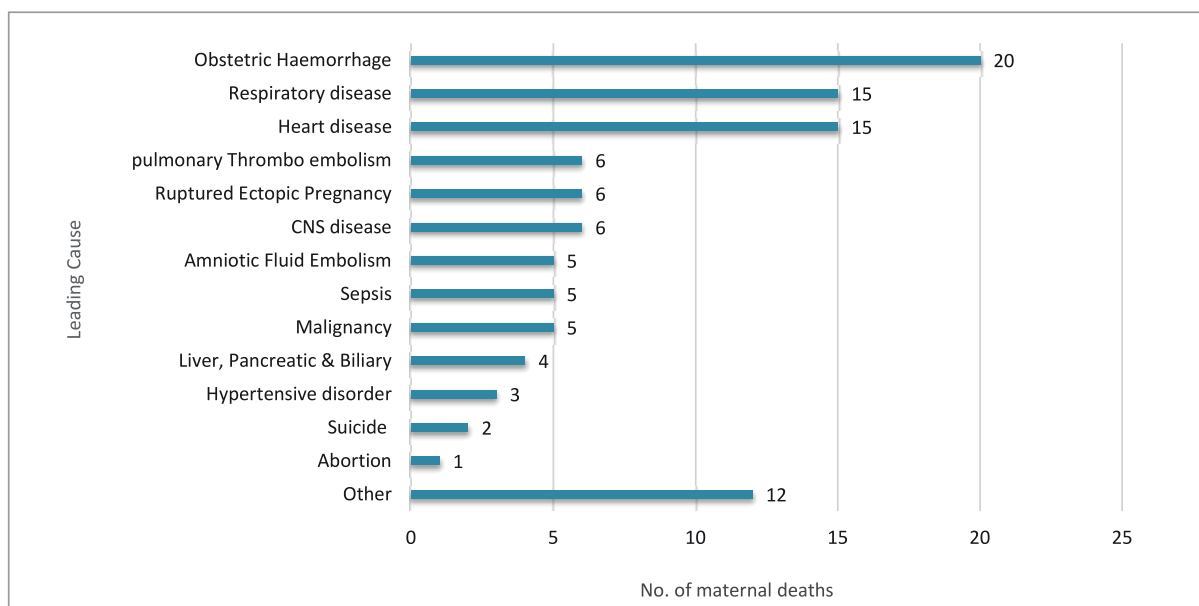


Figure 4.4 : Leading Causes of Maternal Deaths, 2018

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

There were 33 maternal deaths related to caesarian sections. Table 4-1 indicates the indications of the caesarian sections of the maternal deaths. The main indications of

caesarian sections were medical condition complicating pregnancy, pregnancy-induced hypertension, fetal distress and past sections.

Table 4-1 : Indications of Caesarian Sections of the Maternal Deaths, 2018

Indication	Number	%
Medical condition complicating pregnancy	8	24.2
Pregnancy Induced Hypertension	5	15.2
Fetal distress	4	12.1
Past sections	3	9.1
Elderly mother	2	6.1
Uterine rupture	2	6.1
Placenta accreta / Placenta previa	2	6.1
Severe IUGR & PIH	1	3.0
Twins	1	3.0
Not recorded	5	15.2
Total	33	100.0

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

Table 4-2 indicates the main outcome of the pregnancy among the maternal deaths. A live baby was delivered by half of the women (50.5%).

Table 4-2 : Outcome of Pregnancy of the Maternal Deaths, 2018

Outcome of Pregnancy	Number	%
Not delivered	29	27.7
Live birth	53	50.5
Still birth	15	14.3
Ectopic	6	5.7
Hydatidiform mole	1	1.0
No details	1	1.0
Total	105	100.0

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

A majority (n=87; 83%) of women were cared at a hospital before they died (Table 4-3). Twelve women were pronounced dead on admission to a hospital. Out of the women who died at the hospital, a majority (n=61; 70%) died at a teaching or a provincial general hospital and 23 (26%) at a base or a district general hospital. There were two deaths from ural hospitals and one from a private hospital.

Table 4-3 : Place of Death of the Maternal Deaths, 2018

Place of Death	Number	%
Hospital	87	82.9
On admission	12	11.4
Home	4	3.8
In transit	2	1.9
Total	105	100.0

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

Three delays (seeking, reaching and treating) were assessed in confirmed maternal deaths. Delays were identified in 76 (72%) deaths (Figure 4.5). Out of total deaths due to identified delays (n=76), deaths due to delays in seeking

care was attributable to 50 (66%) cases. Suboptimal care provision, both at field and hospital, was revealed in 49 (64%) cases out of 76 cases.

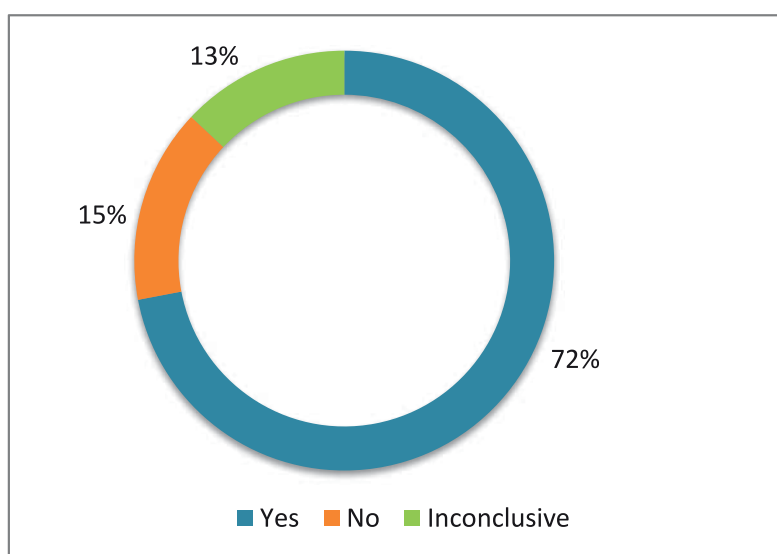


Figure 4.5 : Presence of Delays of the Maternal Deaths, 2018

Source: Family Health Bureau

Out of the 105 maternal deaths reported, 69 (66%) were categorized as preventable based on expert opinion (Figure 4.6).

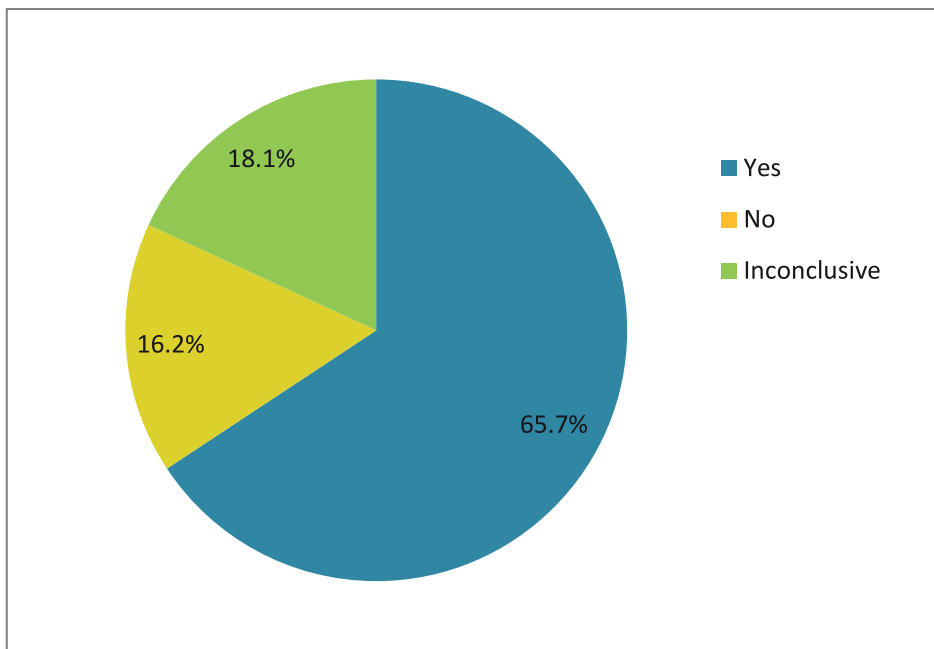


Figure 4.6 : Preventability of Maternal Deaths, 2018

Source: Maternal & Child Morbidity & Mortality Surveillance Unit - Family Health Bureau

At each district level national maternal mortality reviews, these cases were discussed, deficiencies identified and the recommendations were formulated. These details were included in relevant district maternal mortality minutes and disseminated to all stakeholders.

4.1.2. Still Birth Rate

In order to reduce the still birth rate from 6.4/1000 births in 2018, to 3.5/1000 births by the end of 2025 as given in the Every New-born Action Plan (WHO 2014), a still birth rate of 4.5/1000 births by 2020 must be achieved. The target is to achieve a still birth rate of 2.2/1000 births by 2030.

Since 2016, still birth registration has been streamlined through the civil registration system by the introduction of a stillbirth certificate which must be completed before disposal of the dead body. Differentiation of still births by fresh and macerated and reporting percentages of each category by health facilities are needed in order to assess the quality of ANC care provided by the health facility.

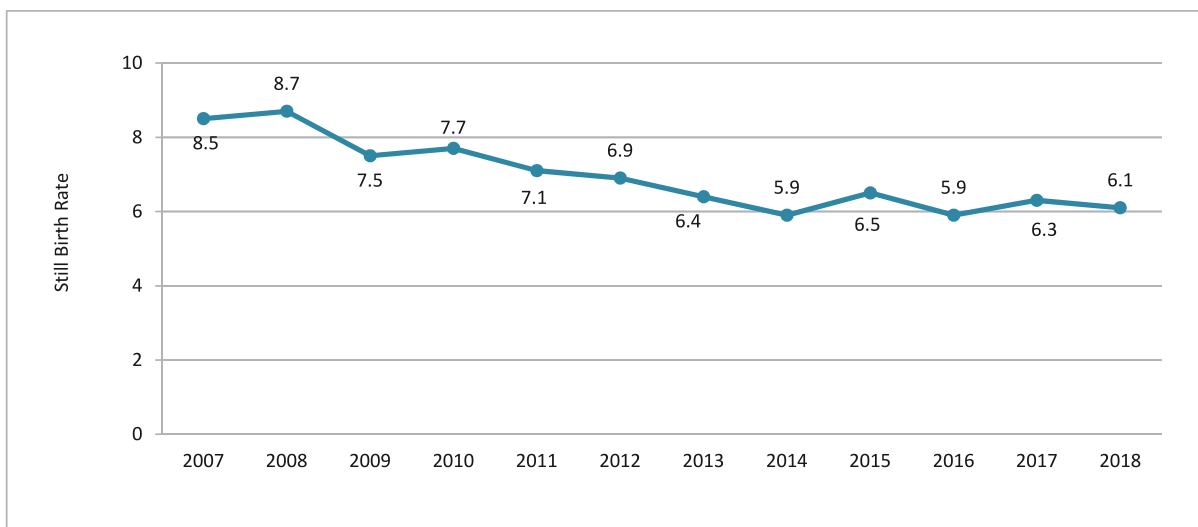


Figure 4.7 : Still Birth Rates, 2007 - 2018

Source: RHMIS 2018 - Family Health Bureau

4.1.3. Neonatal Mortality Rate

Early Neonatal Mortality Rate (ENMR) is compared globally as an important indicator in Every newborn Action Plan (ENAP). ENMR for 2018 reported by RHMIS is 4.6 per 1000 live births.

Foeto-infant mortality surveillance by FHB collects individual data by each case and analyse in detail. Surveillance data for 2015 indicate ENDR of 4.8, whereas the routine information system for the same year has reported 4.5. These indicators need to be compared with data from the civil registration system.

A Time series analysis of Neonatal Mortality Rates from 1996 – 2012 depicts that the country can achieve the expected target, if we reduce the neonatal mortality with the same rate of reduction as shown from 1996 - 2012, up to 2025.

To achieve the targets set for 2030 for NNMR, and SBR priority packages of interventions have been identified to strengthen care during labour and childbirth, essential newborn care, care of the sick and small newborn and care beyond newborn survival.

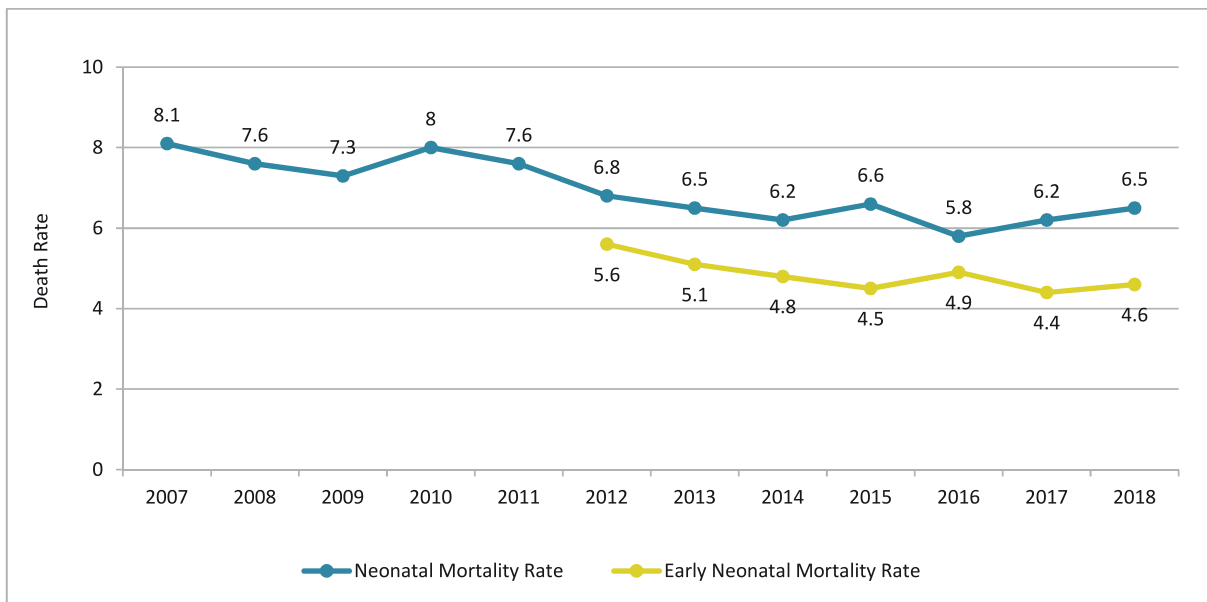


Figure 4.8 : Neonatal Mortality Rates, 2007 - 2018

Source : Family Health Bureau

4.1.4. Infant Mortality Rate

Infant Mortality Rate of Sri Lanka has reduced to the level of many high-income countries. In 2018, 2,863 infant deaths were reported with an Infant Mortality Rate (IMR) of 9.1 for 1000 live births from routine RHMIS. The last available IMR from Registrar Generals' Department is for 2015 and it was 8.5 per 1000 live births.

As illustrated by Figure 4.9, out of infant deaths, 40.4% were due to non-preventable congenital abnormalities, while nearly 40% were due to preventable causes: prematurity, asphyxia and neonatal sepsis. Out of total infant deaths, 2,039 (71.2%) were due to neonatal deaths. Out of neonatal deaths, 1,494 (73.3%) were early neonatal deaths.

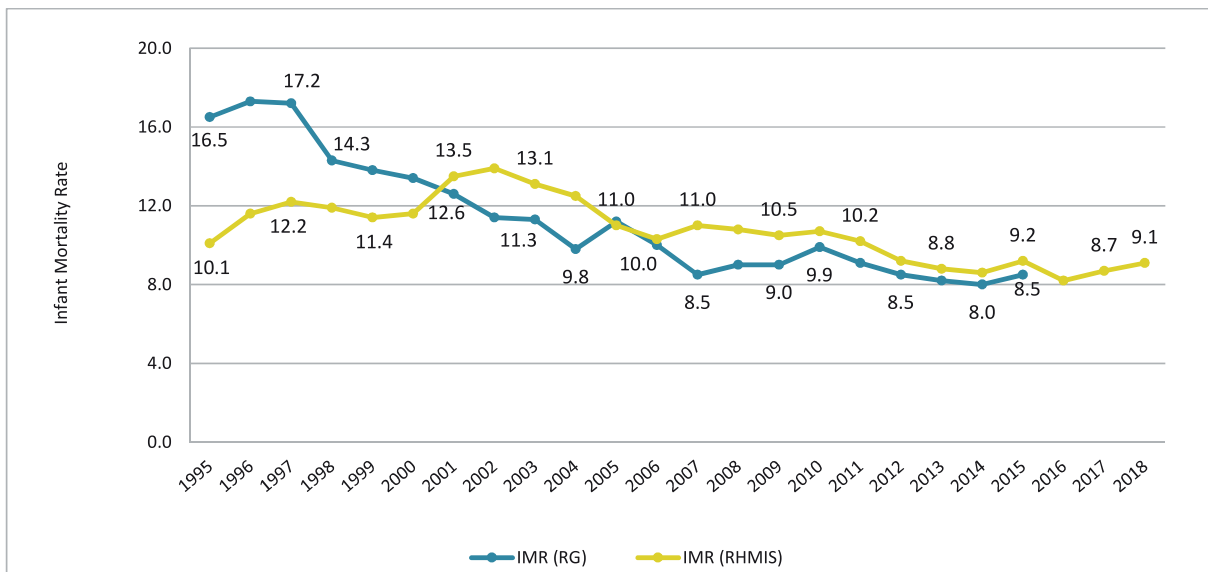


Figure 4.9 : Comparison of Trends in National IMRs Determined from RHMIS and Registrar General's Department, 1995 - 2018
 Source: eRHMIS 2018 - FHB, Register Generals' Department

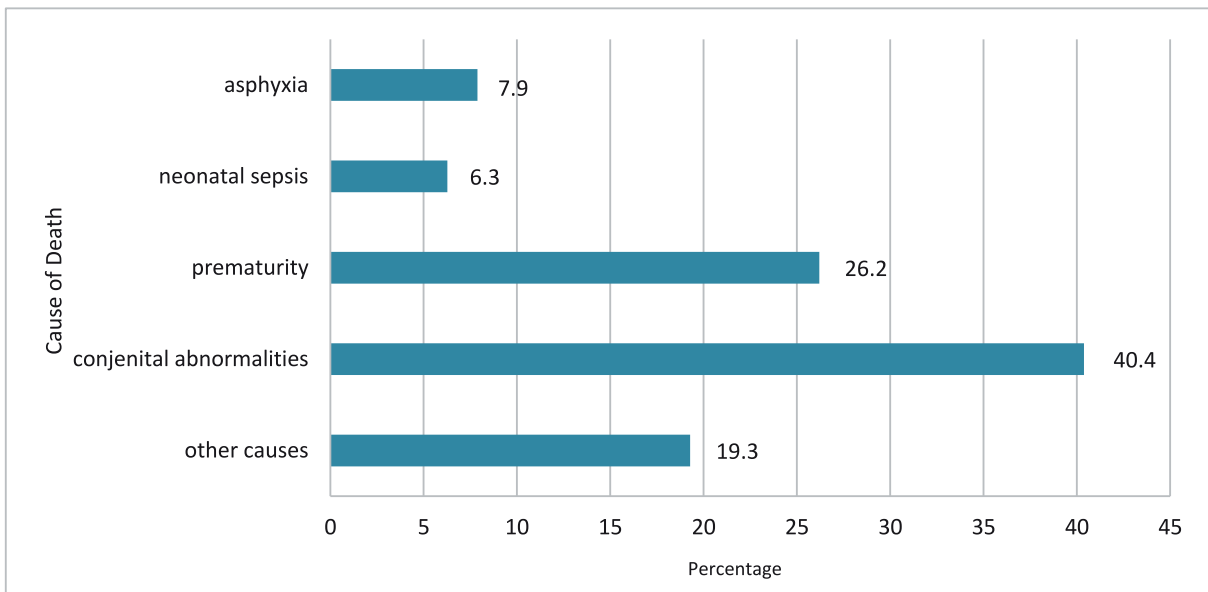


Figure 4.10 : Percentage Distribution of Cause of Infant Deaths, 2018
 Source: eHRIS 2018 - Family Health Bureau

4.1.5. Under Five Mortality Rate

In 2018, under 5 mortality rate reported by Medical Officers of Health through eRHMS was 10.5.

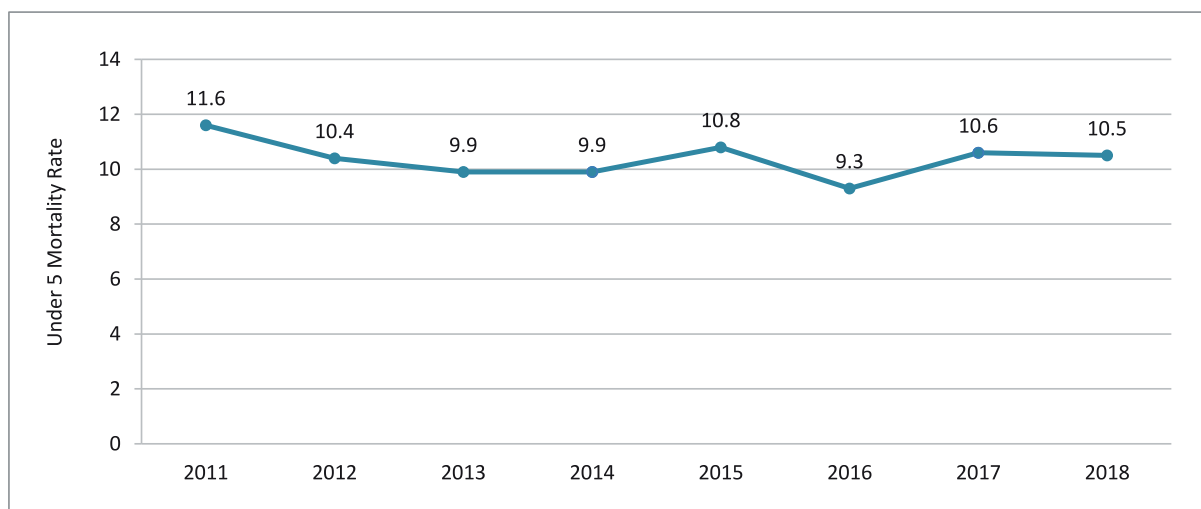


Figure 4.11 : Under Five Mortality Rate, 2007 - 2018

Source: eRHMS 2018 - Family Health Bureau

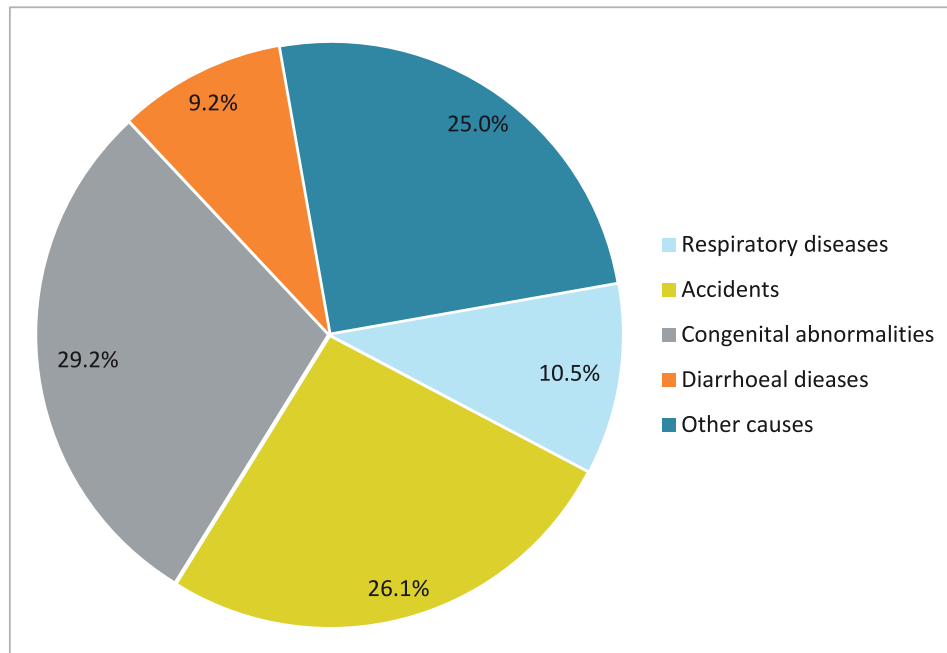


Figure 4.12 : Percentage Distribution of Cause of 1-5 Year Child Deaths, 2018

Source: eRHMS 2018 - Family Health Bureau

5. Infectious Diseases/Communicable Diseases

5.1. Dengue Fever (DF)/Dengue Haemorrhagic Fever (DHF)

The Dengue is currently endemic in more than 100 countries mainly in the regions of South-East Asia, the Western Pacific, the America and the Eastern Mediterranean. There are about 4 billion people at risk and 390 million dengue infections occurring each year which includes nearly 5 million Dengue Haemorrhagic Fever cases and 22,000 deaths. The America, South-East Asia and Western Pacific regions are the most seriously affected, exceeding 1.2 million cases in 2008 and over 3.2 million in 2015.

Dengue is a major vector-borne disease in Sri Lanka where it has become an endemic disease with regular epidemics. Total reported cases for the year 2018, were 51,659 with an overall incidence of 240.9 per 100,000 population and the majority were males (60.1%) and the percentage of cases between 25 to 49 years of age is 49.3%. The number of deaths was 58 with a case fatality ratio (CFR) of 0.11%. The Western province contributed to the majority of cases (37.4%) with an overall incidence of 316.9 per 100,000 population (Figure 5.1).

Epidemiological data of patients' records revealed the occurrence of two distinct peaks where it correlates with seasonal (monsoonal) rain patterns and the geographical areas of the country. The first peak from the 22nd to 34th week correlates with the South West monsoonal rain mainly in the wet zone of the country while the 2nd peak from 43rd to 53rd week corresponds with the North Eastern monsoonal rain in the dry zone of the country.

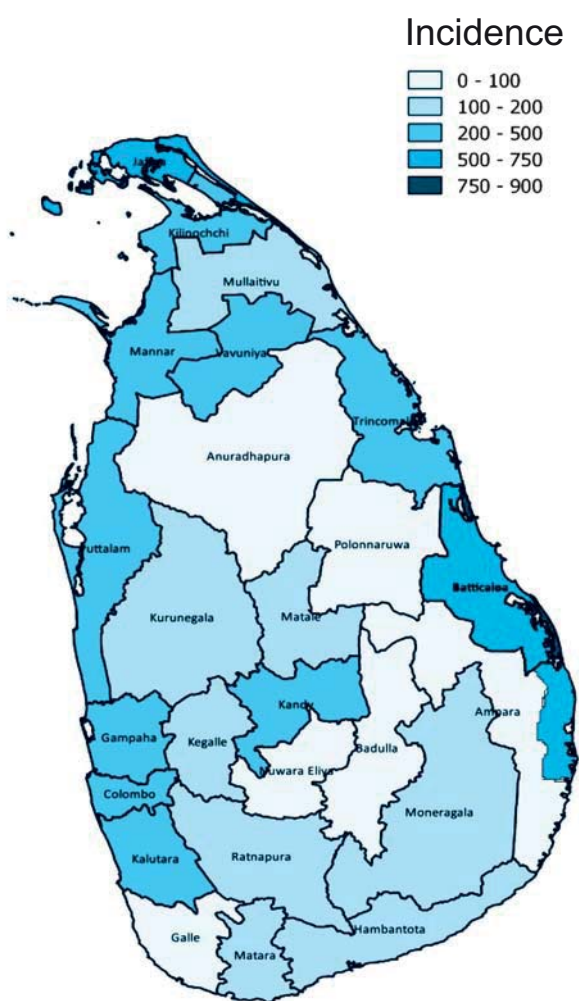


Figure 5.1 : Incidence of Dengue in Sri Lanka, 2018

Source: National Dengue Control Unit (NDCU)

Recommendations

- ◆ The rising trend of Dengue is associated with urbanization, physical development and migration of population which generates multiple mosquito breeding habitats. Vector indices indicate that the vector mosquito breeding mainly occurs in discarded receptacles, water storage tanks, roof gutters, concrete slabs, etc. Continuous public awareness on the elimination of breeding places, keeping the premises/schools/ construction sites/ workplaces dengue mosquito breeding free and implementing feasible & sustainable waste management policies are highly recommended especially before monsoonal rains in high transmission risk areas.
- ◆ The low case fatality rate is achieved by training of health staff in the curative sector with the provision of health institutions with the necessary equipment for patient management. Further, early treatment-seeking behaviour, prompt diagnosis and prompt laboratory investigations are recommended for suspected dengue patients.

- ◆ Maintaining a real-time web-based vector surveillance data system and rapid vector control activities by the preventive sector with multi-sector engagement is highly recommended. Regular, proper and solid waste management programme in high-risk areas by the local government is essential with special emphasis on non-degradable container removal.
- ◆ Regular elimination of mosquito breeding places within school premises, public and private institutions, construction sites, religious places and public places is mandatory.
- ◆ Provincial/District/Divisional coordination committee meetings by the respective higher authorities of the relevant ministries are strongly recommended.

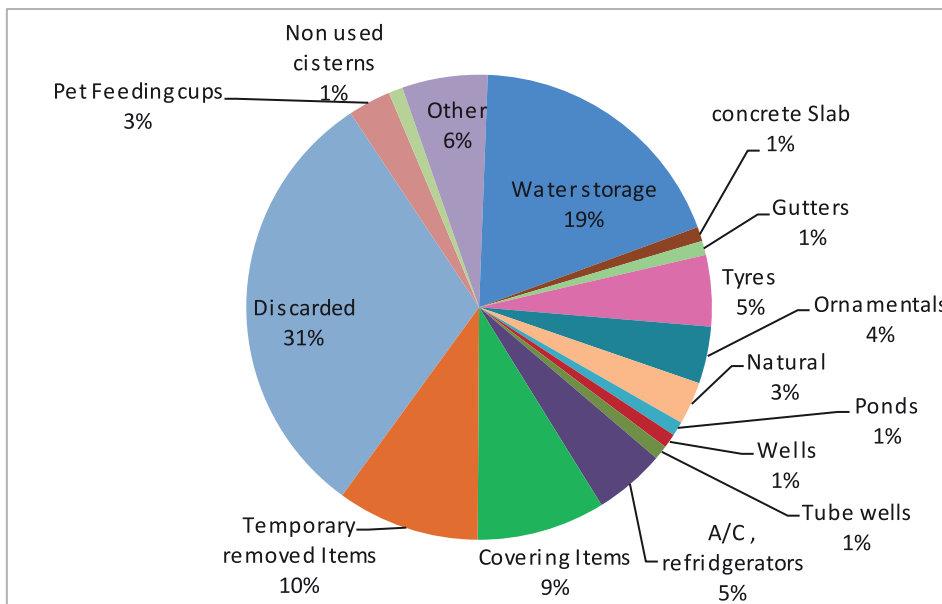


Figure 5.2 : Summary of Breeding Places, 2018

Source: Island wide entomological surveillance data, National Dengue Control Unit

5.2. Tuberculosis

Tuberculosis (TB) continues as a public health problem in the country and the estimated incidence in 2018, is 65/100,000 population. Around 9,000 cases are reported every year and the ratio for new pulmonary to new EPTB is 2.4 in 2018. Nearly 65% of total TB cases are pulmonary TB (PTB) while 70% of PTB are bacteriologically confirmed. There are 14 Multi-Drug Resistant TB (MDR) patients reported in the country in 2018 and the number of people with TB/HIV co-infection is 23 (Number detected by screening in both TB and HIV programmes).

The National Programme for Tuberculosis Control and Chest Diseases is the national focal point for the prevention and control of TB in the country. The services are provided through a network of 26 District Chest Clinics, 1 sub chest clinic, 108 branch clinics and more than 150 microscopic centers. Diagnostic culture facilities are available at National TB Reference Laboratory (NTRL) and Intermediate TB Laboratories at Rathnapura, Kandy, Jaffna and Galle.

- ◆ In 2018, 8,856 incident cases (new and relapse cases; 40.1/100,000 population) were notified to the National Programme and there is a gap of around 4,000 cases between the number notified and the number estimated for the country.
- ◆ The observed inadequacies were
 - Fewer referrals from primary health care settings for sputum investigations leading to underutilization of microscopic centers
 - Inadequate contact screening
 - Mal-distribution of trained manpower
 - Poor involvement of non-governmental organizations and community-based organizations at the district level
 - Inadequate involvement of the private sector
- ◆ The treatment success rate for the cohort of patients registered for treatment in 2017 was 84.2% and a high death rate (6.8%) has contributed mainly to the observed rate. Clinical practice has shown a late presentation and comorbid factors as the main reasons for deaths.

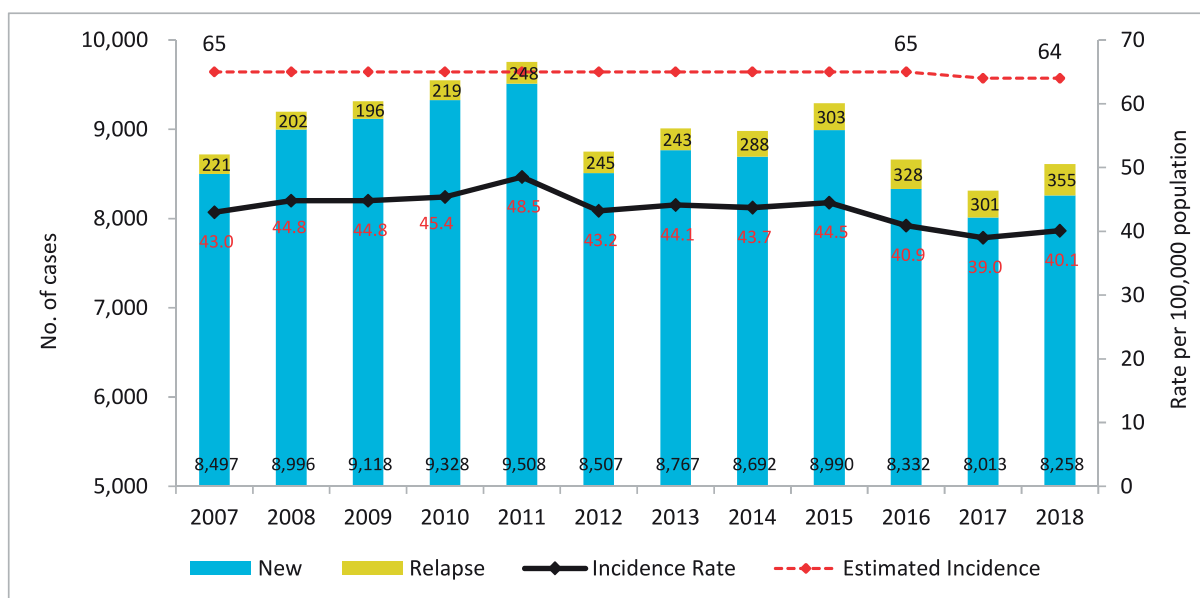


Figure 5.3 : Gap between the Estimated TB Cases (New & Relapse) and Notified Cases, 2007 - 2018
 Source: National Programme for Tuberculosis Control and Chest Diseases

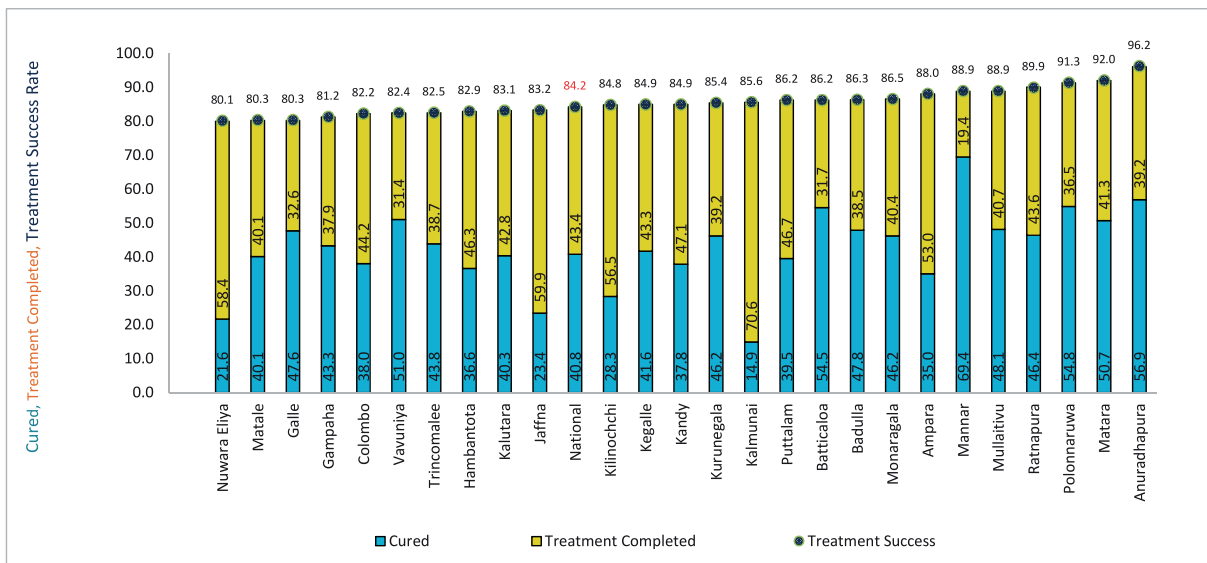


Figure 5.4 : Treatment Success Rate (Cured + Treatment Completed), 2017

Source: National Programme for Tuberculosis Control and Chest Diseases

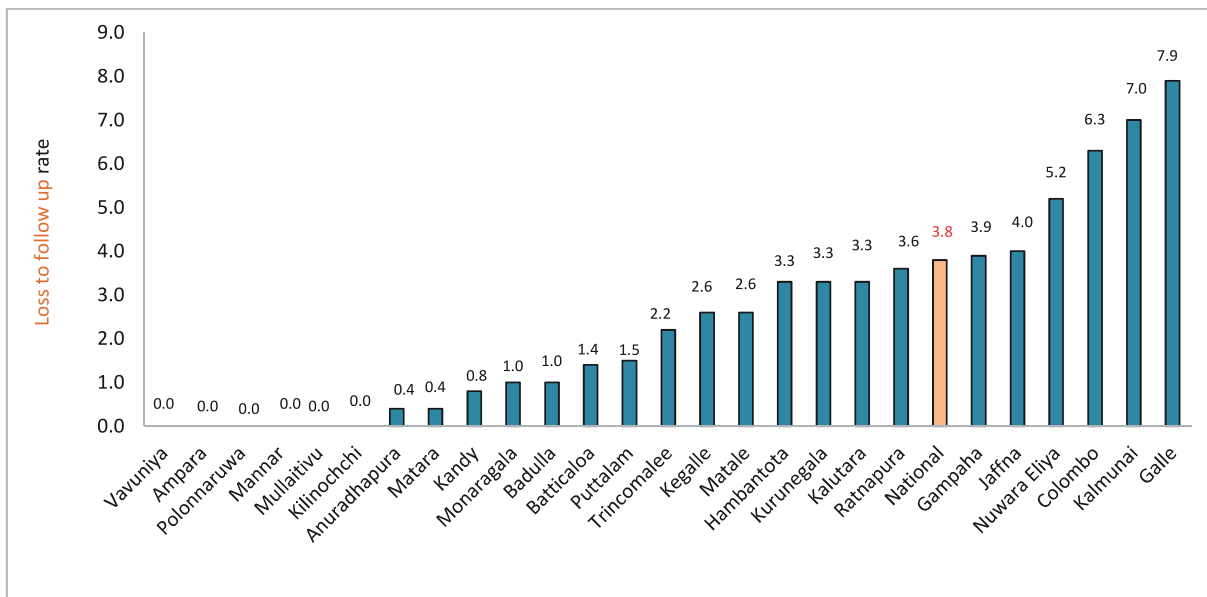


Figure 5.5 : Loss to Follow-up Rate of All Forms of TB, 2017

Source: National Programme for Tuberculosis Control and Chest Diseases

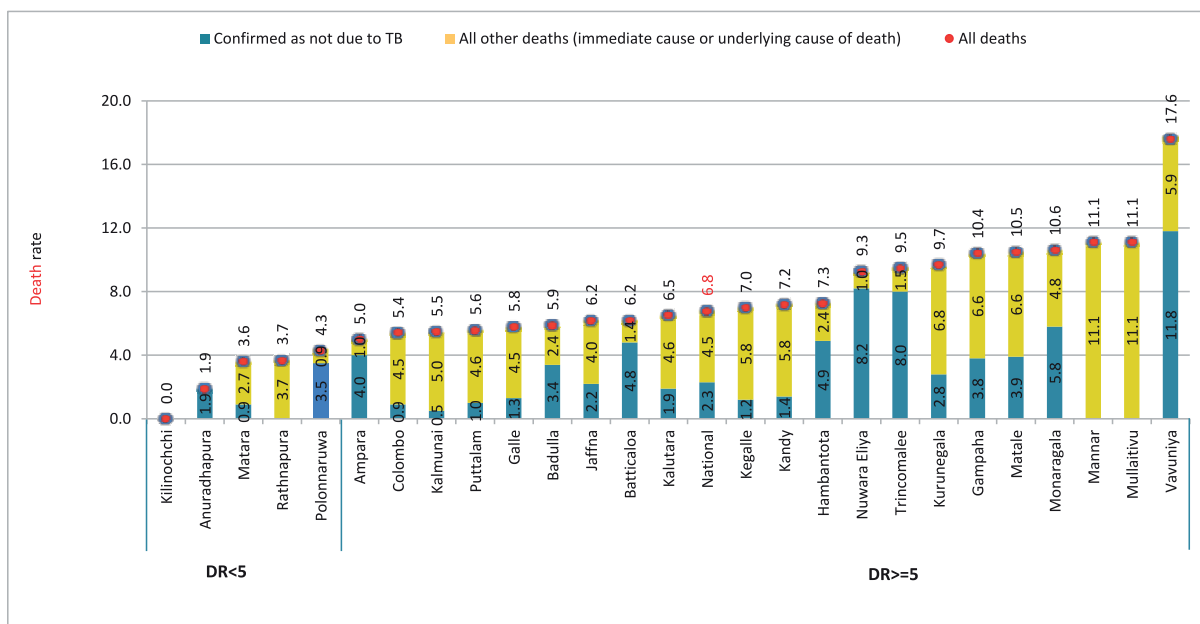


Figure 5.6 : Death Rate of All Forms of TB, 2017

Source: National Programme for Tuberculosis Control and Chest Diseases

5.3. HIV/AIDS and Sexually Transmitted Infections (STIs)

Need to fill the existing gaps in the HIV treatment and care cascade to end AIDS in Sri Lanka

01. Only 77% of the estimated people living with HIV (PLHIV) know their status.
02. Only 45% of the estimated PLHIV are on antiretroviral treatment.
03. Only 38% of the estimated PLHIV are having suppressed HIV viral levels (viral loads).

The estimated number of people living with HIV (PLHIV) in 2018 is 3,500 (3,100-4,000). The total number of people living with HIV (PLHIV) diagnosed and assumed to be alive is 2,709. This

number is calculated by reducing the cumulative reported deaths from the cumulative reported number. The total number of PLHIV who are currently in HIV care services is 1,656. Of these, 1,574 have been started on antiretroviral treatment (ART). Among them, 1,338 are having a suppressed viral load levels (below 1,000 viral copies per millilitre) as given in the Figure 5.7.

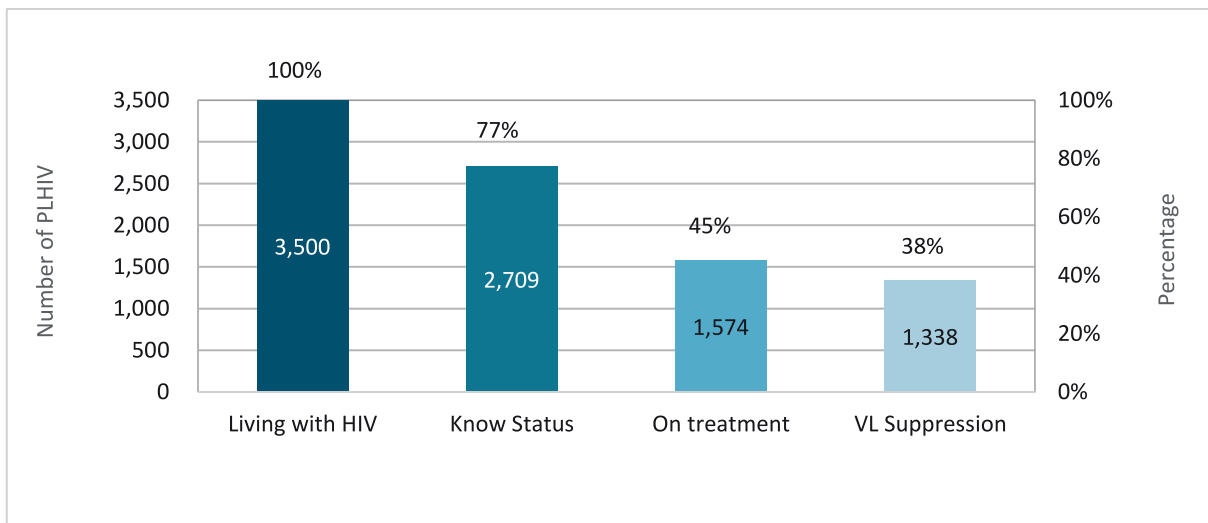


Figure 5.7 : Cross-Sectional HIV Treatment Cascade as of End 2018

Source: National STD & AIDS Control Programme

However, if we consider only the PLHIV who were diagnosed in 2017 and completed 12 months of follow-up, better coverage targets have been achieved.

The following graph is a longitudinal cascade of PLHIV who were diagnosed with HIV in 2017, which shows that 90% of PLHIV were on ART after 12 months and 75% have achieved viral suppression.

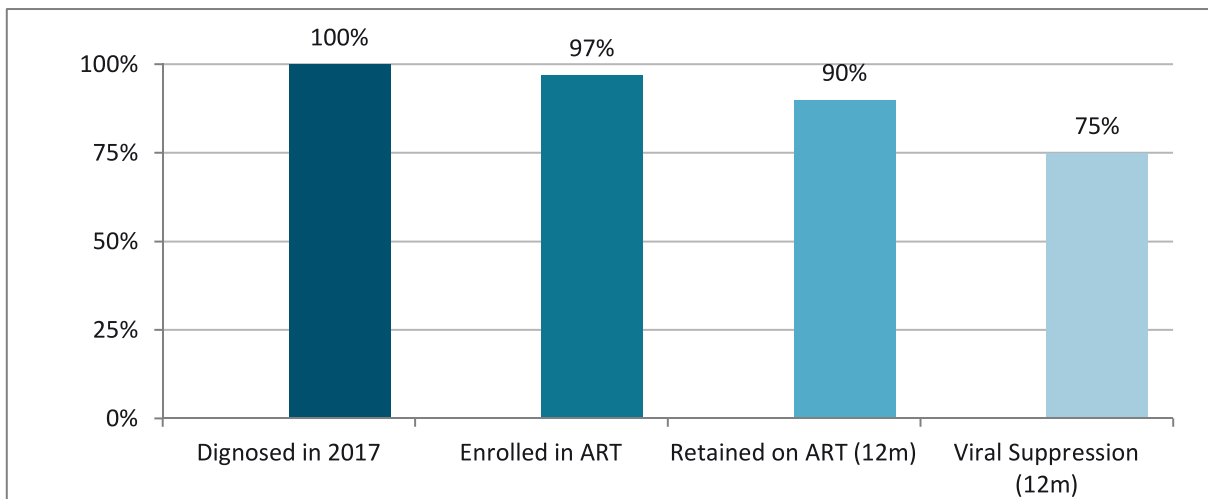


Figure 5.8 : Longitudinal HIV Treatment Cascade among PLHIV Who Initiated ART in 2017

Source: National STD & AIDS Control Programme

Most of the newly reported HIV infections occur among males and most of these infections are due to male to male sexual relationships.

From 2011 to 2018, HIV infection among adult males has been increasing rapidly from 78 cases to 285 cases, which is a 265% increase. During this time period, the trend of adult female HIV

infections is seen to be stable around 60 cases per year. Two paediatric HIV infections were detected in 2018 due to mother-to-child transmission.

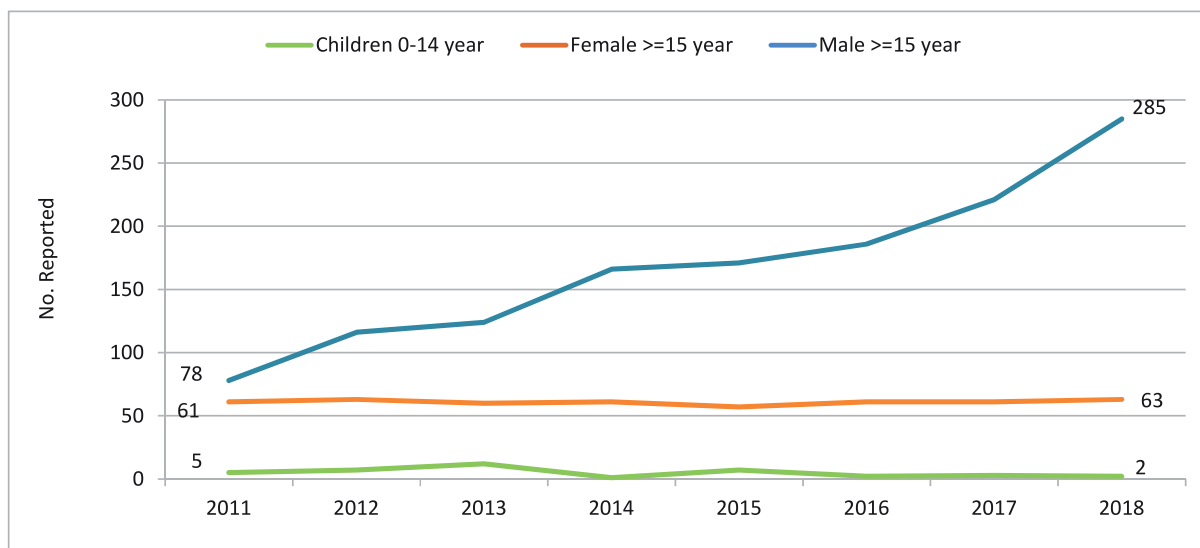


Figure 5.9 : Trends of Reported HIV Infections by Age and Sex, 2011 - 2018

Source: National STD & AIDS Control Programme

The proportion of male-to-male HIV transmission among reported males with HIV infection is nearly 60% in 2018. Unprotected sexual intercourse among males is driving the HIV epidemic in Sri Lanka. In addition to condom promotion, biomedical interventions such as

pre-exposure prophylaxis (PrEP) and postexposure prophylaxis following sexual exposure (PEPSE) should be initiated and scaled up in Sri Lanka.

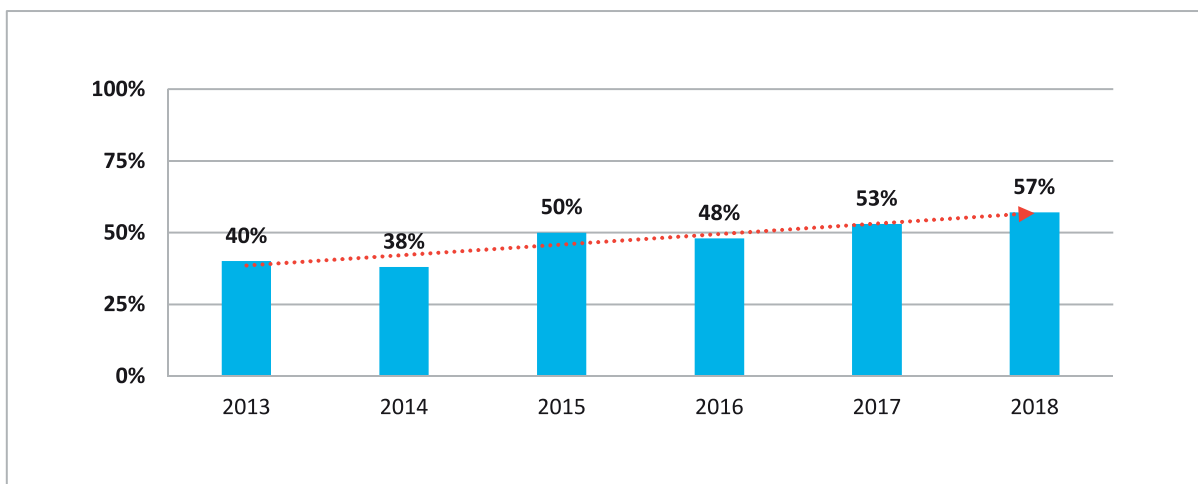


Figure 5.10 : Percentage of Male-to-Male Transmission of HIV among Reported Males with HIV Infection, 2013 - 2018

Source: National STD & AIDS Control Programme

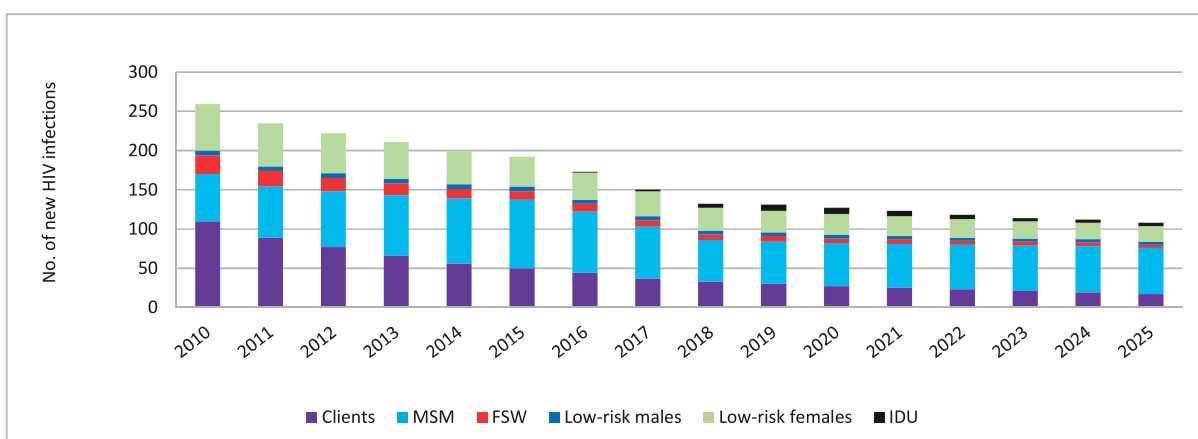


Figure 5.11 : Annual New HIV Infections by Key Populations (with Projections), 2010 - 2025

Source: National STD & AIDS Control Programme

Viral sexually transmitted infections and non-gonococcal infections are on the rise, whereas the other common bacterial STI do not show significant changes in reported numbers.

Overall, the sexually transmitted diseases caused by viruses such as herpes and human papilloma virus showed a rising trend during the last 2 years, i.e. 2017 and 2018. Non-gonococcal infections also showed an increasing trend,

which may be due to over-diagnosis as specific tests for chlamydia were unavailable during the recent past. Declining trends of syphilis and gonorrhoea rates were seen during the period of 2014 to 2018. It should be noted that the data represents only cases seen in public STD clinics.

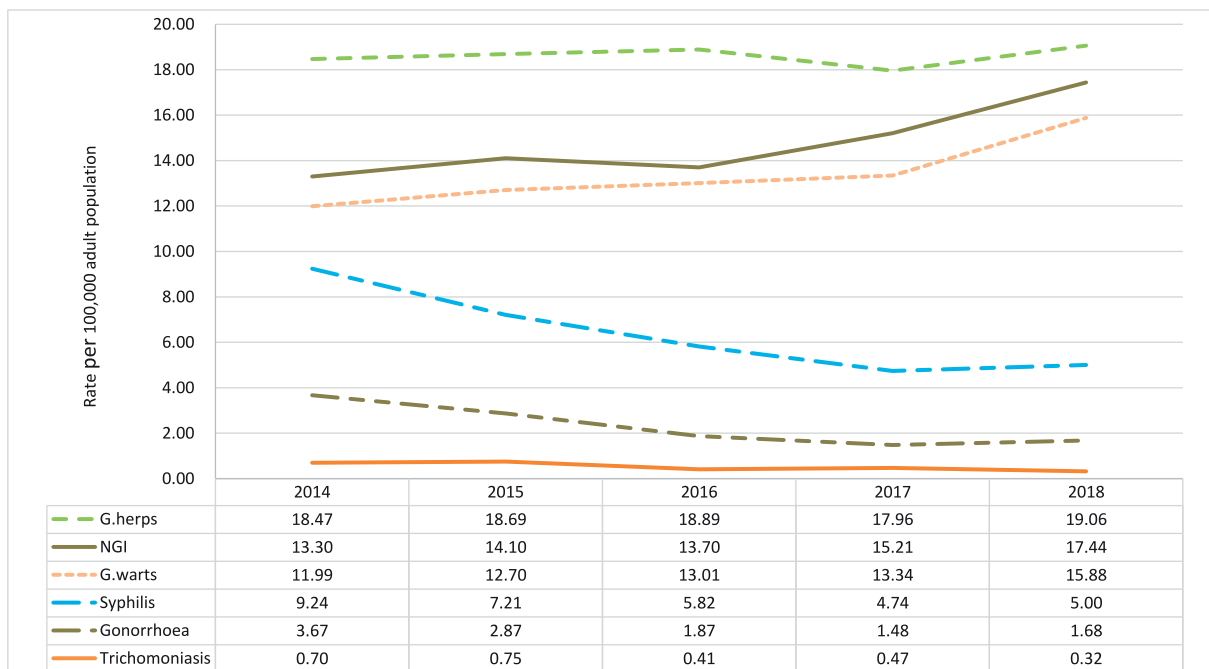


Figure 5.12 : STI Rates per 100,000 Adult Population (15+ Years), 2014 - 2018

Source: National STD & AIDS Control Programme

Sri Lanka is ready to obtain the WHO validation certificate for the programme for elimination of mother to child transmission (EMTCT) of HIV and syphilis.

This programme, which was initiated in 2013, was strengthened further in 2018 to reach the below-mentioned indicator targets required for validation of the EMTCT programme.

According to the WHO, the term “validation” is used when a country has successfully met the criteria for eliminating mother-to-child transmission (EMTCT) of HIV at a specific moment in time. Additionally, validation “implies that countries will also need to maintain ongoing, routine, effective programme interventions and quality surveillance systems to monitor EMTCT of HIV.”

According to the global minimum criteria, a country is eligible to apply for validation of the EMTCT programme if it has achieved the impact indicators for one year and process indicators for 2 years. The plan is to apply for the validation based on the achievements during 2017 and 2018.

Table 5-1 : Key EMTCT Validation Indicators, Targets and Achievements in 2017 and 2018

Impact Indicators	Target	2017			2018		
		%	Numerator	Denominator	%	Numerator	Denominator
MTCT rate of HIV	≤2%	0	0	16	0	0	16
Annual rate of new pediatric HIV infections per 100,000 live births	≤50	0	0	326,052	0	0	328,112
Annual rate of congenital syphilis per 100,000 live births	≤50	1.5	5	326,052	1.5	5	328,112
Key Monitoring Indicators							
Antenatal care coverage	≥95%	97%	349,524	358,657	96%	347,954	360,923
HIV testing coverage of pregnant women	≥95%	95%	341,318	358,657	96%	345,985	360,923
Syphilis testing coverage of pregnant women	≥95%	97%	338,662	349,524	99%	345,657	347,954
ART coverage of HIV-positive pregnant women	≥95%	100%	16	16	100%	16	16
Treatment coverage of syphilis-positive pregnant women	≥95%	100%	52	52	97%	35	36

NSACP is in the final stage of developing and introducing the electronic information management system.

The objective of this activity is to develop an automated Electronic Information Management System (EIMS) which gives timely information for efficient patient management and monitoring of HIV care and ART Programme. This project is funded by GFATM through the Ministry of Health, Nutrition & Indigenous Medicine. The current paper-based system will be replaced by this electronic system to improve the data quality and patient records.

Seven modules are included in this system.

01. STD Clinic Management system
02. HIV care, ART management and monitoring system
03. Laboratory Information Management System
04. Pharmacy Management System
05. Reporting Module (DHIS2)
06. Queue Management System
07. Private Sector Module

5.4. Vaccine-Preventable Diseases

5.4.1. Encephalitis

During the year 2018, 208 suspected cases of encephalitis were notified. Out of the total suspected cases, 152 were clinically confirmed. The districts which notified the highest number of cases were Ratnapura (43) followed by, Kurunegala (20), Galle (14), Gampaha (13), Kegalle (13) and Polonnaruwa (11).

5.4.2. Mumps

A total of 363 cases of mumps were reported in 2018 and 289 (79.6%) were clinically confirmed. The districts reporting the highest number of cases were Ampara (37), Kurunegala (29), Kalutara (28), Gampaha (25). According to case-based investigation, the maximum presentation of cases were among 21 - 30 years age group (22%) and males (54.6%). The majority (91.7%) was found as no complications.

5.4.3. Measles

The measles elimination programme is ongoing and targeting to achieve zero endogenous cases by 2020. Surveillance case definition has been broadened as “fever and maculopapular rash” to identify all possible measles cases for notification purposes. All suspected cases were investigated epidemiologically and laboratory tested for final categorization. This categorization was used to identify endogenous and imported cases.

Total of 168 fever and maculopapular rash cases were notified as suspected cases and more than 90% were investigated in the national proficiency laboratory for measles and rubella at Medical Research Institute. The laboratory investigations include measles serology for IgM and virus detection including genotype identification for positive cases with the assistance of Regional Reference Laboratory, Bangkok.

Only one case was positive for measles with genotype identification of H1 with a clear travel history to China. This was 9 year old child who had been vaccinated with 2 MCV in the private sector. The child was considered as possible non-sero convertor, susceptible to measles, contracted the disease from China. On follow-up of the family members and other close contacts no further transmission was established in the country. Measles incidence was 0.05 per million population.

5.4.4. Rubella

Rubella elimination targets are set at zero endogenous cases by 2020 and maintained and achieved the elimination status during 2018. In order to identify rubella cases, all “fever and maculopapular rash” cases were investigated together with measles. After thorough investigations of all the notified (168) suspected cases, no case was confirmed. Rubella control targets achieved were maintained for the year 2018.

5.4.5. Congenital Rubella Syndrome (CRS)

Congenital Rubella Syndrome is a notifiable condition and followed up with field-level investigations and laboratory confirmation, if the case is suspected or compatible with the surveillance case definition.

In addition to routine notifications, active surveillance was also continued in monitoring cases through institutional and field level zero reporting system. Further, all congenital abnormalities suspected with a probable cause due to congenital infections, were screened for TORCH, in which CRS screening also was included.

In the year 2018, there were 1,271 such cases tested for rubella below 9 months, among those who have not received MMR vaccination to identify rubella IgM positive cases. Those cases were traced back to the community for back referrals to Paediatricians in excluding them as non-CRS or non-Congenital Rubella Infection. No confirmed CRS cases were reported after 2014 and maintained the required elimination target of zero CRS cases.

5.4.6. Poliomyelitis

The poliomyelitis eradication programme is ongoing and the country is maintaining polio-free status. The last poliomyelitis case in Sri Lanka is in 1993 and after that Acute Flaccid Paralysis (AFP) surveillance is ongoing under 15 year old children with satisfactory surveillance indicators without any polio positive cases. The target of the surveillance has been 2 per 100,000 under 15 child population.

Total of 66 AFP cases was reported from hospitals based on the routine and active case detection. National Indigenous Ayurvedic hospital was also included in the routine surveillance system during 2018 to ensure that no under-reporting of polio cases were admitted to Ayurvedic hospitals. Laboratory testing for polio was done for 87% of AFP cases in the Regional Reference Laboratory for poliomyelitis at the Medical Research Institute. The excluded non-polio AFP rate being at 1.2 per 100,000 under 15 child population.

Polio vaccination is continued as bivalent OPV given at 2, 4,6,18 months and at 5 years of age together with fractional dose IPV at 2 and 4 months. Applied research was done to ensure adequate population level immunity for polio virus type 2.

5.4.7. Whooping Cough

A total of 54 suspected whooping cough patients were reported in the year 2018, out of which 31 cases were clinically confirmed as whooping cough like illness. The majority belonged to the age group of less than one year. The leading districts reporting the highest number of cases were Colombo (06), Gampaha (06), Kaluthara (05) and Hambantota (05).

5.4.8. Tetanus

A total of 20 tetanus cases were reported in 2018. Out of which 18 cases were clinically confirmed. Colombo (04), Kandy (03), Anuradhapura (02) and Rathnapura (02) were the districts that notified the highest number of cases.

5.4.9. Rabies

Twenty-five lab-confirmed cases of human rabies were reported in 2018. The districts reporting the highest number of cases were Kurunegala (03), Batticaloa (03) and Gampaha (03). Districts of Anuradhapura, Kandy and Rathnapura had two cases each while Hambantota, Galle, Kilinochchi, Matara, Mullaitivu, Vavuniya, Colombo, Matale, Badulla and Polonnaruwa reported one case each.

Strategies implemented to control rabies in the country has brought down the incidence of human rabies to a greater extent over the period of time. The lowest number of human rabies incidence was reported in the year 2014 and it was 19.

Seven cases of human rabies were notified in the 1st quarter of 2018, compared to 07 cases in the previous quarter and 5 cases in the corresponding quarter of the year 2017. Four cases of human rabies were notified in the 2nd quarter of 2018, compared to 07 cases in the previous quarter and 6 cases in the corresponding quarter of the year 2017. During the third and fourth quarters of the year 2018, there were fourteen cases of human rabies were notified.

Animal Rabies

The dog is the main reservoir as well as the transmitter of rabies in Sri Lanka. Total number of animal rabies reported during the year 2018 was 595 .Majority; 58.32% (347) of animal rabies was reported among dogs.

5.5. Leptospirosis

A total of 5,257 cases of leptospirosis were notified to the Epidemiology Unit in 2018. Throughout the past years, the case incidence rate has been fluctuating with a slight downward trend. Reporting of leptospirosis cases has shown an annual seasonal pattern with peaks during rainy seasons of two monsoons in the country. There were 108 deaths due to leptospirosis in 2018 indicating a Case Fatality Rate of 2.0 per 100 cases. Deaths due to leptospirosis too has been declining during the past years. The age-wise distribution of patients shows that the majority of patients belonged to the age group of 20-49 years (61.1%).

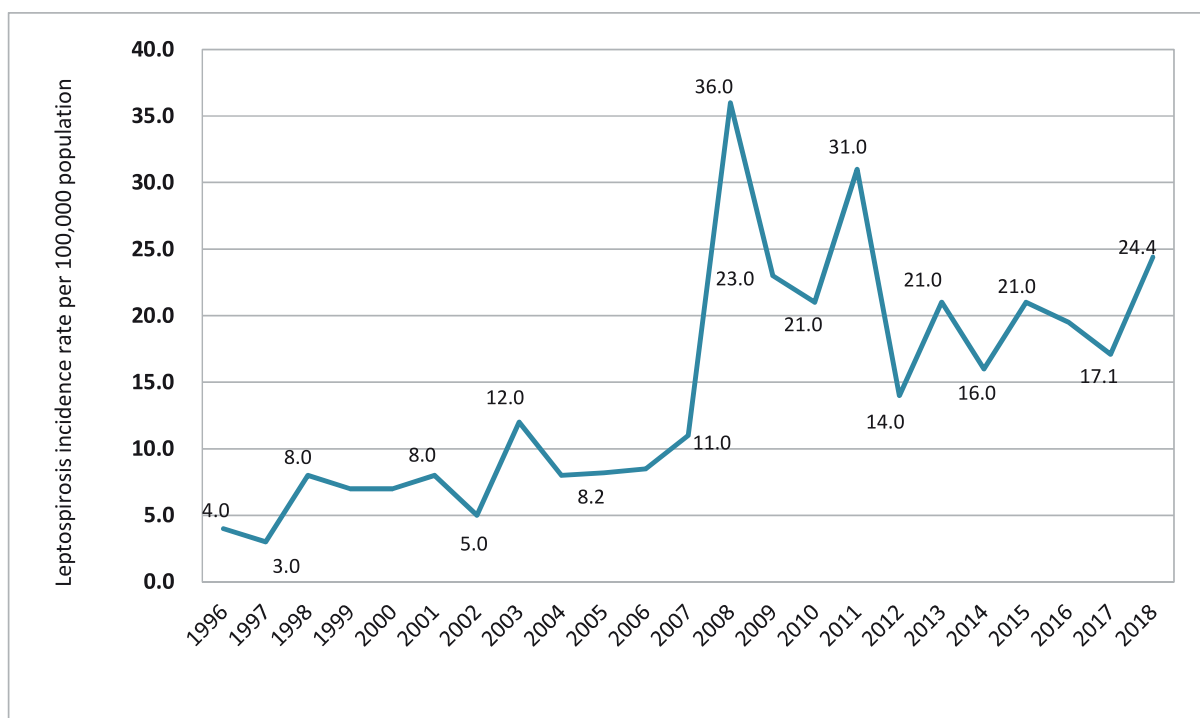


Figure 5.13 : Leptospirosis Incidence Rate per 100,000 Population, 1996 - 2018

Source: Epidemiology Unit

Table 5-2 : Leptospirosis Deaths and CFR, 2008 - 2018

Year	No. of Deaths	CFR (%)
2008	207	2.8
2009	145	2.9
2010	123	2.7
2011	100	1.5
2012	52	2.0
2013	80	1.8
2014	41	1.3
2015	71	1.6
2016	62	1.5
2017	52	1.4
2018	108	2.0

Source: Epidemiology Unit

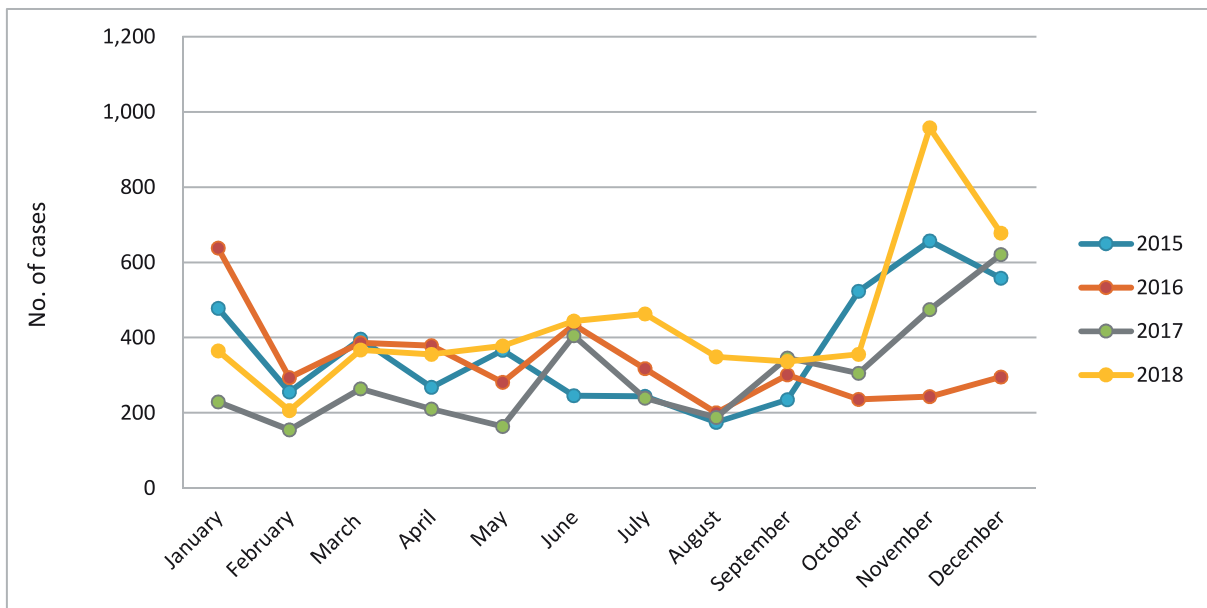


Figure 5.14 : Seasonality in Reporting Leptospirosis, 2015 - 2018

Source: Epidemiology Unit

Leptospirosis is a zoonotic disease of great public health importance in Sri Lanka. Recent surveillance data received at the Epidemiology Unit indicate that paddy farming is the major source of exposure. Therefore, increased reporting is observed during the rainy seasons which coincide with the 'Yala' and 'Maha' paddy cultivation seasons. Hence each year with the objective of controlling and preventing leptospirosis, activities are conducted at the Medical Officer of Health (MOH), district and central level to increase community awareness, strengthen intersectoral coordination and provide chemoprophylaxis to the identified high-risk individuals.

5.6. Influenza

- ◆ Influenza surveillance in humans had been established complementary to the influenza surveillance among animals by the Department of Animal Production and Health (DAPH) as a part of the pandemic preparedness activities initiated in the country for Avian/Pandemic Influenza. Both these activities are supervised by the monthly National Technical Committee for Avian/Pandemic Influenza Preparedness.
- ◆ Human and animal influenza surveillance activities are expected to act as the early warning surveillance system for a possible Avian/Pandemic Influenza outbreak in the country.
- ◆ The human influenza surveillance is conducted in selected sentinel hospitals by the Epidemiology Unit of the Ministry of Health. Human Influenza surveillance comprises 2 components; Influenza-like illness (ILI) surveillance and Severe Acute Respiratory tract Infections (SARI) surveillance.
- ◆ ILI surveillance has been established in 19 sentinel sites, namely NHSL, Colombo South TH, NIID, DGH Nuwara Eliya, TH Karapitiya, PGH Badulla, TH Kurunegala, DGH Chilaw, DGH Ampara, TH Jaffna, DGH Vavuniya, TH Anuradhapura, DGH Polonnaruwa, PGH Ratnapura, TH Batticaloa, LRH, TH Ragama, TH Peradeniya and DGH Matara. ILI surveillance is carried out at the OPD.
- ◆ SARI surveillance has been established in 04 sentinel sites and carried out among inward patients. Those four sites are LRH, TH Ragama, TH Peradeniya and DGH Matara.
- ◆ The reported ILI visits from all sentinel sites were 88,411 in 2018. It was 1.96% of the total OPD visits.
- ◆ The sentinel sites reported 1,359 of SARI visits in the year 2018 and it was 1.47% of admitted patients to medical and paediatric wards.
- ◆ Virological surveillance is carried out at the Medical Research Institute which is the National Influenza Centre (NIC) in Sri Lanka for human influenza surveillance.
- ◆ Data management is done through 'Flusys', an online data management system by Epidemiology Unit.

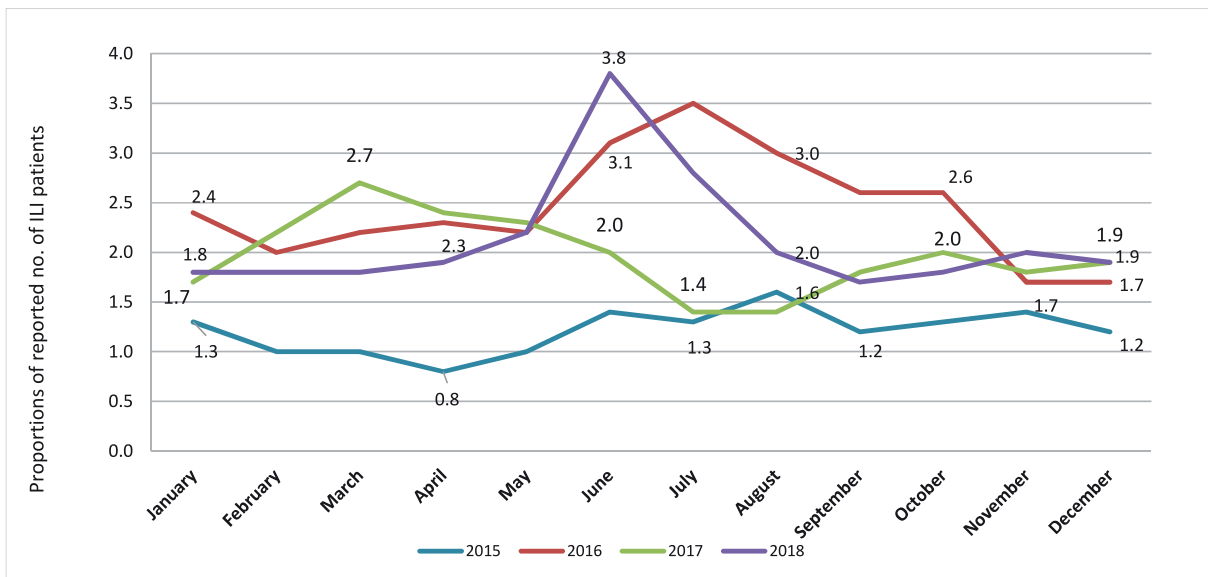


Figure 5.15 : Monthly Distribution of Proportions of Reported Influenza-Like Illness (ILI) Patients from Sentinel Sites, 2015 - 2018
 Source: Epidemiology Unit

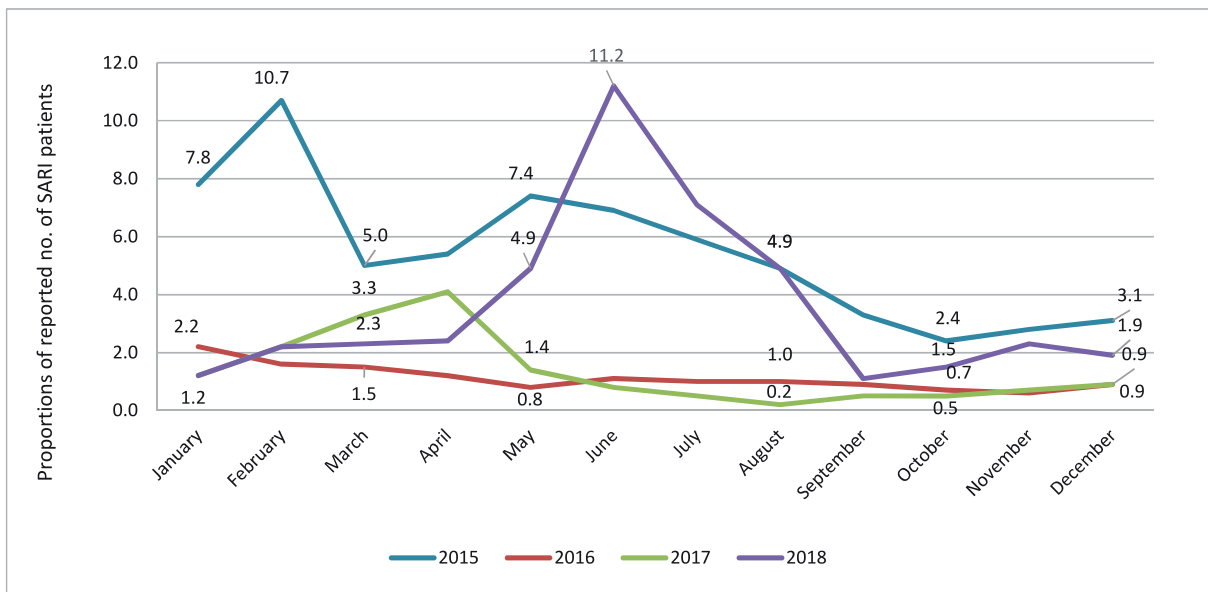


Figure 5.16 : Monthly Distribution of Proportions of Reported Number of Severe Acute Respiratory Infection (SARI) Patients by Sentinel Sites, 2015 - 2018
 Source: Epidemiology Unit

5.7. Leishmaniasis

The number of notified cases of Cutaneous Leishmaniasis in 2018 was 3,273. Five districts were reported more than 250 cases in 2018. Hambantota had the highest number (749) reported, followed by Kurunegala (533), Anuradhapura (515), Matara (508) and Polonnaruwa (263). Out of the total number reported, 2,783 were clinically confirmed.

Cutaneous Leishmaniasis is an emerging public health problem in many countries, including Sri Lanka. CL has been established as an endemic disease within a short period of time in the country despite the first local case reported from the Ambalanthota MOH area in Hambantota district in 1992. The number of reported leishmaniasis cases have increased gradually and the disease was included in the list of notifiable diseases in 2008.

5.8. Chickenpox

A total of 8,097 cases of chickenpox were reported in 2018 and 7,223 (89.2%) were clinically confirmed. The districts reporting the highest number of cases were Gampaha (749), Kalutara (732), Colombo (722), Kurunegala (615), Kegalle (443) and Anuradhapura (435). According to case-based investigation, the maximum presentation of cases was among more than 60 years age group (19.5%) and males (52.9%). Majority (84.5%) was found as no complications.

5.9. Malaria

Sri Lanka was certified by the World Health Organization as a malaria free country on 6th September 2016, at the 69th session of the Regional Committee for South East Asia in Colombo after continuous effort over four decades by the Anti Malaria Campaign. Currently Sri Lanka is in the phase of prevention of the re-introduction of malaria.

A total of 47 microscopically confirmed, imported malaria cases and 1 introduced case of malaria were reported in Sri Lanka in 2018 including 44 males (92%) and 4 (8.0%) females. *P.vivax* infections constituted 30 (63.0%), while *P.falciparum* and *P. ovale* represented 15 (31.0%) and 3 (6.0%), respectively. No deaths due to malaria were reported during the year 2018.

An.culicifacies continued to be the principal vector of malaria and *An. subpictus*, *An. stephensi* secondary vectors of malaria in Sri Lanka were encountered in the year 2018.

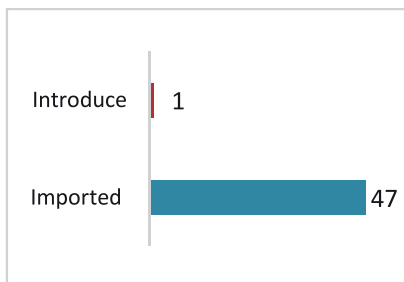


Figure 5.17 : Nature of Malaria Cases, 2018

Source: Anti-Malaria Campaign

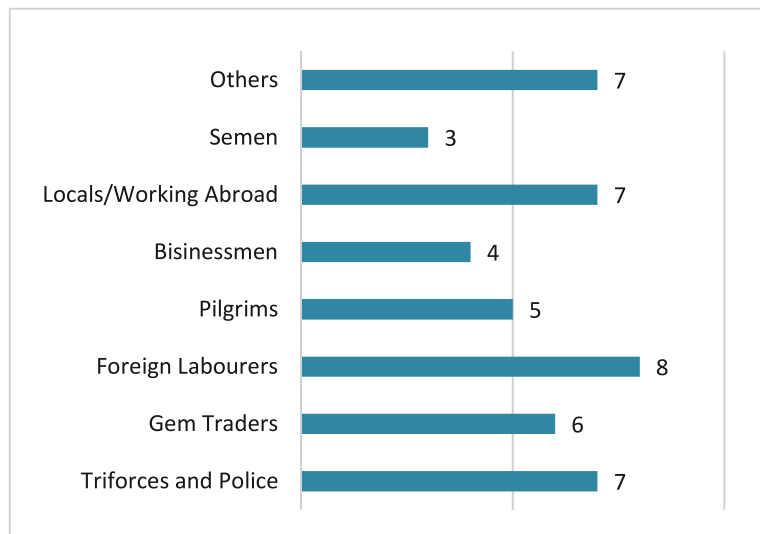


Figure 5.18 : Risk Category of Imported Cases, 2018

Source: Anti-Malaria Campaign

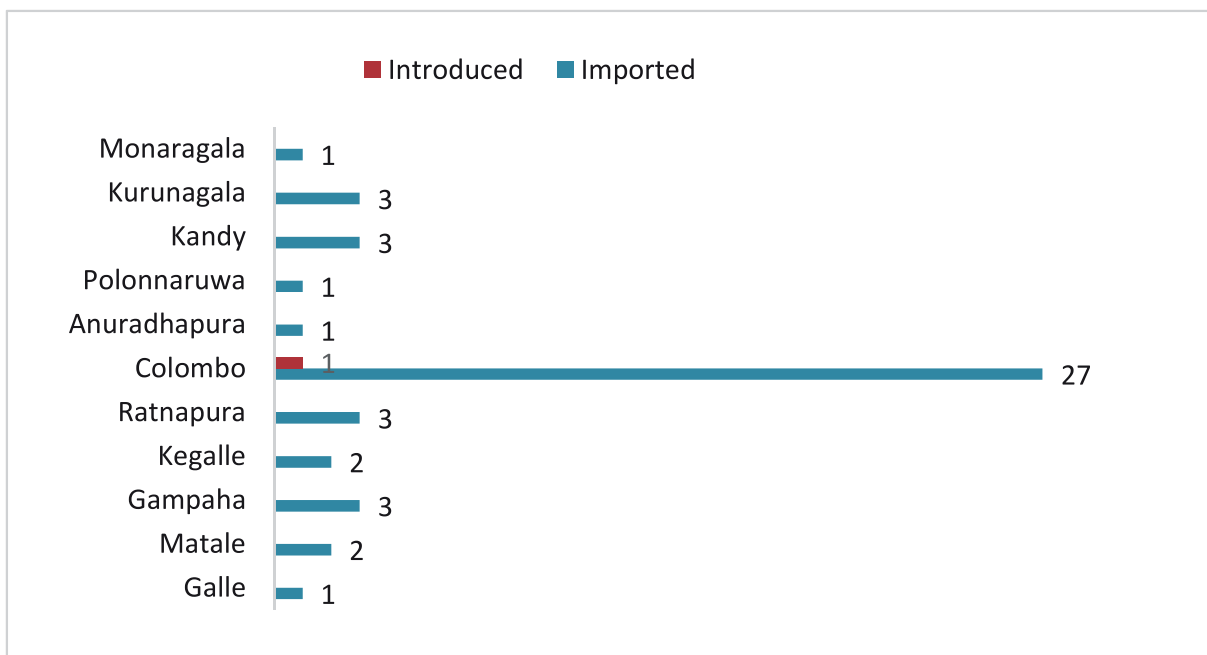


Figure 5.19 : Case Distribution by Treated District, 2018

Source: Anti-Malaria Campaign

Table 5-3 : Blood Smear Examination by District, 2018

District	Blood Smears Examined
Ampara	24,404
Anuradhapura	53,727
Badulla	40,782
Batticaloa	74,137
Colombo	92,106
Embilipitiya	49,014
Galle	21,593
Gampaha	66,415
Hambantota	25,041
Jaffna	67,352
Kalmunai	51,628
Kalutara	17,408
Kandy	66,069
Kegalle	25,989
Kilinochchi	32,362
Kurunegala	77,897
Maho	19,530
Mannar	32,315
Matale	36,246
Matara	23,959
Monaragala	46,370
Mullaitivu	28,805
Nuwara Eliya	12,591
Polonnaruwa	38,734
Puttalam	37,632
Ratnapura	49,014
Trincomalee	37,651
Vavuniya	28,910
Total	1,128,667

Source: Anti-Malaria Campaign

5.10. Filariasis

- ◆ Sri Lanka received a declaration of elimination of filariasis as a public health problem in 2016. Yet, filariasis foci are still prevalent in few localities in endemic districts.
- ◆ More cases have been identified by enhanced active parasitological surveillance guided by entomological surveillance in endemic districts.
- ◆ Support of the community, health and non-health organizations, government and non-governmental organizations are essential to sustain elimination status and to achieve total elimination of the disease.

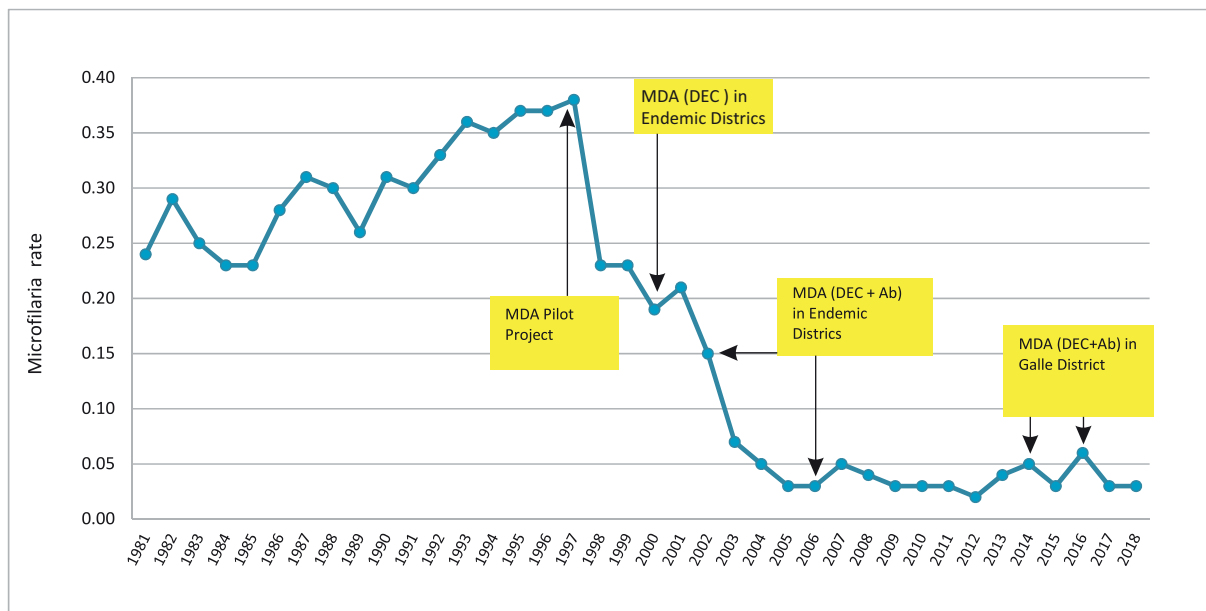


Figure 5.20 : Microfilaria Rates in Sri Lanka, 1981 - 2018

Source: Anti-Filariasis Campaign

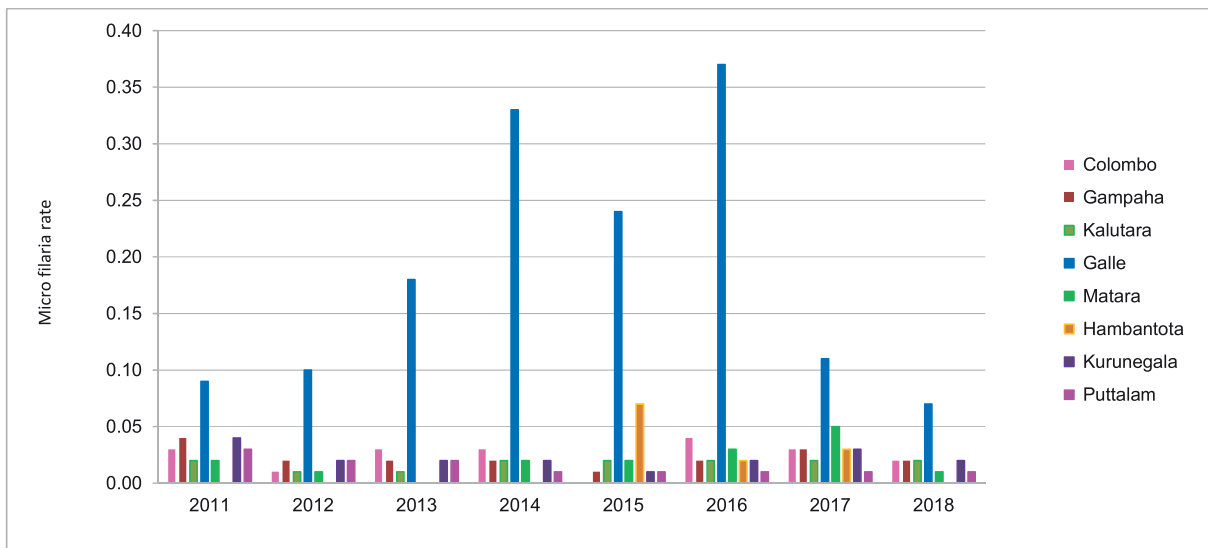


Figure 5.21 : Microfilaria Rates in Endemic Districts, 2011 - 2018

Source: Anti-Filariasis Campaign

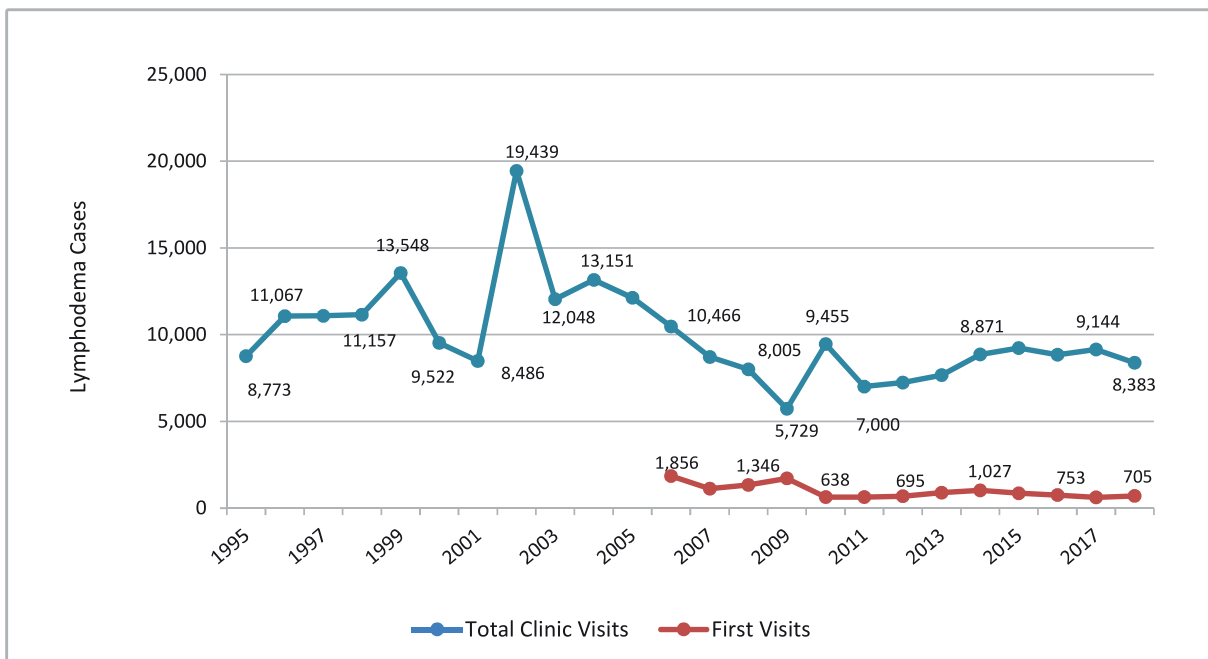


Figure 5.22 : Lymphoedema Cases Attended to Anti Filariasis Clinics, 1995 - 2018

Source: Anti-Filariasis Campaign

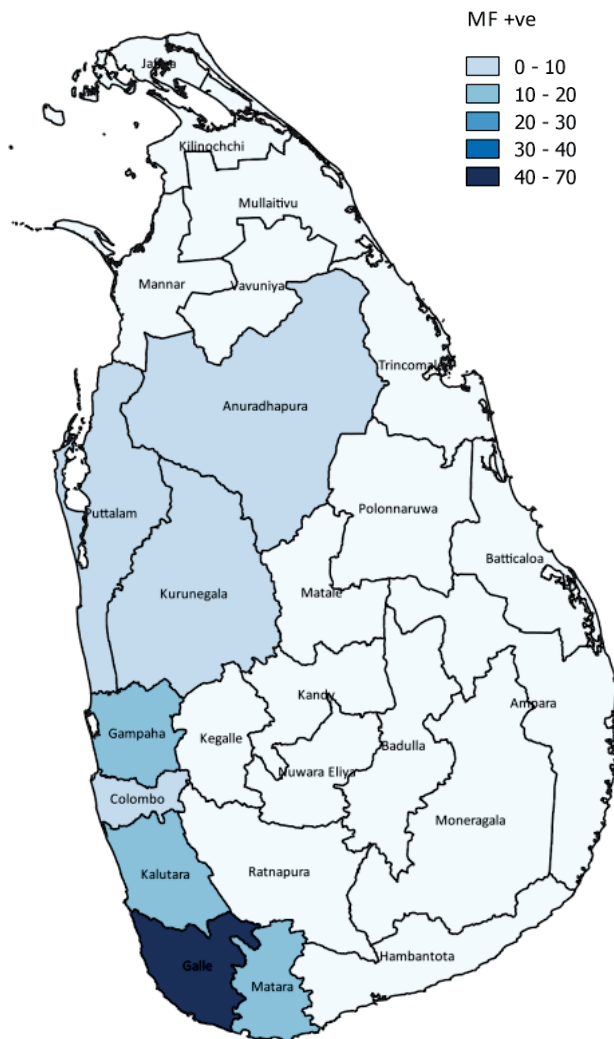


Figure 5.23 : Distribution of Cases with Active Infection of Lymphatic Filariasis in Sri Lanka, 2018

Source: Anti-Filariasis Campaign

Service Delivery for Patients with Lymphatic Filariasis

Microfilaria Positive Patients

The number of mf positive patients who required treatment during 2018 is shown in Table 5-4. These patients are treated and

followed up by field staff and followed up with repeated night blood films to ensure clearance of parasitaemia and complete cure.

Table 5-4 : Results of the Night Blood Filming Surveys, 2018

District	No. of Blood Films Examined	No. of Blood Films		Total No. of Blood Films Positive	MF Rate	MF Count	MF Density
		Wucheraria Bancrofti	Brugia Malayi				
Kurunegala	47,762	1	-	1	0.002	11	-
Puttalam	26,138	-	3	3	0.011	13	72.24
North Western Province	73,900	1	3	4	0.005	24	100.02
Galle	84,651	62	1	63	0.074	1,463	387.11
Hambantota	6,062	-	-	-	-	-	-
Matara	81,367	10	1	11	0.014	118	178.82
Southern Province	172,080	72	2	74	0.043	1,581	356.15
Colombo	57,943	5	4	9	0.016	48	88.91
Gampaha	66,811	11	1	12	0.018	123	170.87
Kalutara	84,338	4	9	13	0.015	75	96.17
Western Province	209,092	20	14	34	0.016	246	120.61
Non Endemic	8,392	-	1	1	0.012	6	100.02
Migrated Workers	2,123	30	-	30	1.413	933	518.44
Total	465,587	123	20	143	0.031	2,790	325.24

Note : Microfilaria (mf) rate is the number of microfilaria positive persons per 100 persons tested Mf density is the average number of microfilaria in slides found positive for microfilaria per ml of blood

Source : Anti-Filariasis Campaign

Lymphoedema Patients

Numbers of the first visit of lymphoedema patients to the clinics of AFC and RAFUs and the number of clinic visits of past lymphoedema patients during 2018 are shown in Figure 5.22. Patients are managed in 19 clinics (Figure 5.24) situated in endemic districts and are conducted by Regional Medical Officers of filariasis control. Minimal care package for lymphatic filariasis patients; treatment of acute attacks, management of lymphoedema, management of hydroceles and treatment with anti-filarial drugs

are provided by these clinics. Basic care package including hygiene of affected parts of the body, skin and wound care, elevation, exercise and advice regarding wearing suitable foot-wear are provided other than the provision of complementary care such as bandaging and prophylactic antibiotics to prevent recurrent acute attacks with a secondary bacterial infection.

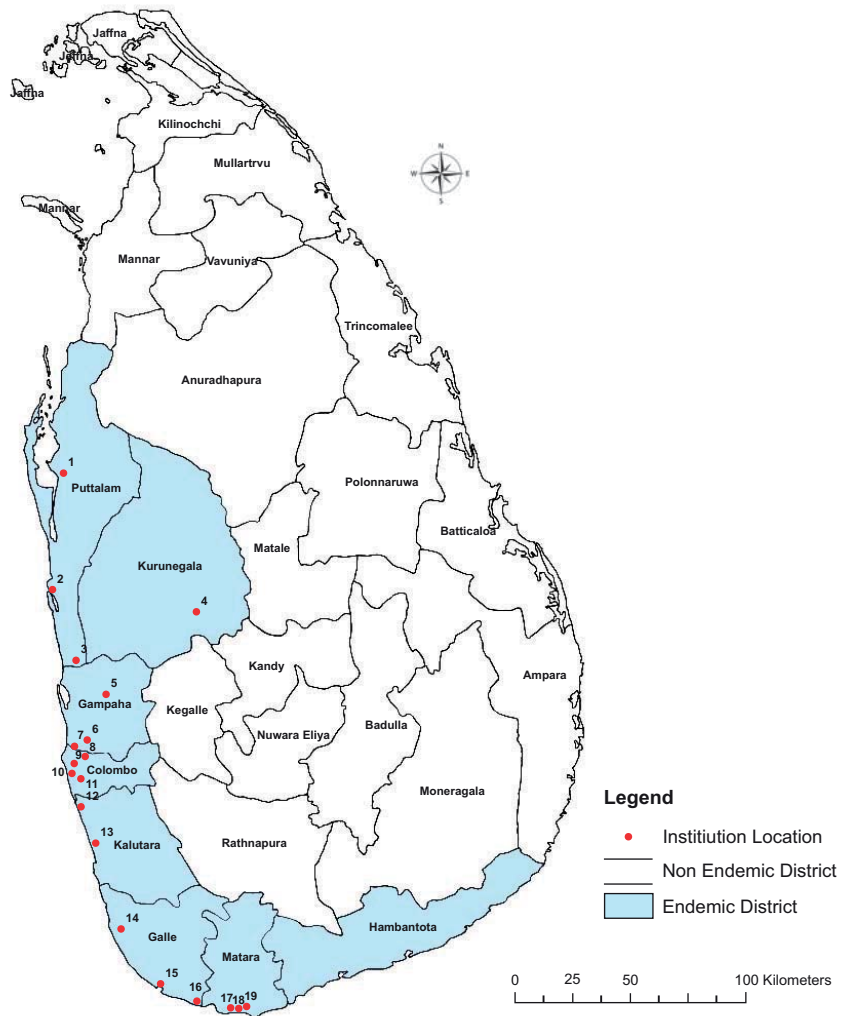


Figure 5.24 : Lymphoedema Management Clinic Distribution in Endemic Districts, 2018

Source: Anti-Filariasis Campaign

5.11. Leprosy

There is a static rate of child cases among new leprosy cases detected during last 18 years and there is a static rate of Grade 2 deformities among new leprosy cases detected during last 18 years.

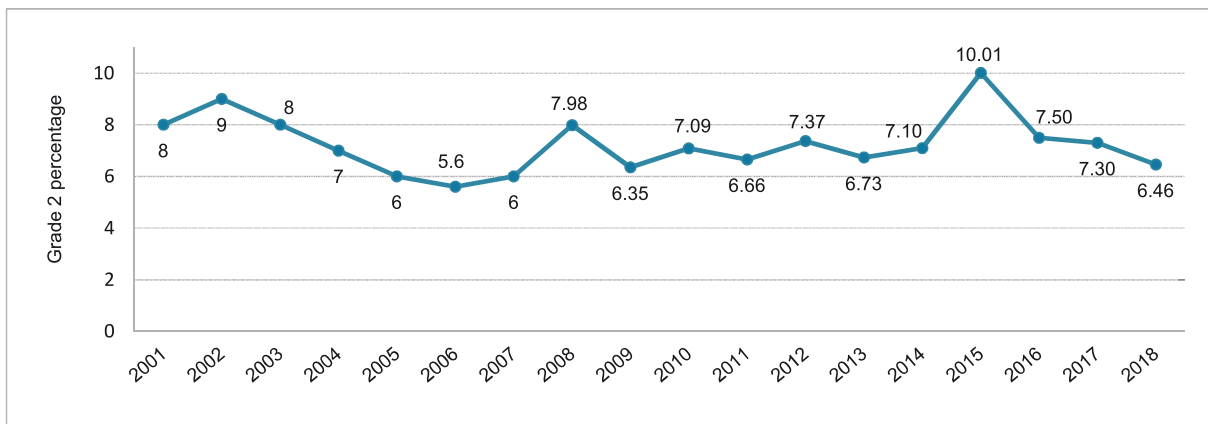


Figure 5.25 : Trend of Grade 2 Deformity Percentage at the Time of Diagnosis, 2001 - 2018
 Source: Anti-Leprosy Campaign

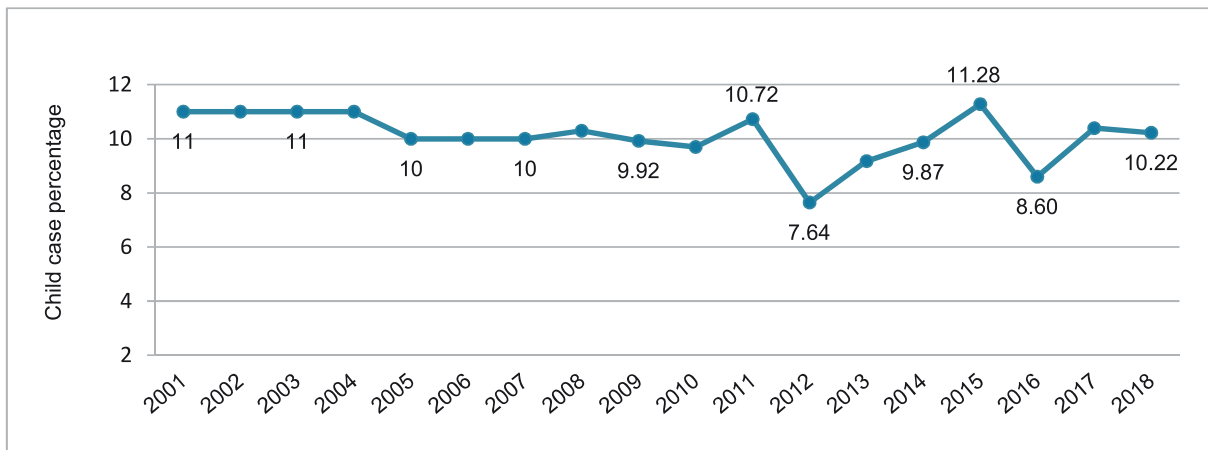


Figure 5.26 : Child Case Percentage of New Leprosy Cases, 2001 - 2018
 Source: Anti-Leprosy Campaign

6. Non-Communicable Diseases (NCD)

6.1. Major Chronic Non - communicable Diseases

- ◆ In the year 2018, fifty two percent (52%) of the government hospital deaths were due to major non-communicable diseases.
- ◆ Ischemic heart disease has been the number one leading cause of death among government hospital deaths during the last decade.
- ◆ Neoplasms, chronic respiratory diseases and cerebrovascular diseases assumed 2nd, 4th and 5th positions among the leading causes of deaths among government hospitals in 2018.
- ◆ Proportionate mortality rate due to diabetes mellitus and hypertensive diseases among the government hospital deaths has decreased compared to 2017.

According to Indoor Morbidity and Mortality Return (IMMR) data for 2018, 52% of the total deaths occurred in the government hospitals in Sri Lanka were due to major non-communicable diseases such as cardiovascular diseases, cancer, chronic respiratory diseases and diabetes mellitus. The proportionate mortality for ischemic heart disease, neoplasms, diseases of the respiratory system (excluding pneumonia,

upper respiratory illnesses, influenza) and cerebrovascular diseases accounted for 15%, 11.7%, 9.9% and 8% respectively. Diabetes mellitus and hypertensive diseases accounted for 1.4% and 1.3% proportionate mortality respectively.

Table 6-1 : Number of Deaths Occurred among all Ages due to Major NCDs in Government Hospitals in Sri Lanka, 2018

Major NCD	ICD Code	No. of Deaths
Cardio vascular diseases	I10-I99	16,058
Cancer	C00-D48	5,789
Chronic respiratory diseases	J20-J22, J40-J98	4,900
Diabetes mellitus	E10-E14	709

Source: Medical Statistics Unit, Ministry of Health

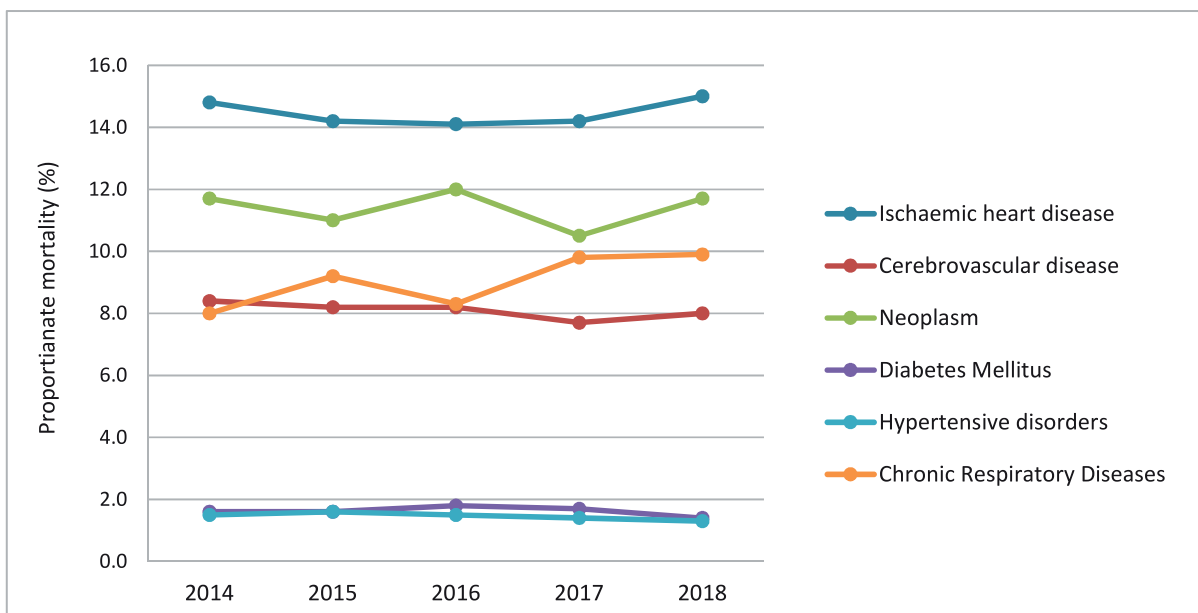


Figure 6.1 : Trends of Mortality due to Chronic NCDs in Government Hospitals, 2014 - 2018

Source : Medical Statistics Unit, Ministry of Health

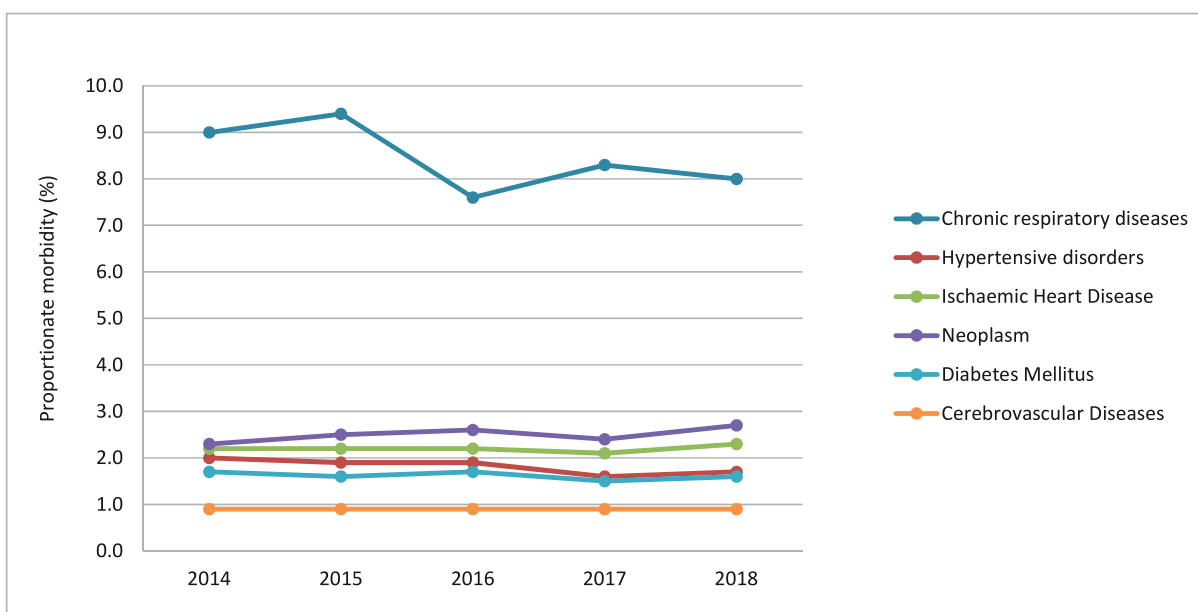


Figure 6.2 : Trends of Government Sector Hospitalizations due to Chronic NCDs, 2014 - 2018

Source : Medical Statistics Unit, Ministry of Health

Actions Taken in 2018

As the focal point for the prevention and control of non-communicable diseases in Sri Lanka, Directorate of non-communicable diseases conducted several activities under main four strategic areas identified in the National Multi-Sectoral Action Plan (2016-2020). These activities were targeted across the all levels of prevention.

I. Advocacy, Leadership and Partnership

- ◆ Conducted National NCD council and NCD steering committee with the participation of multi-sector stakeholders.
- ◆ Provided advocacy and technical support for formulation and re-formulation several policies and regulations related to NCDs.
- ◆ Organized the international conference of NCD in SAARC.
- ◆ Commemorated special dates (Diabetes day, No tobacco day).

II. Health Promotion & Risk Reduction

- ◆ Conducted and provided technical support in health education and health promotion. (Programmes at schools, work settings and community on NCD risk factors and importance of early detection of NCDs.)
- ◆ Coordinated, conducted and provided technical guidance for school based NCD prevention and health promotion programmes in collaboration with the Ministry of Education and the School Health Unit of the Family Health Bureau.
- ◆ Provided technical expertise and the required resources to establish 'Health Corners' in schools. (i.e. Provided weighing scales, netballs, volley balls, BMI Charts and health corner boards to

promote and facilitate healthy diet and physical activity among school children)

- ◆ Developed and distributed 'Api Nirogi Wemu' booklets for Grade 6-9 students to improve their knowledge on good health.
- ◆ Coordinated, conducted and provided technical support as a stake-holder for programmes for the youth in collaboration with the Ministry of Youth Affairs.
- ◆ Conducted regular monitoring of the implementation of the multi-sectoral action plan for prevention and control of NCDs.

III. Health System Strengthening for Early Detection and Management of NCDs and Their Risk Factors

- ◆ Conducted training of trainers (TOT) programmes for MO-NCDs on behavioural change communication, health promotion and community empowerment.
- ◆ Developed management guidelines for cardiovascular diseases, diabetes mellitus, overweight and obesity for primary healthcare providers.
- ◆ Trained the regional Consultant Physicians and Medical Officers on the management guidelines for cardiovascular diseases, diabetes mellitus, overweight and obesity for primary healthcare providers.
- ◆ Coordinated and conducted local and foreign capacity building programmes for MO-NCDs and regional Consultant Community Physicians

IV. Surveillance, Monitoring, Evaluation and Research Key Achievements

- ◆ Reviewed provincial plans of action and guided the provincial and district level managers for activities related to management of NCDs.
- ◆ Conducted quarterly and annual review of MO-NCDs to monitor the nation-wide NCD prevention activities.

Key Achievements

- ◆ Development of Management Guidelines for Cardiovascular Diseases, Diabetes Mellitus, Overweight and Obesity for the primary healthcare providers
- ◆ Established “Health Corners” in schools
- ◆ Development and distribution of “Api Nirogi Wemu” book among grade 6-9 students
- ◆ Expansion of NCD screening services (HLCs)

6.2. Injuries

Traumatic Injuries

- ◆ Traumatic injuries are the number one cause of hospitalization over the last two decades
- ◆ About 1 million people are hospitalized each year due to all forms of injuries
- ◆ Traumatic injuries are the 10th cause of hospital deaths in Sri Lanka
- ◆ National injury surveillance was established in 2016, and injury-related data have been collected through this system
- ◆ National injury policy was developed and published

Injuries are the number one cause of hospitalization over the last few decades in Sri Lanka and it continued in 2018 with over 1.1 million admissions and accounted for about 19% of all admissions to government hospitals.

Based on IMMR data during the last 5 years, the projected number of injury admissions to all government hospitals may increase by almost 0.4 million by the year 2023 if the current trend of occurrence of injuries continues as it is. (Figure 6.3)

This indicates that the health facilities at the government hospitals need to treat an additional 0.4 million victims using the existing resources.

According to the IMMR, injury-related deaths increased every year and the projected number may reach 2,287 by the year 2025 if no interventions are done for its prevention.

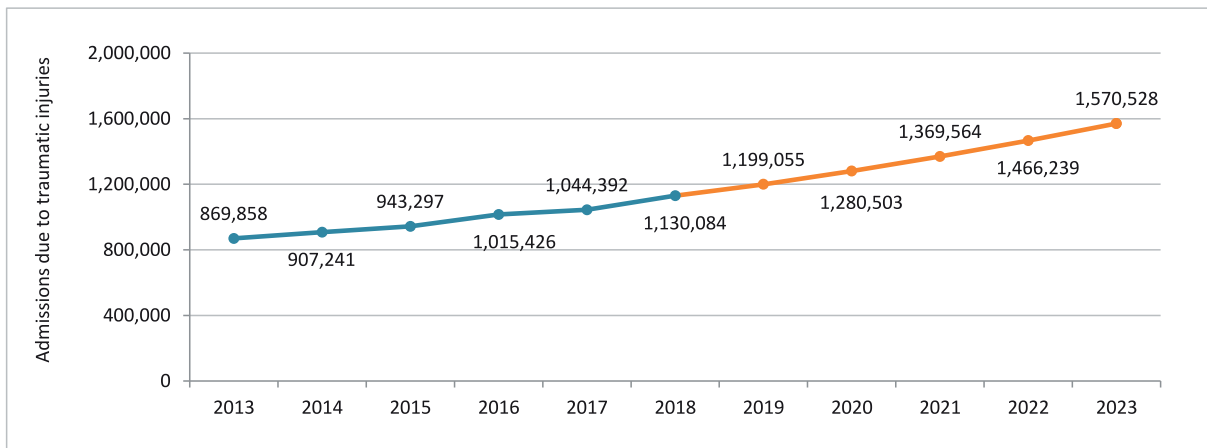


Figure 6.3 : Projections of Number of Inward Admissions due to Injuries to Government Hospitals up to 2023

National Injury Surveillance

Until 2017, the main source of injury information in Sri Lanka was Indoor Morbidity and Mortality Report (IMMR) published by the Medical Statistics Unit. The National Injury Surveillance System (NISS) was established in 2016 in sentinel hospitals. The NISS gives more information on injuries compared to IMMR data.

Currently, there are four components of the National Injury Surveillance.

1. Outpatient surveillance
2. Inpatient (inward) surveillance
3. Death surveillance
 - a. Death notification
 - b. Death investigation and review
4. Injury-related transfer surveillance

Of the four components, except death surveillance, which has not yet been started, all the other components have shown good progress. Accordingly, the coverage of inward injury surveillance has gone up from 8.34% in 2017 to 23.81% in 2018.

The numbers reported in outpatient surveillance have gone up from 32,669 in 2017 to 72,674 in 2018 with an increase of 122.5% in 2018. Further, the number of notified deaths were increased from 33 in 2017 to 764 in 2018.

According to the reported injuries through outpatient surveillance, 3/4 of the reported injuries were due to animal bites (Figure 6.4) and 3/5 of injuries were taken place at home (Figure 6.5).

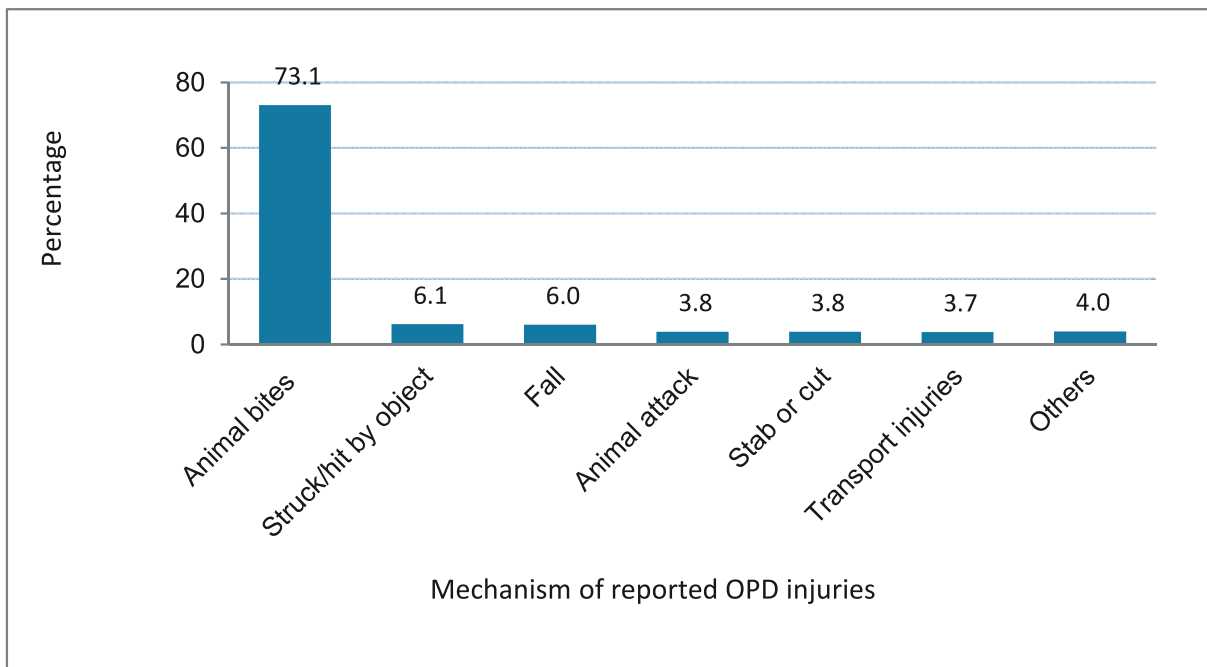


Figure 6.4: Leading Mechanisms of Reported Injuries in Outpatient Surveillance, 2018

Source: National Injury Surveillance, Ministry of Health

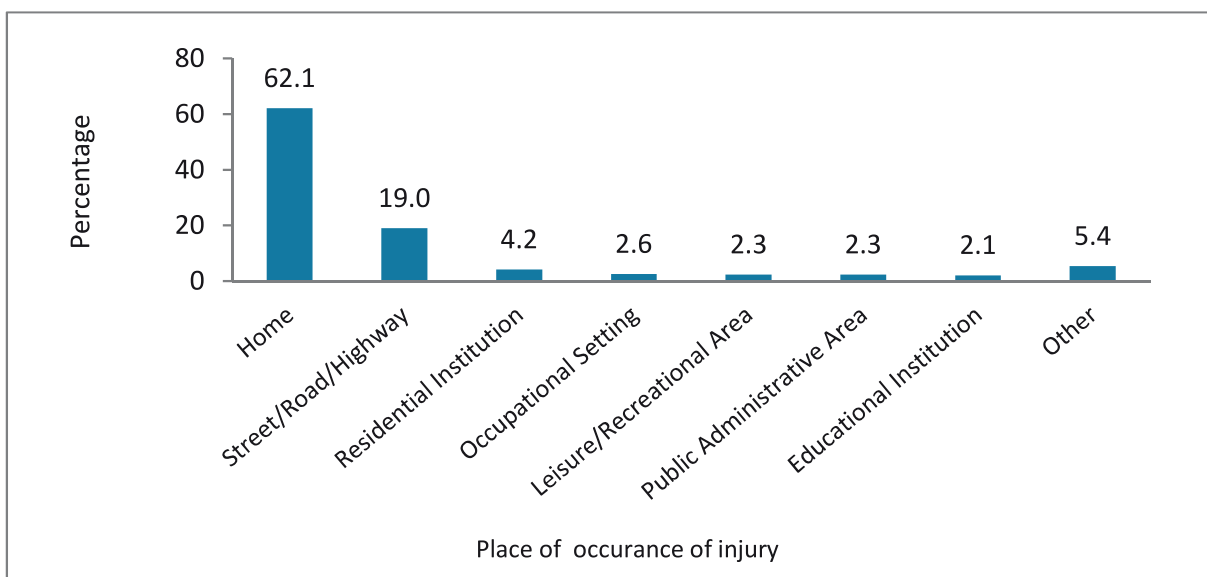


Figure 6.5 : Distribution of Reported Outpatient Injuries by Place of Occurrence, 2018

Source: National Injury Surveillance, Ministry of Health

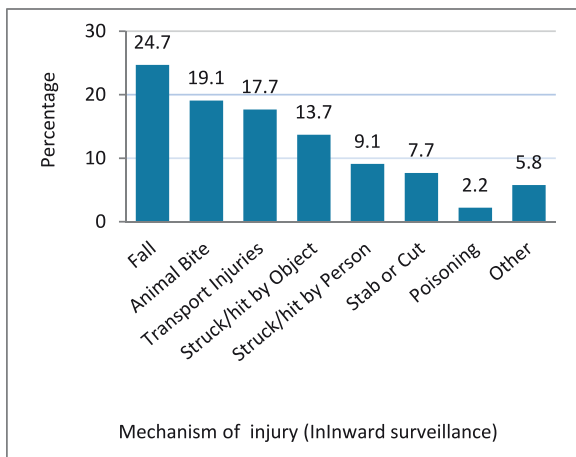


Figure 6.6 : Leading Mechanisms of Reported Injuries in Inward Surveillance, 2018

Of all reported inward injuries, children less than 5 years and adolescents, youths and young adults between 16 to 40 years of ages were mostly affected in both sexes (67% of males, 60% of females and 64% of both sexes)

Of all reported inward injuries, the leading mechanism of injury were falls (24.7%), animal bites, transport injuries were the second and the third leading mechanism (Figure 6.6). Further, about 67% of the injuries occurred at

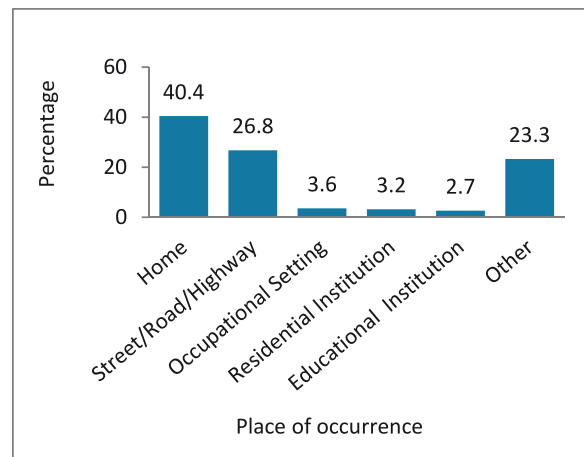


Figure 6.7 : Distribution of Reported Inward Injuries by Place of Occurrence, 2018

home or streets (Figure 6.7). Most of the reported inward injuries were unintentional (88%). However, poisoning and struck/hit by a person were mostly intentional (71% and 64% respectively). (Figure 6.8).

Of all notified injury deaths, most were due to transport injuries (29.8%) followed by poisoning (11.9%) and drowning (11.6%) (Figure 6.9). Reported inward deaths were mostly unintentional.

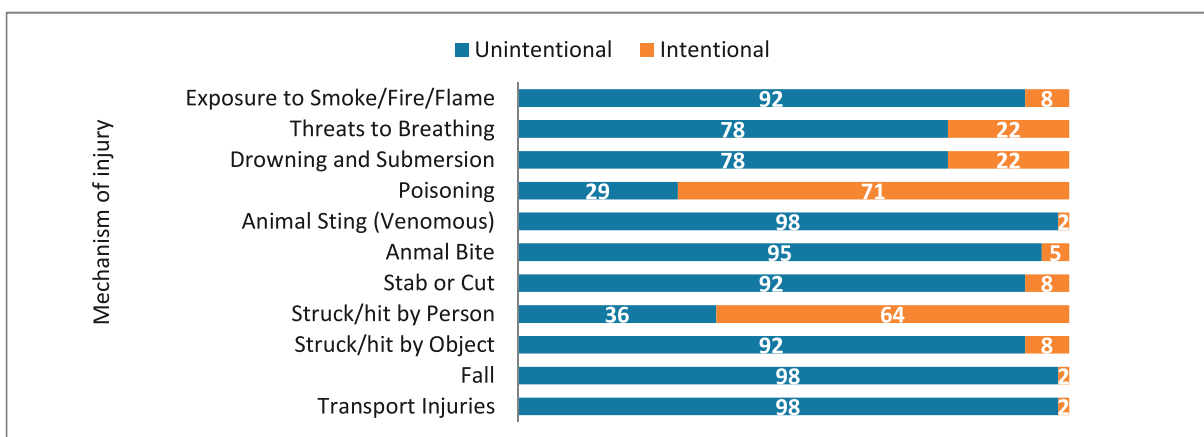


Figure 6.8 : Intention of Selected Injuries Reported in Inward Surveillance by Percentage, 2018

Source: National Injury Surveillance, Ministry of Health

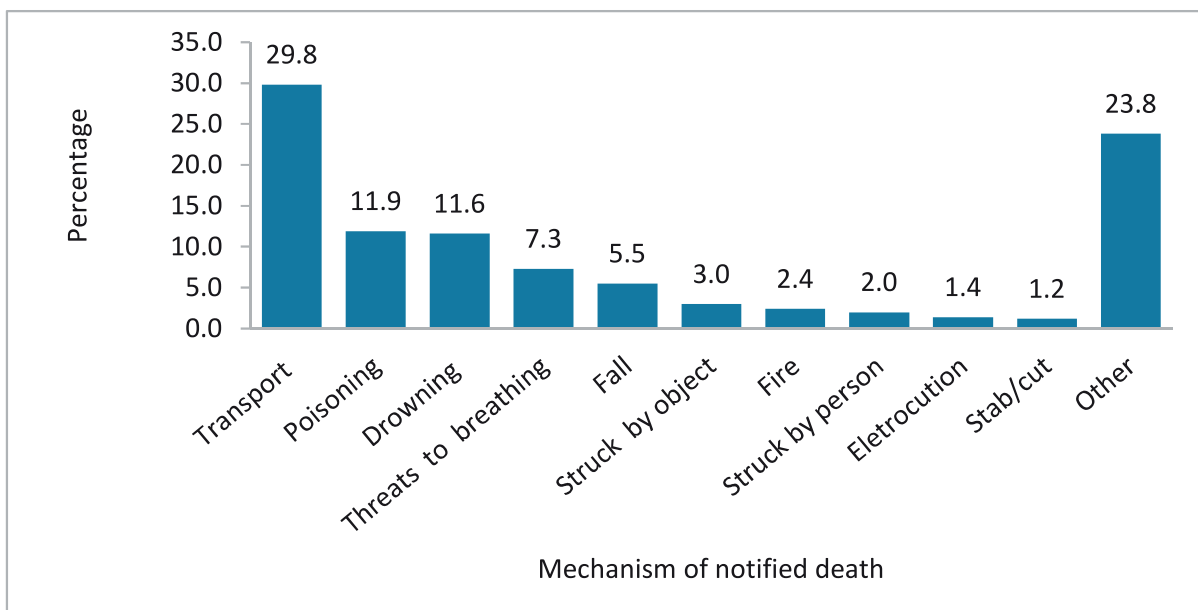


Figure 6.9 : Leading Mechanisms of Notified Deaths due to Injuries, 2018

Source: National Injury Surveillance, Ministry of Health

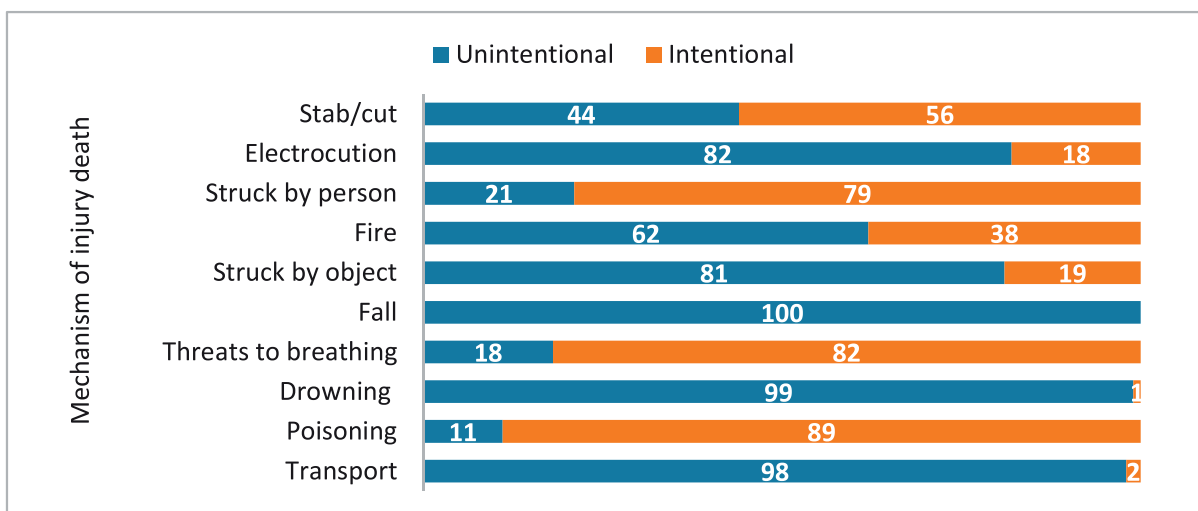


Figure 6.10 : Intention of Selected Injury-Related Deaths, 2018

Source: National Injury Surveillance, Ministry of Health

6.3. Chronic Kidney Disease

The Epidemiology Unit launched surveillance of Chronic Kidney Diseases in Sri Lanka in October 2013 as a sentinel surveillance covering areas known to report Chronic Kidney Disease of Uncertain aetiology (CKDu). The primary objective was to assess the disease burden, socio-demographic factors and co-morbidities associated with CKDu.

Later on, the scope of the surveillance was broadened. The sentinel sites were expanded to get nationwide representative data. The initial paper-based system was converted to a real-time online data reporting system. In parallel to the above changes, surveillance was renamed as the National Renal Registry.

The National Renal Registry (NRR) is expected to serve as the national database on renal diseases. It captures socio-demographic information and all clinical details. The primary data entering is done at sentinel site hospitals. It further facilitates the continuation of follow up in curative care settings and also in field preventive care settings through the Medical Officers of Health.

In addition to providing statistics on renal diseases, the NRR serves as an electronic bed-head ticket (BHT) and electronic clinic record too.

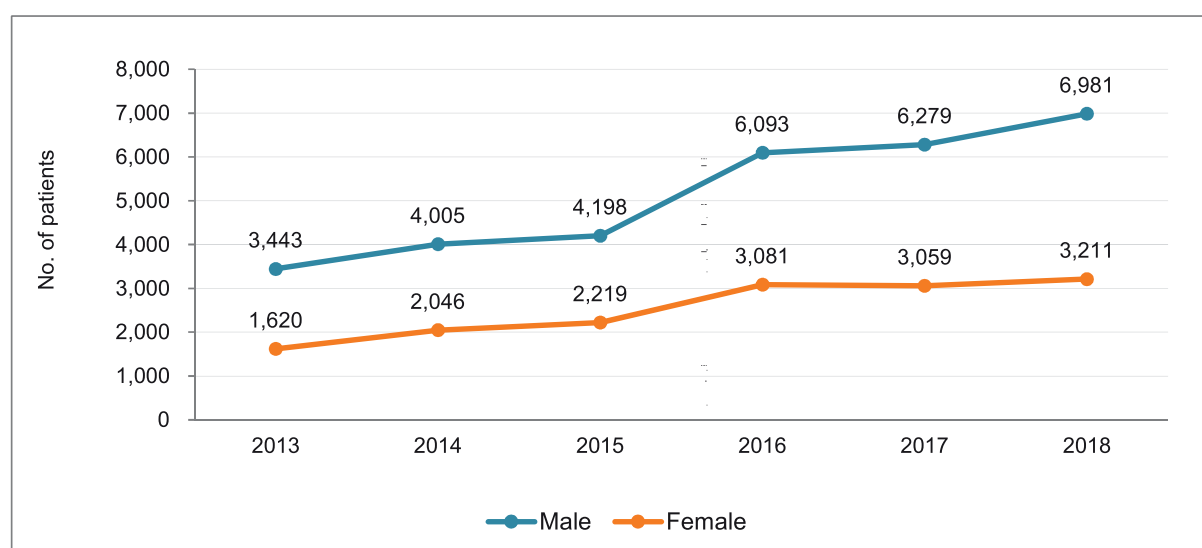


Figure 6.11 : Number of Male and Female CKD/CKDu Patients Reported by Sentinel Sites, 2013 - 2018
Source: National Renal Registry, Epidemiology Unit

6.4. Cancer

6.4.1. New Patient Registration

There are nine main cancer treatment centers, one in each province of the country that deliver specialized cancer care. In addition, from the year 2016 onwards, Consultant Oncologists were appointed to other Teaching or District General Hospitals to initiate cancer care services at district level, improving accessibility for care.

Therefore, at the end of 2018, there were 13 other cancer centers available at district level as shown in Figure 6.12. Oncology units in DGH Kalutara & DGH Avissawella were commenced in the year 2018.

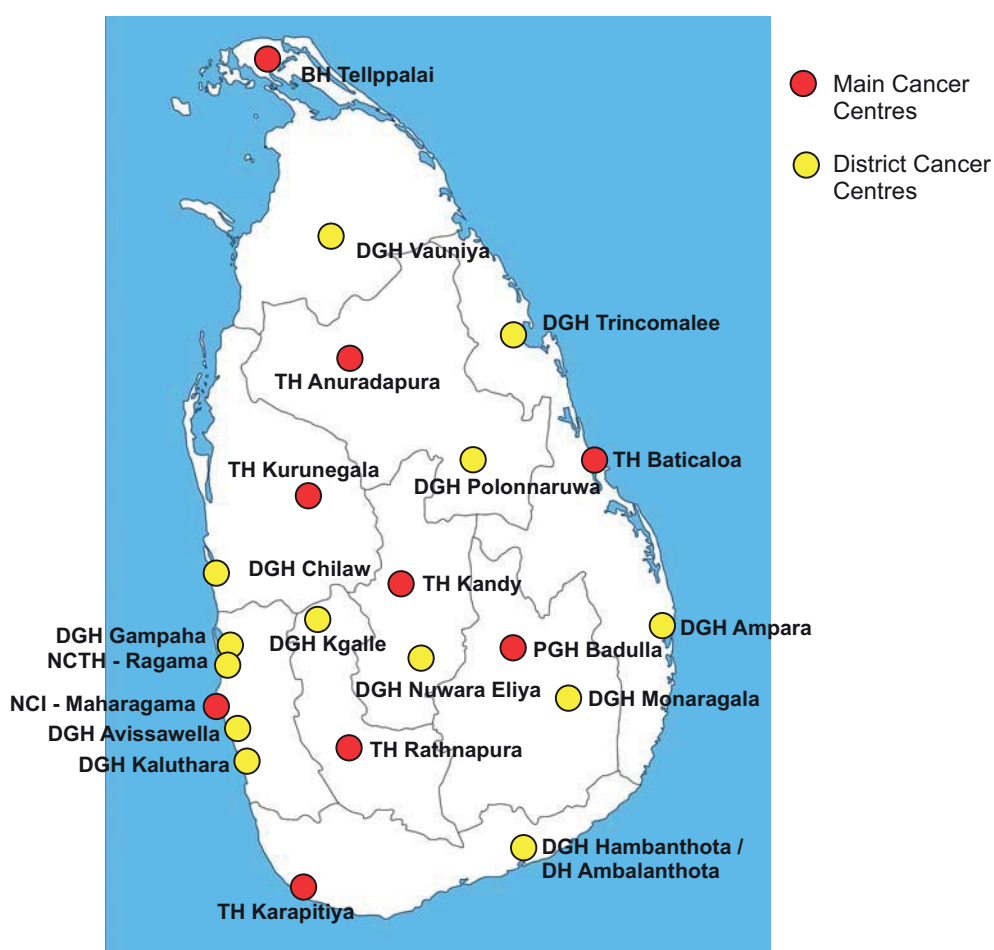


Figure 6.12 : Distribution of Government Cancer Centers, 2018

Source: National Cancer Control Programme

There are 9 main cancer treatment centers, located one in each province and thirteen other state sector cancer treatment units at district level. Cancer units in DGH Kalutara & DGH Avissawella were commenced in the year 2018.

The number of newly diagnosed cancer patients registered at state cancer treatment centers for clinical care is shown in Table 6-2. Since the same patient may register in more than one cancer treatment center, there is a chance of duplication. However, it has shown an increasing

trend of number of new patient registration during the period of 2008 - 2018 as shown in Figure 6.13.

Table 6-2 : New Patient Registration at Each Cancer Centre, 2008 - 2018

Cancer Center	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Main Centers											
NCI - Maharagama	11,163	11,756	11,513	12,403	12,550	12,689	13,247	13,890	14,248	13,651	14,171
TH Kandy	3,648	3,634	4,046	5,042	3,717	3,516	4,000	4,023	3,877	4,150	4,042
TH Karapitiya	1,764	1,866	1,793	2,193	2,158	2,455	2,479	2,394	2,595	2,585	2,652
TH Jaffna/BH Thelippalai	412	479	659	1,055	1,048	1,061	1,032	1,100	1,099	1,103	1,186
TH Anuradhapura	712	551	641	698	803	850	1,114	1,300	1,131	1,214	1,483
PGH Badulla	753	794	858	1,430	2,152	2,203	1,527	2,285	2,225	2,015	2,151
TH Batticaloa		169	565	727	1,094	932	897	900	1,325	1,048	876
TH Kurunegala	538	804	806	1,174	1,122	1,042	1,238	1,680	1,863	2,062	2,206
PGH Rathnapura	319	485	636	735	808	767	807	902	1,094	1,103	1,076
Other Centers											
NCTH Ragama											747
DGH Gampaha										153	580
DGH Avissawella											76
DGH Kalutara											480
DGH Nuwara Eliya									238	236	203
DGH Hambanthota										177	312
DGH Vavuniya										26	223
DGH Polonnaruwa										648	699
DGH Monaragala									125	136	413
DGH Trincomalee										702	568
DGH Ampara									164	140	111
DGH Chilaw									91	239	455
DGH Kegalle									183	276	243
Total	19,309	20,538	21,517	25,457	25,452	25,515	26,341	28,474	30,258	31,664	34,953

Source: National Cancer Control Programme

There is a 10% increase in new cancer patient registration at all state sector cancer treatment centers in year 2018 compared to year 2017.

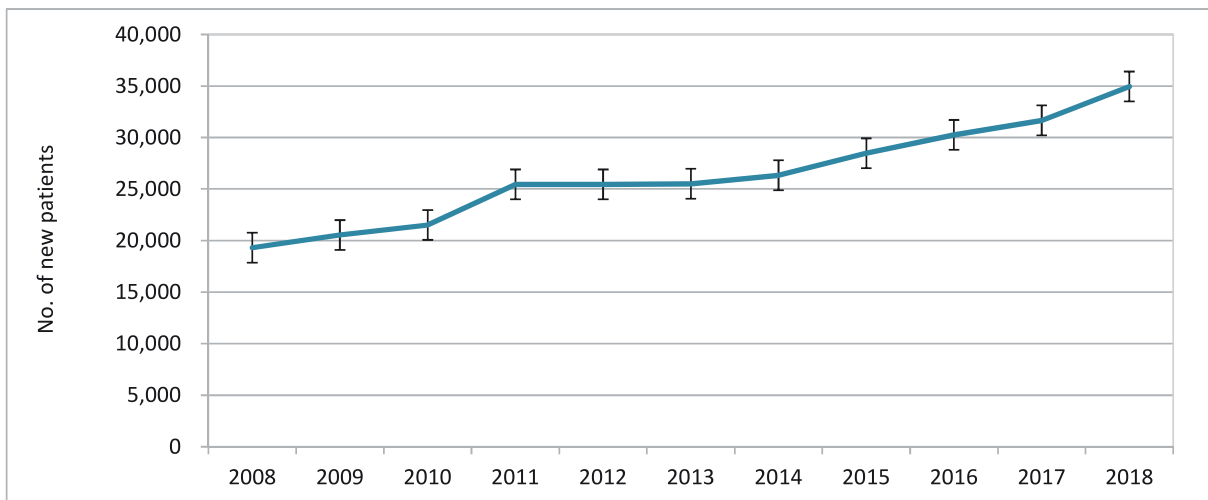


Figure 6.13 : Total Number of New Patient Registration in All Cancer Treatment Units of Ministry of Health, 2008 – 2018

Source: National Cancer Control Programme

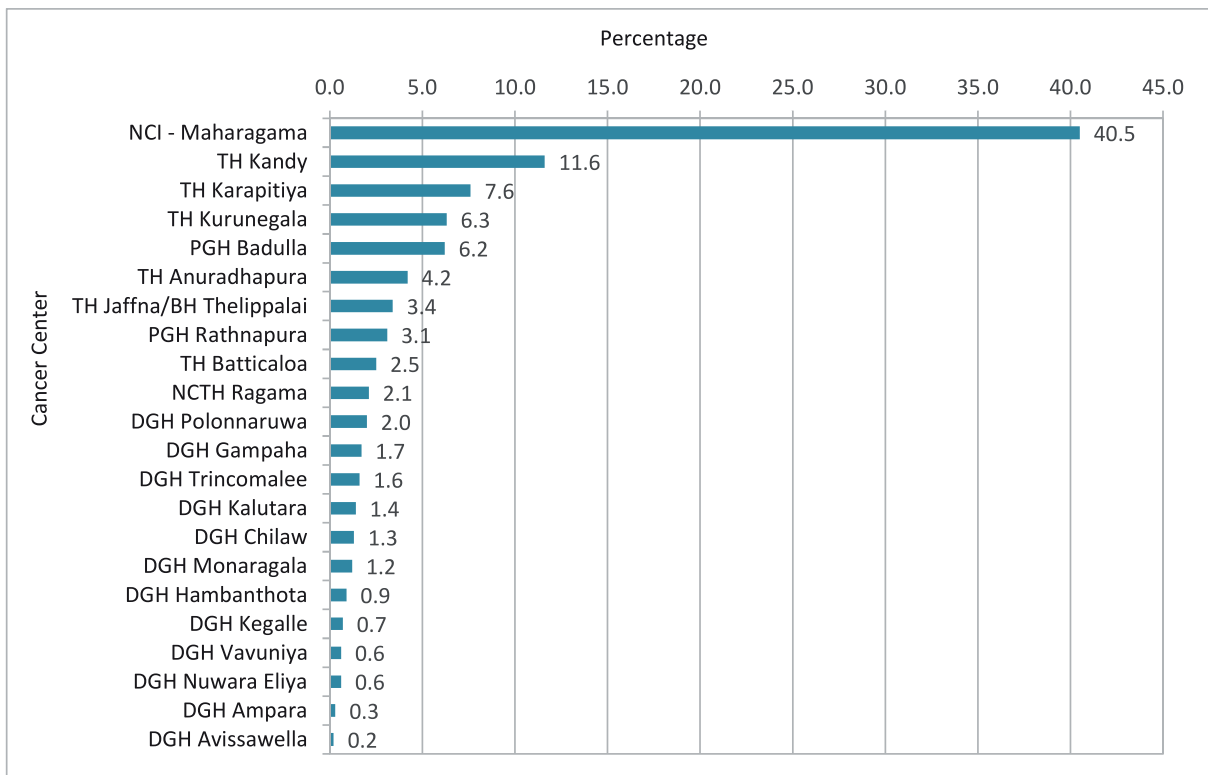


Figure 6.14 : Percentage of New Patient Registration in Each Cancer Centre, 2018

Source: National Cancer Control Programme

Out of all new patient registration in year 2018, 40.5% of patients registered at Apeksha Hospital (National Cancer Institute, Maharagama) while 11.6%, 7.6%, 6.3% and 6.2% were registered at TH Kandy, TH Karapitiya, TH Kurunegala and PGH Badulla.

6.4.2. Cancer Incidence

Cancer incidence data in Sri Lanka can be obtained through the National Cancer Registry Programme which is coordinated by the NCCP. Cancer registration in Sri Lanka was initiated by NCCP with the cancer incidence data of the year 1985 and final reports were published up to the year 2012. In addition, 2014 interim report was published.

Number of cancers detected through the process of cancer registration in Sri Lanka for the time period of 1985 to 2014 is shown in Table 6-3 while the trend of cancer incidence rates are shown in Figure 6.15.

Table 6-3 : No. of Cancers Detected through Cancer Registration in Sri Lanka

Year	Male	Female	Total
1985	2,564	2,448	5,012
1990	2,979	3,084	6,063
1995	3,450	3,875	7,325
2000	5,130	5,795	10,925
2005	6,058	7,314	13,372
2006	6,205	7,875	14,080
2007	6,356	7,279	13,635
2008	7,695	8,816	16,511
2009	7,858	9,030	16,888
2010	7,993	8,970	16,963
2011	8,370	9,112	17,482
2012	11,363	11,778	23,141
2014	10,854	12,251	23,105

Source: National Cancer Control Programme

Total number of reported cancers over the years through the National Cancer Registry have increased more than 4 times from 1985 to 2014. Therefore, cancer care services need to be expanded to cater the increasing demand for care.

Trends of Age Standardized Cancer Incidence Rates

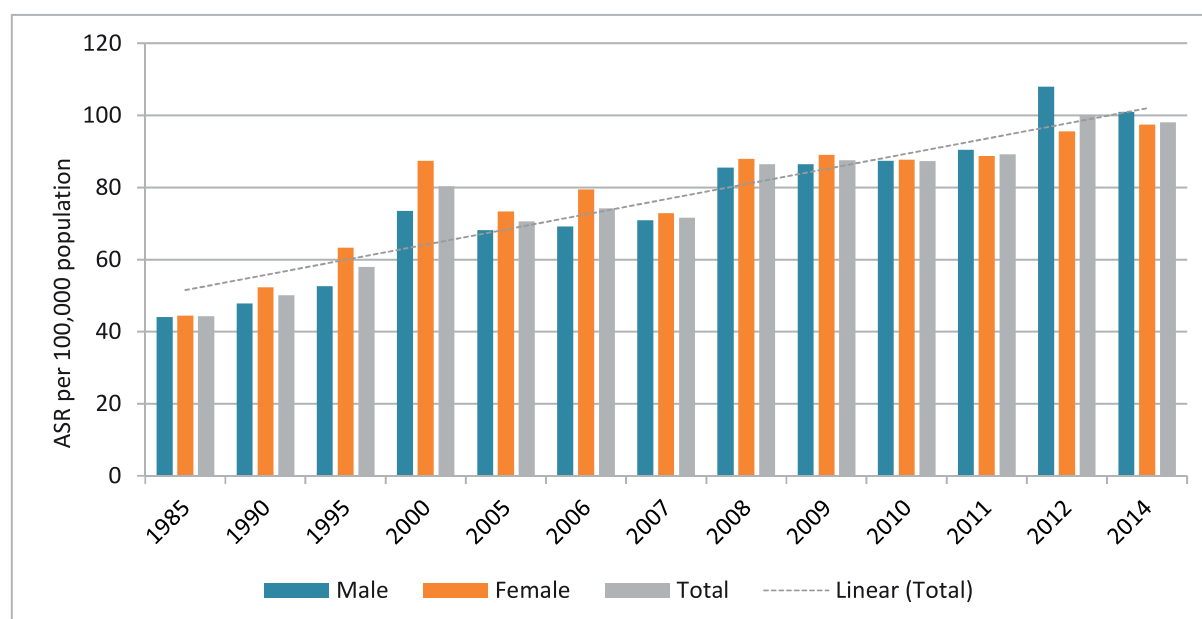


Figure 6.15 : Age Standardized Cancer Incidence Rates in Sri Lanka, 1985 - 2014

Source: National Cancer Control Programme

The overall age standardized cancer incidence rates in Sri Lanka have doubled during the last 29 years, from 44.3/100,000 population in 1985 to 98.1/100,000 population in 2014.

Table 6-4 : Leading Cancers in Sri Lanka, 2014

Male			Female		
ICD 10 Site	Cases	Percentage	ICD 10 Site	Cases	Percentage
Lip, tongue and mouth	1,495	15.7	Breast	2,558	27.0
Colon and Rectum	860	9.0	Thyroid gland	1,086	11.5
Trachea, bronchus and lung	782	8.2	Colon and Rectum	895	9.5
Other and unspecified	778	8.2	Uterus	631	6.7
Oesophagus	735	7.7	Oesophagus	542	5.7
Prostate	622	6.5	Other and unspecified	528	5.6
Bladder	587	6.2	Cervix uteri	484	5.1
Larynx	507	5.3	Lip, tongue and mouth	390	4.1
Skin	452	4.7	Ovary	318	3.4
Stomach	366	3.8	Skin	304	3.2
All sites	9,533	100	All sites	9,466	100

Source: National Cancer Control Programme

6.5. Mental Health

6.5.1. Suicides

Suicides show a slight increase during 2018 compared to the previous year

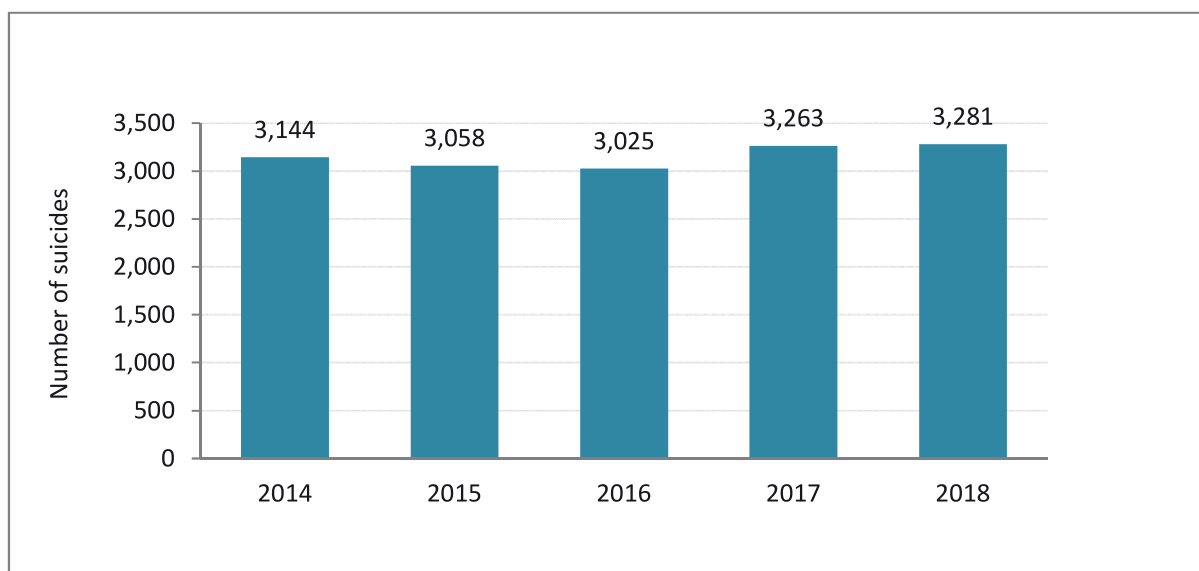


Figure 6.16 : Number of Suicides in Sri Lanka, 2014 – 2018

Source: National Mental Health Programme

Suicides have increased slightly in 2018 when compared to previous years (Figure 6.16). But the rate of suicides has come down in 2018 to 15.14 per 100,000 from 15.22 per 100,000 population in 2017.

The increase is due to the rise in suicides among males, while suicides among females have decreased in 2018 (Figure 6.17).

Marital disharmony and family disputes were the reason for 18% of suicides. The presence of chronic diseases and disabilities was the reason for 12.8% of suicides and 10.3% of the deaths were due to mental disorders in 2018. Reasons for nearly a one third (33.2%) of the suicides were not available.

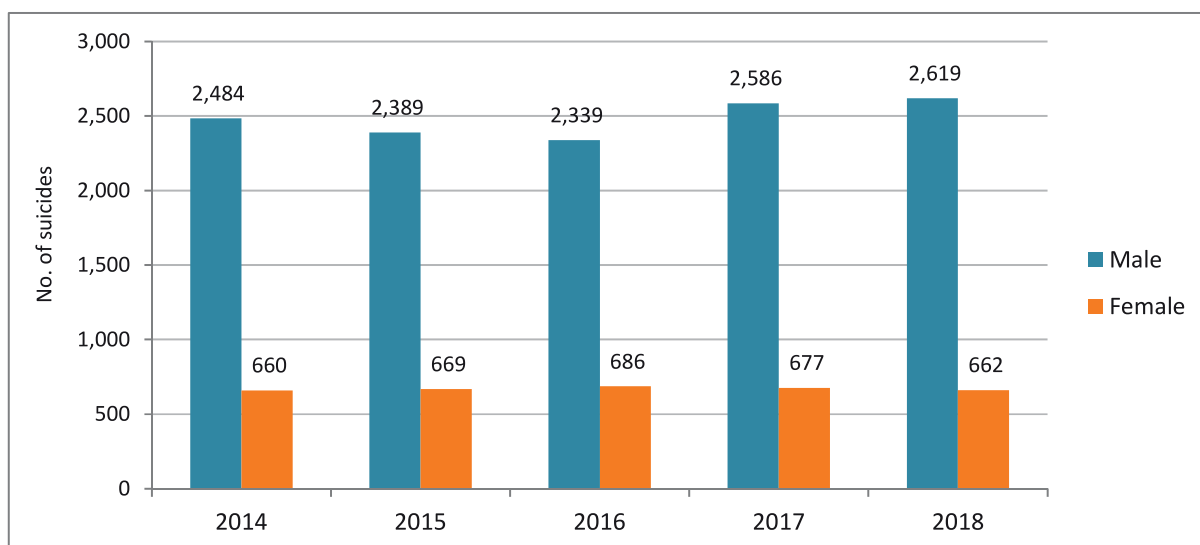


Figure 6.17 : Number of Suicides by Gender, 2014 - 2018

Source: National Mental Health Programme

Actions Taken in 2018

- ◆ Consultative meetings were held with the participation of experts to formulate a National Strategic Plan on Suicide Prevention. The process was initiated, and the strategic plan will be finalized in 2019.
- ◆ Thirteen (13) Community Support Centers were established under the technical guidance of the Consultant Psychiatrist and the Medical Officer- Mental Health of the area.
- ◆ Mental Health Promotion and Violence Prevention programme for school children was pilot tested in Galle district.
- ◆ Suicide Reporting Guidelines were formulated and launched in 2018.

Actions to be Taken in 2019

- ◆ Finalize the strategic plan for suicide prevention in Sri Lanka.
- ◆ This process has to be started and consultative meetings and focus group discussions will be conducted to choose suitable strategies for the prevention of suicides in Sri Lanka.

- ◆ Media guidelines are an essential component in suicide preventive activities, as adverse media coverage is proven to increase 'copycat' suicides. Therefore, guidelines on Suicide Reporting will be implemented with the collaboration of both print and electronic media institutes.
- ◆ Community Support Centers will be established in the new Medical Officer of Health areas in 2019 to provide continuous support to all needy persons in the country, with the view of preventing suicides.
- ◆ School Mental Health Promotion and Violence Prevention programme should be implemented in other districts as well.

The Ministry of Health is leading towards the strengthening of Primary Medical Care Institutions (PMCI), since empowering those to provide comprehensive care is in utmost important measure. One aspect of this comprehensive care package is counselling.

Many people are affected by mental disorders, non-communicable diseases and daily stressors of life. Counselling has been identified as a talking therapy that involves a trained therapist listening to a person and helping to find ways to deal with emotional issues.

Directorate of Mental Health has taken the initial steps to train these primary health care workers with the collaboration of the Sri Lanka Foundation.

6.5.2. Trends in Mental Disorders in Sri Lanka

The Medical Statistics Unit data indicate that persons with mental disorders are in increasing trend. Mainly the mood disorders have become a critical issue in the Sri Lankan context, particularly in the past decade. Further, persons with mental & behavioural disorders due to use of alcohol have also been increased in recent years.

The increase might be due to the improvement of diagnostic facilities, change in mental health care seeking pattern and improved reporting as a result of the implementation of e-based Mental Health Management Information System (eMHMIS).

Actions Taken in 2018

1. Carried out two training programmes for Medical Officers and Nursing Officers attached to Primary Medical Care Institutions (PMCI) on counselling in Kalutara and Hambanthota districts.

Actions to be Taken in 2019

1. Planning to carry out counselling training programmes for primary health care staff in all districts.
2. Strengthen of outpatient management through counselling services.

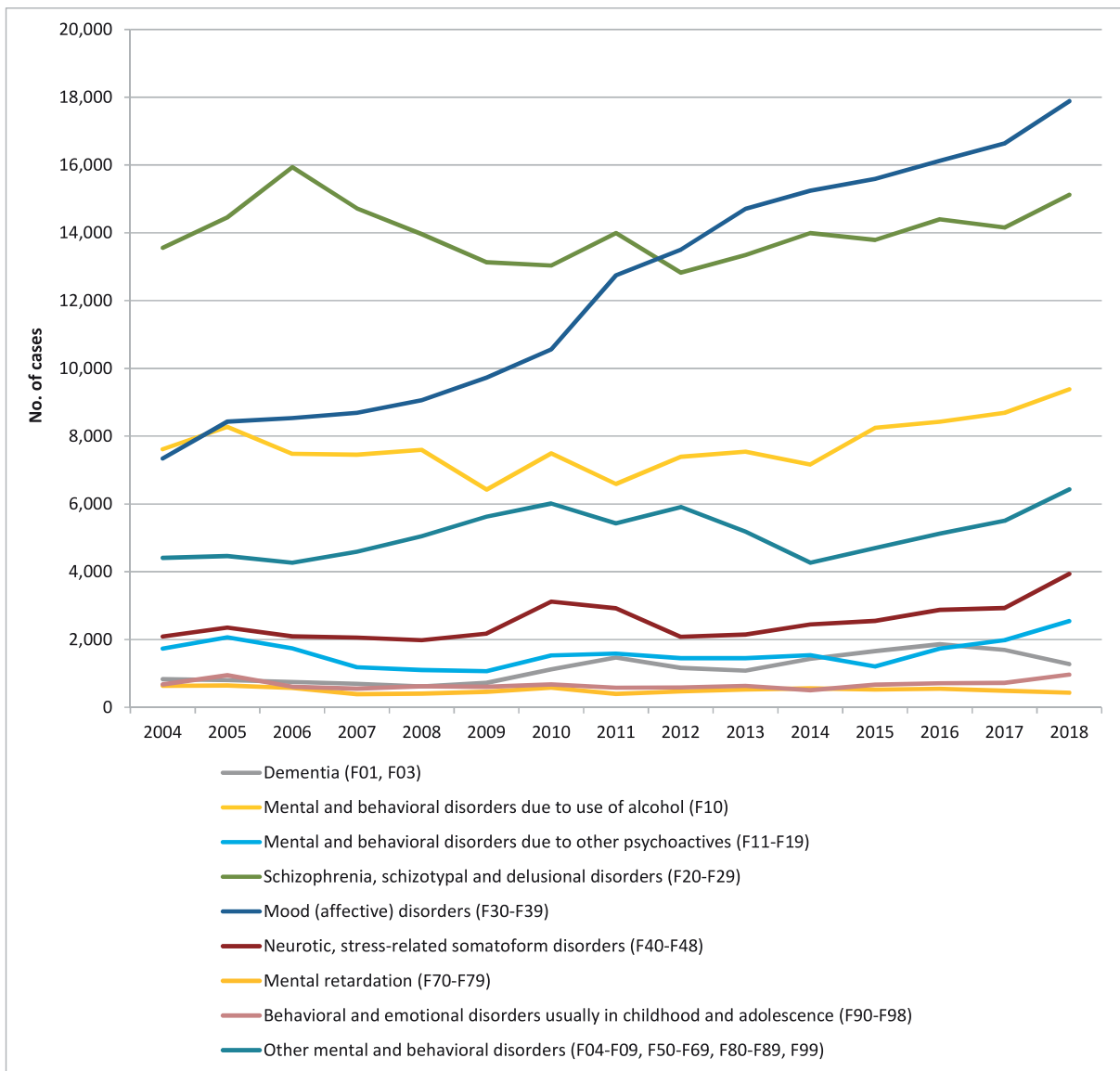


Figure 6.18 : Trends in Mental Disorders Based on Hospital Admissions in Sri Lanka, 2004 - 2018

Source: Medical Statistics Unit

Number of people with mental & behavioural disorders have increased during the past years.

Actions Taken in 2018

1. Funds were mobilized from the national budget to strengthen psychiatric inpatient and outpatient care for mentally ill patients.
2. Human resources were strengthened with cadre increase and new recruitment for Psychiatric units to provide multi-disciplinary care.
3. Out-reach mental health clinics were established to cover all MOH divisions in the country to provide outpatient care.
4. Consumer and career societies were strengthened to facilitate the rehabilitation process.
5. Community Support Centers were established/strengthened island-wide to promote the mental wellbeing of individuals.
6. The Directorate has carried out training programs for health staffs in alcohol prevention & control and clinical management of addicted patients in certain districts. Substance abuse treatments were made available in hospitals where there is a consultant psychiatrist.
7. Implemented an Electronic Management Information system on Mental Health to obtain more accurate and good quality data on time.

Actions to be Taken in 2019

1. Increase the allocation of funds to establish acute psychiatric inpatient care facilities in all districts.
2. Initiate the recruitment of clinical psychologists to the mental health field.
3. Regularize recruitment of all cadres of the multidisciplinary mental health team.
4. Strengthen mental health promotion activities at the community and institutional levels.
5. Development of standard package for mental health care in primary health care institutions including essential services and management guidelines.

7. Oral Health

7.1. Oral Health Disease Trends

Ministry of Health in collaboration with World Health Organization has conducted four National Oral Health Surveys in 1983/1984, 1994/1995, 2002/2003 and 2015/2016.

These surveys indicate an overall declining trend in prevalence and severity of dental caries and improvements in periodontal health (Table 7-1, 7-2).

Table 7-1 : Prevalence and Severity of Dental Caries

Age Group	Prevalence & Severity	1994/95	2002/03	2015/16
6 years	Prevalence	76.4%	65.3%	63.1%
	DMFT	4.1	3.6	3.0
12 years	Prevalence	53.1%	39.2%	30.4%
	DMFT	1.4	0.9	0.6
35-44 years	Prevalence	91.1%	89.8%	92.5%
	DMFT	10.1	8.4	6.5

Source: National Oral Health Survey ; Deputy Director General (Dental Services) Division

Table 7-2 : Prevalence of Healthy Gums in 12 Years and 35 - 44 Year Olds

Age Group	1994/95	2002/03	2015/16
12 years	13.3%	23.3%	55.3%
35-44 years	2.1%	9.7%	47.4%

Source: National Oral Health Survey ; Deputy Director General (Dental Services) Division

Teeth Present and Prosthetic Treatment Need

According to the fourth National Oral Health Survey report 2015/2016, the mean number of deciduous teeth present among 5-year-old children was 19.4. Mean number of permanent teeth present among 35-44 years was 27.5 and it was 15.3 among 65-74 years. The edentulousness rate among 65-74 years was 21.8.

Oral Health-Related Behaviours

According to the fourth National Oral Health Survey report 2015/2016, use of fluoridated toothpaste and toothbrushes was high (around 75%) among all age groups except among the elderly.

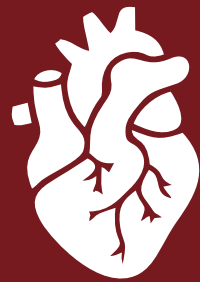
Use of Oral Health Care Services

According to the fourth National Oral Health Survey report 2015/2016, adults aged 35-44 years and children aged 12 years were the major consumers of dental services when compared with the other index age groups. Furthermore, 12-year-old school children visited mostly to School Dental Clinics (53.4%) on their last visit. The majority of adults aged 35-44 years visited hospital dental clinics (52.4%) and 30.7% visited general dental practice on their last visit of dental care.

The most frequent type of treatment received was the extraction among 35-44 and 65-74 age groups and it was around 75% among the 65-74 age group.

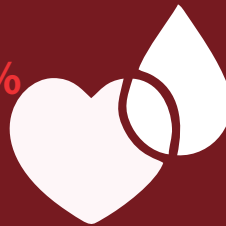
Risk Factors

In 2018...



20%
had raised
Blood Pressure
among the screened
population

31.8%
prevalence of
Anaemia
among pregnant
women



25%
were
Overweight
among the screened
population

Risk Factors

8. Risk Factors

This chapter describes factors that affect personal or community level health. While some factors work in combination to create health problems, others are able to create problems themselves.

A significant attention is needed to the factors described in this chapter, as many of them contribute to the disease burden of the country.

Some factors, like air quality and food safety are not discussed in this chapter, even though they are important in determining the disease burden.

8.1. Maternal and Child Nutrition

8.1.1. Anaemia in Pregnancy

Maternal nutrition is an important associate of the birth weight of the new born which in turn affects the child's nutrition. Pregnant women with nutritional deficiencies should be identified as early as possible to mitigate the effects on the foetus.

Approximately one-third of pregnant women, is found to be anaemic (Hb < 11g/dl). Anaemia in pregnancy shows an upward trend over the years, which could be due to improved screening services in the field.

Further, in-depth analysis is essential for the interpretation of this finding. According to the National Nutrition and Micronutrient Survey of Pregnant Women in Sri Lanka (2015), conducted by the Medical Research Institute, Ministry of Health, the prevalence of anaemia among pregnant women in Sri Lanka was 31.8%. Categorization of anaemia showed that the majority (74% of anaemic women) were mildly

anaemic, with another 26% being moderately anaemic. No cases of severe anaemic women were found in the survey population.

Anaemia reporting has increased over the years and in 2018, it was reported as 30% of pregnant mothers.

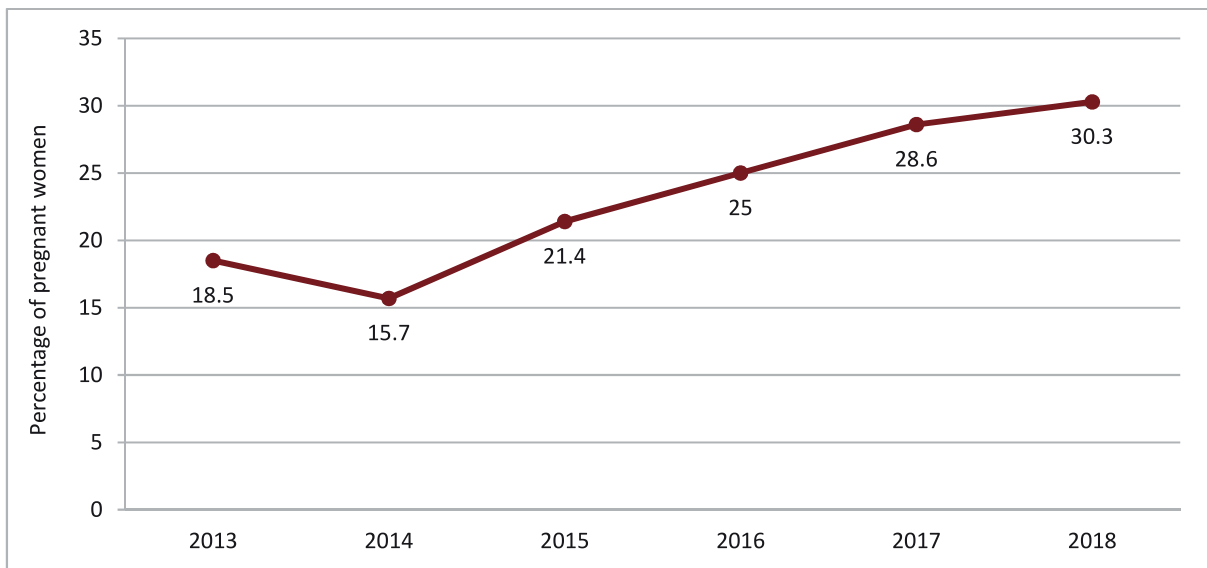


Figure 8.1 : Anemia in Pregnancy, 2013 - 2018

Source: Family Health Bureau

BMI in Pregnancy

Sri Lanka is experiencing a significant burden of maternal malnutrition. Prevalence of low body-mass index (BMI <18.5 kg/m²) among first-trimester pregnant women has decreased from 24.6% in 2011 to 16.6% in 2018. In contrast, there has been an increase in overweight (BMI ≥ 25 kg/m²) from 15.2% to 27.9% during the same period.

The maternal nutrition programme in Sri Lanka is conducted primarily via the government health sector through a package of nutrition-specific interventions that are delivered as antenatal and postnatal care. As part of a preventive approach, through the pre-pregnancy care programme, newly married women are educated on achieving a healthy weight via diet and exercise before becoming pregnant.

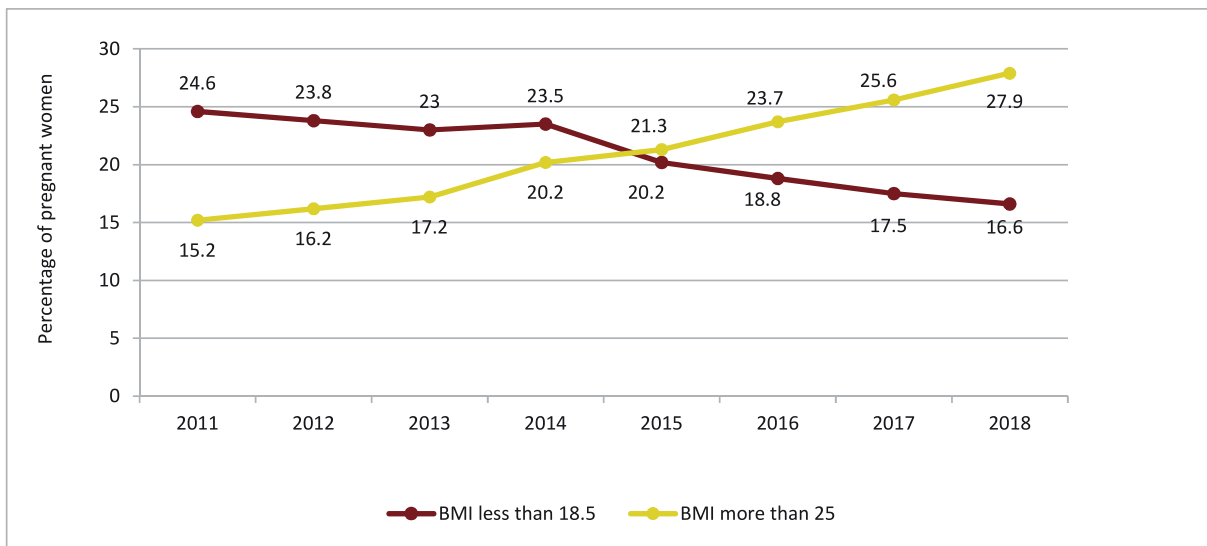


Figure 8.2 : BMI of Mothers before 12th Week, 2011 - 2018

Source : Family Health Bureau

There is a significant increase in the number of mothers with a BMI more than 25 (before 12 weeks) visiting antenatal clinics.

Recommendations

Multi-sectoral, long-term programme is required to combat anaemia in pregnancy as it shows an upward trend over the last few years.

Inter-district variations have been observed in nutritional statuses, such as anaemia, BMI status among pregnant women. Therefore, it is essential to investigate the underlying factors and develop plans at sub-national level to improve the maternal nutritional status in the country.

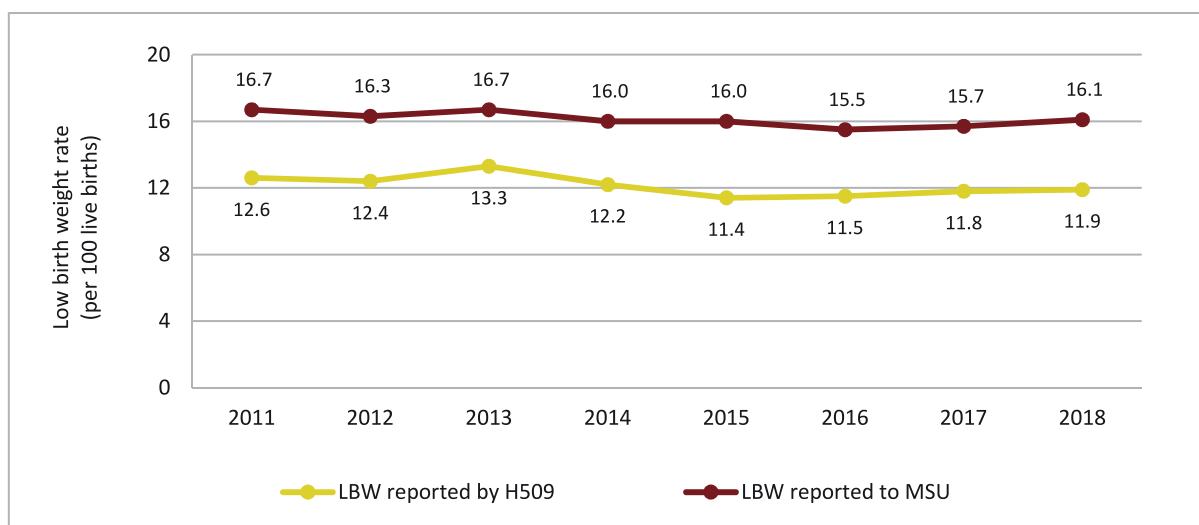


Figure 8.3 : Low Birth Weight among New-Borns, 2011 - 2018

Source: Family Health Bureau & Medical Statistics Unit

8.1.2. Risk Factors Related to Nutrition Status of Children under the Age of Five Years

According to data of the National Nutrition Month collected annually by the Family Health Bureau, there is a declining albeit slow trend in all three indices pertaining to undernutrition of children under the age of 5 years, underweight (weight for age < -2SD), stunting (length/height for age < -2SD) and wasting (weight for length/height < -2SD) over the years. When classified according to recently revised WHO-UNICEF population cut-offs Sri Lanka is a low prevalent country with regard to chronic undernutrition since the prevalence of stunting

is 8.9% (cut off for low 2.5 - < 10%), but with a high prevalence of acute undernutrition with wasting at 10.2% (high 10 - <15%). However, overweight rate among children under the age of 5 years remains at the same low level with 0.6% in year 2018 (very low <2.5%).

However, even with the high assessment coverage (94.3%) of nutrition month data, the reported malnutrition rates are very much lower compared with DHS 2016, which reports rates for stunting as 17.3% (medium prevalence by revised WHO-UNICEF cutoffs), underweight 20.5% , wasting 15.1% (very high) and overweight/obesity 2% (very low).

Stunting rates has been static over past years. Inability to bring about a declining trend over the recent past is a matter of concern.

Decline in prevalence of underweight is similarly negligible.

Over the years hardly any improvement is observed regarding prevalence of wasting (acute under nutrition).

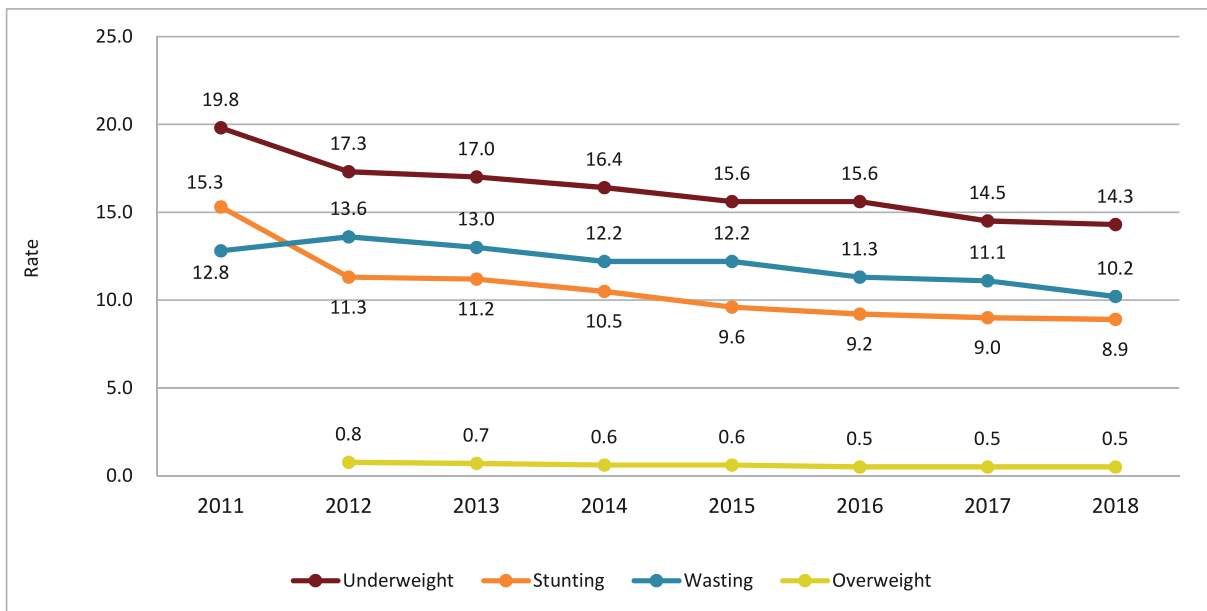


Figure 8.4 : Malnutrition among Under-Five Children, 2011 - 2018

Source: Nutrition Month Data - Family Health Bureau

Actions Taken in 2018

In addition to the routine evidence-based interventions implemented island-wide by the Ministry of Health to address malnutrition, (with a view to address the stagnating trends and to identify sector disparities) the following activities were carried out in year 2018;

- ◆ From the year 2017, data on growth faltering among under 5 children whose weight for age is within the normal range is being collected during the Nutrition Month by the Family Health Bureau with the view of improving early detection and interventions at this easily modifiable stage. The year 2018 saw an improvement in the rate of detection and reporting of these children.

- ◆ From the year 2018 the data from the estate sector are collected and analyzed separately to enable the divisional, district, provincial and national health authorities to plan and carry out more sector-specific interventions in collaboration with the Estate and Urban Health Directorate of the Ministry of Health.

Recommendations

- ◆ Extensive effort should be taken targeting the further improvement of quality and the coverage of these nutrition-specific interventions which should include increasing cadre, human resources, their capacities to provide nutrition interventions and providing required facilities for quality service provision from grass root level upwards.
- ◆ Nutrition specific interventions implemented by the Ministry of Health to be further successful, a supportive environment should also be created by the non – health sector through inter-sector collaboration which should encompass the implementation of nutrition-sensitive interventions such as ensuring food security, poverty alleviation and support for proper child care.

8.1.3. Malnutrition among School Children

During the School Medical Inspections (SMIs) students are assessed for their nutritional status. Stunting is assessed in grades 1 and 4. In 2018, 7.7% and 6% of children in grades 1 and 4 were stunted respectively. Wasting was higher compared to stunting in both grades with 19.4% wasted children in grade 1 and 19.7% wasted children in grade 4.

In 2018, 18.4% and 15.3% of children in grades 7 and 10 were wasted respectively. The highest rate of overweight was reported among children in grade 7 (6.8%), while among children in grade 10 it was 6% (Figure 8.7).

In addition, the Body Mass Index (BMI) of all students in grade 10 was assessed and the necessary nutritional interventions were done during the nutrition month each year. During the year 2018, 115,902 (89.1%) grade 10 students were assessed for their nutritional status and the trends of prevalence of overweight and low BMI among male and female students are given in Figure 8.5 and 8.6 respectively. The overall Low BMI among grade 10 students in 2018 was 19% with 23% among males while it was 15.2% among females. The overall overweight (overweight and obesity) among grade 10 students in 2018 was 8.3% with 9.1% among females and 7.6% among males.

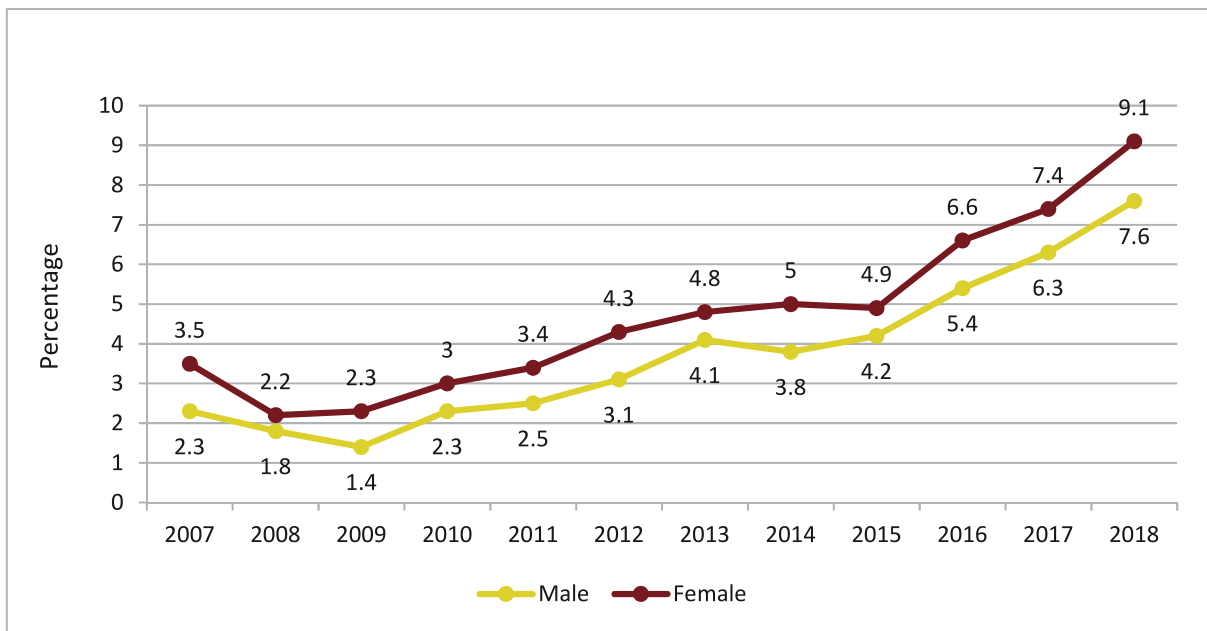


Figure 8.5 : Percentage Distribution of Grade 10 Children with Overweight BMI*, 2007 - 2018

Source: Family Health Bureau, Nutrition Month 2018

*Includes obesity

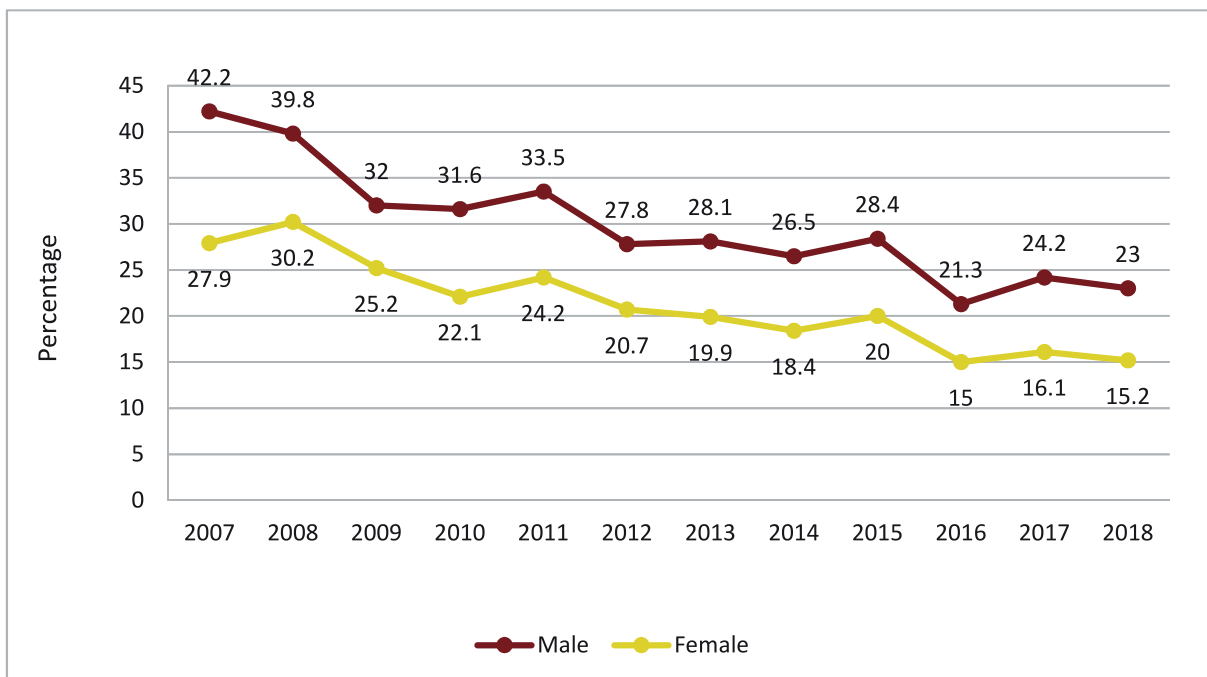


Figure 8.6 : Percentage Distribution of Grade 10 Children with Low BMI, 2007 - 2018

Source: Family Health Bureau, Nutrition Month 2018

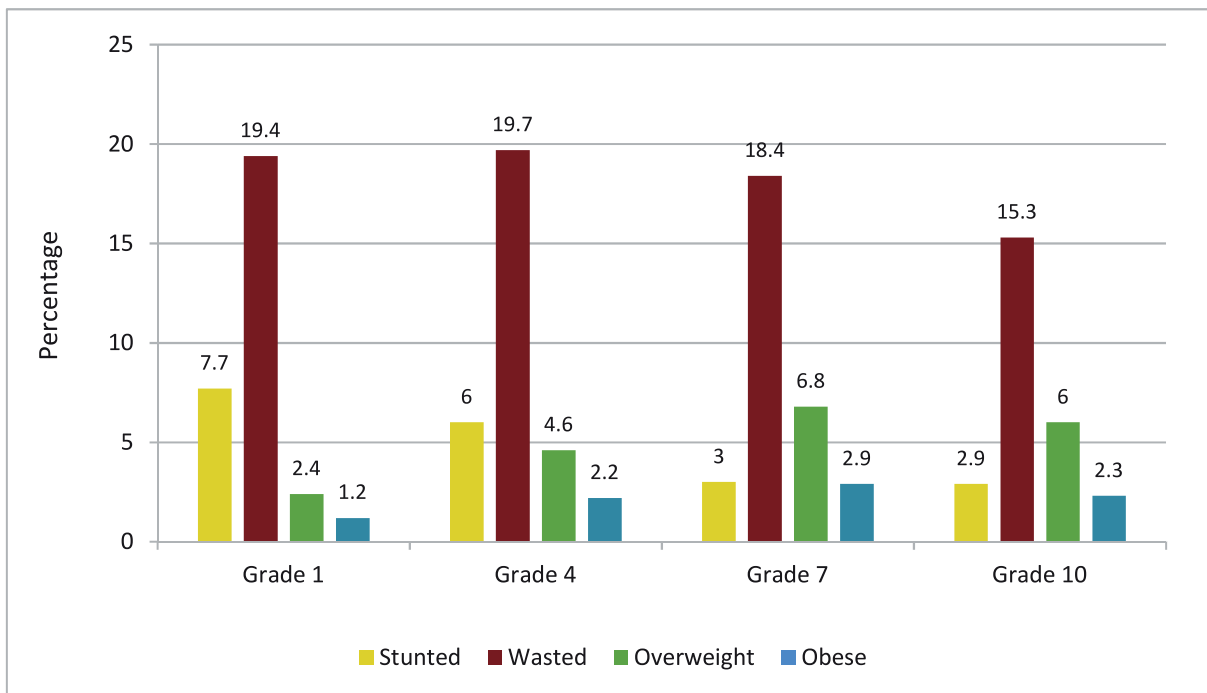


Figure 8.7 : Percentage Distribution of School Children in Different Grades with Stunting, Wasting, Overweight and Obese, 2018

Source: Family Health Bureau, eRHMIS 2017, Family Health Bureau

Managing Nutritional Problems among Adolescents with a Special Emphasis to Control of Overweight and Obesity

The analysis of the routine nutritional data of the School Medical Inspections and Nutrition Month data revealed that the prevalence of overweight and obesity among grade 7 and 10 students are high.

Prompt action was taken by the School Health Unit in coordination with the Ministry of Education in order to prevent obesity and premature deaths among these children in the future due to non-communicable diseases.

Managing overweight and obesity was included in the school curriculum. School Health Unit developed a guide for the management of overweight and obesity among school children to facilitate the students, teachers and health care providers.

Children were empowered to monitor their BMI and 875 weighing scales with height measuring rods were distributed to schools throughout the country. Wall charts were developed with BMI for age and height for age growth curves and distributed among schools island-wide. This was supplemented with a wall chart displaying the advice for children in each BMI category.

School Health Unit contributed to develop the “National Physical activity and sedentary behavior guideline” which was coordinated by the Sports Medicine Institute of Ministry of Sports.

School Health Unit directly worked at the ground level as well and conducted workshops for school children and parents on nutrition and promotion of physical activities.

8.2. Adolescence Health Risk Factors

Teenage Pregnancies

There was a reduction in the percentage of teenage pregnancies reported over the last seven years.

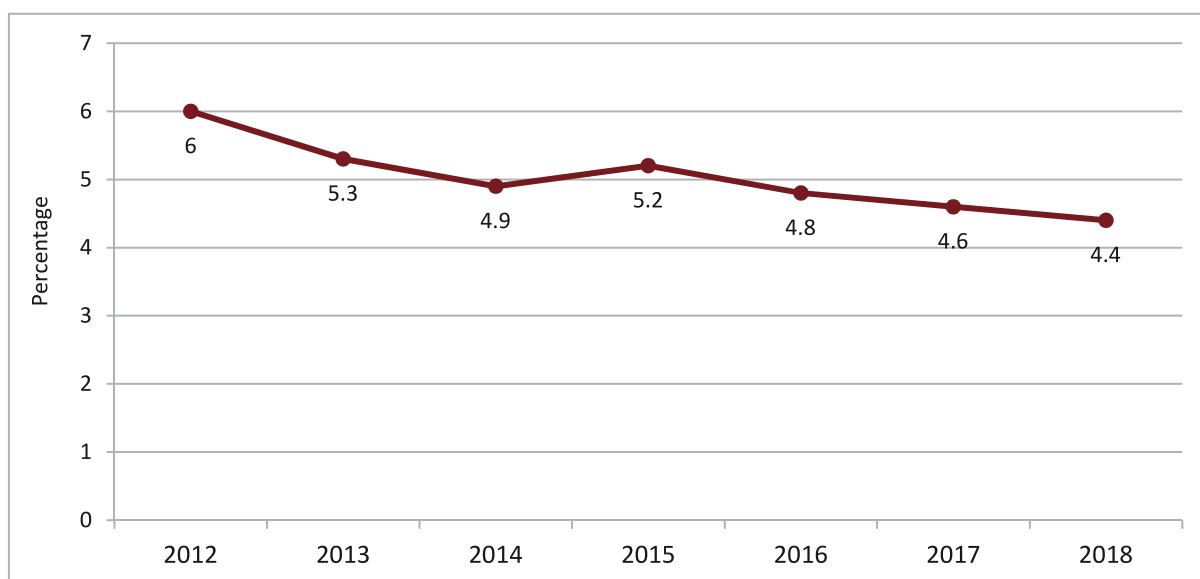


Figure 8.8 : Teenage Pregnant Mothers Out of All Registered Pregnancies, 2012 - 2018

Source: Family Health Bureau

Out of the teenage pregnancies reported in 2018, almost 80% of pregnancies were reported in the age group of 18 and 19.

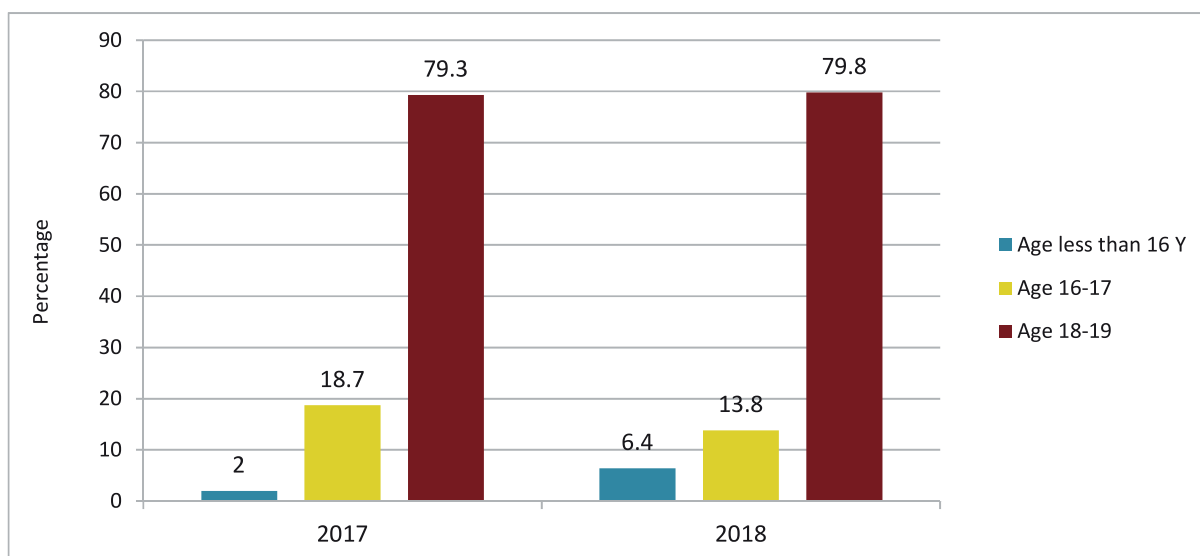


Figure 8.9 : Age Group Wise Percentages of Teenage Pregnancies among Pregnant Mothers, 2017 - 2018

Source: Family Health Bureau

8.3. Gender Based Violence

Gender-based violence is the major negative consequence of gender inequality which results in great negative health impacts.

Gender-Based Violence (GBV) is recognized as a major public health issue with a wide range of negative consequences to the survivors creating an adverse impact on children, and acting as an inhibiting factor towards the family wellbeing. Although this is a common problem, it is also considered a hidden problem as most of the survivors do not reveal about their sufferings due to reasons such as culture, fear of reprisal, and concern over children, shame and internalizing the violence. It is also an ever-increasing burden to the health care services of the country. In addition, the social and economic burden to the country at the national level due to Domestic Violence/GBV is tremendous and it is currently estimated to be more than that due to malignancies.

Gender-Based Violence during pregnancy which is a common occurrence leads to many negative pregnancy outcomes including miscarriages, still births and maternal deaths. Also, GBV in one generation can influence the behaviour of the next generation by a process of learned behaviour. When children are exposed to violence between their parents, boys learn violence as a means of achieving control and eventually have a greater chance of being a perpetrator. On the other hand, girls learn to accept violence as inevitable helplessness and have a higher chance of being survivors in adult life.

The health sector response within a country is often the initial, and a crucial response to GBV. Gender and Women's Health Unit of the Family Health Bureau (FHB) is the nodal agency at the national level responsible for addressing GBV in the health sector in Sri Lanka.

The programmes implemented by Family Health Bureau responding to GBV focuses on,

01. Prevention of GBV,
02. Provision of care for survivors of GBV,
03. Creating an enabling environment to strengthen the health sector response to GBV.

GBV prevention activities at individual, family and community level is mainly done through preventive health staff of Medical Officer of Health areas. Also, they get involved in providing care for survivors of GBV in the community.

Table 8-1 : Service Provision to GBV Survivors by Preventive Health Staff, 2016 - 2018

Year		2016	2017	2018
No. of new survivors identified	Men	1,365	2,649	2,766
	Women	4,769	6,157	8,495
No. of survivors given emotional support		3,298	4,103	5,787
No. of survivors referred for further care	Men	419	2,438	3,016
	Women	677		

Source: Family Health Bureau

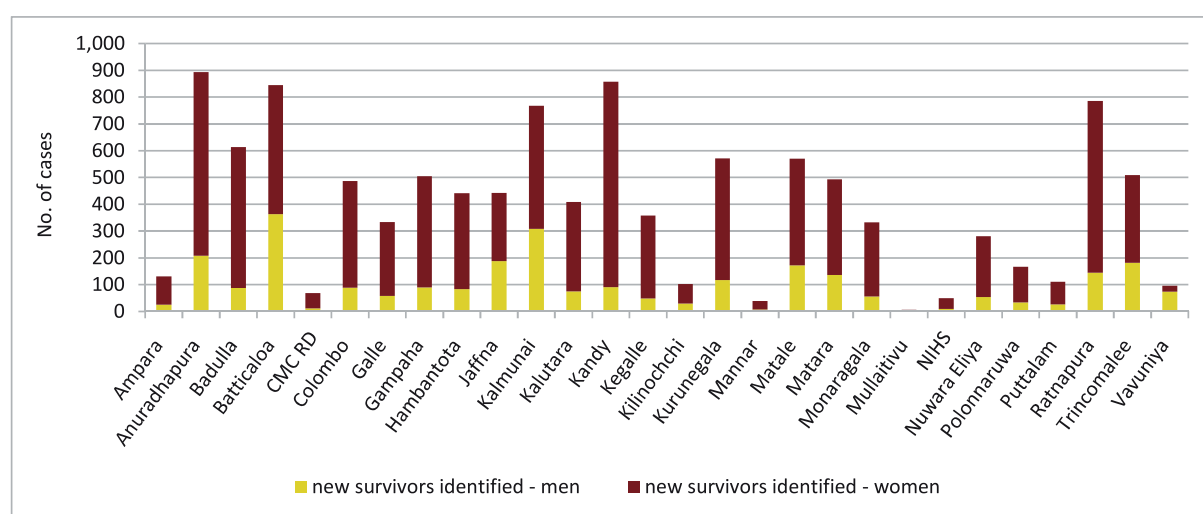


Figure 8.10 : Reported Cases of Gender Based Violence by RDHS Area, 2018

Source: Family Health Bureau

The establishment of Gender-Based Violence Care Centres named “Mithuru Piyasa/Natpu Nilayam” at hospitals, which are dedicated to provide essential medical care and basic emotional support to survivors of GBV is

designed to respond to survivors in an effective manner. There were 61 “Mithuru Piyasa” centres established in the country by the end of year 2018.

Table 8-2 : Gradual Increase of Number of Mithuru Piyasa Centres and Total Number of Consultations Done at Centres over the Years, 2011 - 2018

Year	Number of Mithuru Piyasa Centres	Total Number of New Survivors Seeking Care over the Year	Total Number of Subsequent Consultations Held with the Survivors	Total Number of Consultations Held with the Family Members of Survivors	Total Number of Consultations Held with the Perpetrators	Total Number of Consultations Held during the Year
2011	06	447			101	1,010
2012	08	870	355	432	249	1,906
2013	16	1,722	726	827	471	3,746
2014	20	2,949	1,360	1,309	717	6,335
2015	31	4,670	2,683	2,135	1,261	10,749
2016	45	7,577	4,131	3,077	2,243	17,028
2017	55	7,463	4,743	3,276	2,834	18,316
2018	61	8,943	5,579	4,418	3,205	22,145

Source: Family Health Bureau

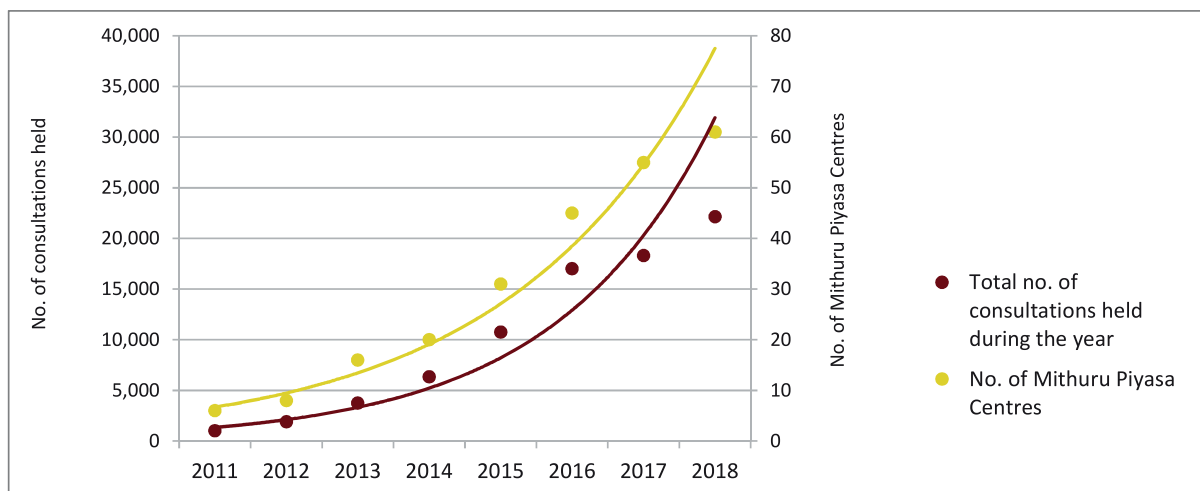


Figure 8.11 : Number of Consultations Held and Number of Mithuru Piyasa Centres, 2011 - 2018

Source: Family Health Bureau

8.4. Risk Factors for Non-Communicable Diseases

8.4.1. Prevalence of Risk Factors among the Screened Population

- ◆ Among the screened population at HLCs across the country, nearly 25% were overweight with BMI $\geq 25\text{Kg/m}^2$
- ◆ Among the screened population, 20% had raised blood pressure (systolic $\geq 140\text{mmHg}$ and/or diastolic $\geq 90\text{mmHg}$)

Healthy Lifestyle Centres (HLCs) were established across the island to screen the general population for NCDs and to promote lifestyle modification. People aged 40-65 years of age were eligible for screening. The main objective of screening is to identify behavioural and intermediate risk factors and to intervene early to prevent a CVD event. In addition, this

screening also provides an opportunity for early detection and early initiation of treatment for NCDs to prevent complications among diagnosed patients.

The prevalence of behavioural and intermediate risk factors of NCDs among the screened population is shown in Table 8-3.

Table 8-3 : Prevalence of Behavioural and Intermediate Risk Factors among the Screened Population, 2014 - 2018

Behavioural or Immediate Risk Factor	Number and Percentage of Screened Population				
	2014 ^a	2015 ^b	2016 ^c	2017 ^d	2018 ^e
Fasting blood glucose >126 mg/dl	48,853 (12.75)	41,372 (10.57)	33,845 (10.79)	60,998 (11.1)	62,465 (11.0)
Raised blood pressure (systolic ≥140 mmHg and/or diastolic ≥90 mmHg)	91,805 (23.96)	89,862 (22.97)	74,387 (23.71)	110,549 (20.17)	96,757 (16.9)
Overweight (BMI ≥25 kg/m ²)	100,618 (26.26)	99,873 (25.53)	78,695 (25.09)	136,137 (24.84)	150,098 (26.3)
Obese (BMI ≥30 kg/m ²)	29,043 (7.58)	32,300 (8.26)	24,955 (7.96)	41,440 (7.56)	47,888 (8.4)
Current tobacco smoker	25,557 (6.67)	26,826 (6.86)	21,356 (6.80)	30,986 (5.65)	33,277 (5.8)
Current alcohol user	28,775 (7.51)	29,836 (7.63)	25,339 (8.08)	41,829 (7.63)	44,200 (7.7)
Tobacco chewer	53,604 (13.99)	53,651 (13.71)	45,230 (14.42)	66,265 (12.09)	71,777 (12.6)
With 10-year CVD risk ≥30%	1,724 (0.45)	2,268 (0.58)	908 (0.29)	1,794 (0.33)	1,563 (0.27)

BMI: body mass index; CVD: cardiovascular disease

a: 88,554 men screened; 239,425 women screened; total population screened: 327,979

b: 110,469 men screened; 272,692 women screened; total population screened: 383,161

c: 108,399 men screened; 282,861 women screened; total population screened: 391,260 (weighted data)

d: 85,338 men screened; 228,361 women screened; total population screened: 313,699

e: 163,638 men screened; 384,410 women screened; total population screened: 548,048

Source: Directorate of NCD

The district-wise prevalence of behavioural and intermediate risk factors of NCDs among the screened population in the year 2018 is given in Table 8-4.

Table 8-4 : District Wise Prevalence of Behavioral and Intermediate Risk Factors among the Screened Population, 2018

District	Target population	Total Screened	% of Smokers Detected	% of Tobacco Chewers Detected	% of Alcoholics	% of BMI 25 - 29.9	% of BMI > 30	% of Blood Pressure $\geq 140/90$	% with Blood Glucose $\geq 126\text{mg/dl}$	% with CVD >30
Ampara	179,750	46,957	6.38	11.63	4.45	54.73	12.0	10.62	12.86	0.19
Anuradhapura	232,500	34,880	6.83	14.30	9.77	27.02	8.97	32.56	13.50	0.41
Badulla	218,250	30,381	8.10	21.61	12.0	26.38	7.78	11.00	7.22	0.39
Batticaloa	142,500	7,037	5.22	10.71	6.12	27.23	10.7	39.37	12.19	0.17
Colombo	609,750	21,452	5.60	5.86	7.49	29.75	11.2	25.49	12.68	0.13
Galle	281,000	24,967	3.43	5.07	4.01	21.77	5.89	10.63	11.51	0.40
Gampaha	602,250	63,057	4.21	6.18	5.63	24.78	10.3	9.27	8.00	0.24
Hambantota	163,750	21,320	7.24	12.27	9.01	26.70	7.38	11.90	7.41	0.29
Jaffna	153,250	11,582	7.24	11.20	7.84	28.59	9.96	24.74	15.88	0.19
Kalutara	320,250	23,870	4.01	9.95	8.03	28.30	8.65	12.57	9.66	0.22
Kandy	367,000	32,490	3.54	4.87	3.95	26.20	8.52	7.95	9.98	0.09
Kegalle	221,000	25,222	3.62	7.86	4.98	21.46	6.99	18.03	12.03	0.15
Kilinochchi	31,500	2,177	11.8	12.67	11.4	14.75	4.78	10.38	3.67	0.00
Kurunegala	427,750	57,317	2.77	9.36	3.88	25.52	6.60	13.33	10.68	0.25
Mannar	27,250	4,481	10.8	16.69	10.6	25.46	6.58	15.59	11.85	0.00
Matale	129,750	16,661	6.77	15.12	9.12	30.67	9.30	18.75	11.94	0.51
Matara	214,500	17,273	2.84	8.38	3.53	27.08	8.26	29.47	12.82	0.09
Monaragala	122,750	16,052	8.31	17.76	10.0	25.31	7.04	13.89	8.57	0.29
Mullaitivu	24,000	8,490	10.6	12.76	9.89	18.22	5.08	5.30	3.94	0.22
Nuwara Eliya	190,750	33,608	11.8	30.73	18.7	24.79	6.95	25.30	14.12	0.62
Polonnaruwa	109,000	30,540	6.23	11.79	8.19	22.42	6.28	18.04	8.26	0.04
Puttalam	206,250	29,990	4.86	13.39	7.38	29.66	10.0	22.78	14.64	0.50
Ratnapura	290,750	25,210	5.11	19.83	8.19	24.73	6.57	20.51	11.45	0.12
Trincomalee	105,250	6,083	7.72	15.09	6.46	26.86	9.76	14.15	7.69	0.25
Vavuniya	46,750	7,294	12.4	21.92	11.8	22.74	7.35	7.43	15.27	0.21


Source: Directorate of NCD

Service Coverage

In 2018...



Only **3.0%** eligible families were **Reported** as *subfertile*



50.7% Infants have been visited by PHM
96% Infants have been **Registered** by PHM



54% of primi mothers attended at least **one** Session of **Pre-conception care**



98.1% **SMI** Coverage



98% of all pregnant mothers **REGISTERED** for antenatal care services



61.6% **WWC** Attendance
Women Aged 35 Years



Almost **ALL DELIVERIES** had taken place in healthcare institutions



>90% Immunization Coverage

2:5
caesarean sections rate

300
MOH areas with >2 HLCs

Service Coverage

*
SMI - School Medical Inspection
WWC - Well-Women's Clinic
MOH - Medical Officer of Health
HLC - Healthy Lifestyles Center

9. Health Service Coverage

Ministry of Health is responsible for providing health services for all the citizens of the country. The goal is to provide a sufficient quality service to people in need of promotive, preventive, curative, rehabilitative or palliative healthcare that would achieve potential health gains.

Indicators of service coverage, which are defined as the proportion of people in need of a service that receive it, regardless of quality, are more commonly measured than effective coverage indicators which require the measurement of intervention effect of the service provided. The assessment of the service coverage indicators is a critical dimension to tracking performance.

9.1. Service Coverage Indicators

According to the WHO publication on 2018 Global Reference List of 100 core health indicators (plus health-related SDGs); “**Service coverage**” indicators reflect priorities across the spectrum of health services including reproductive, maternal, newborn, child and adolescent, immunization, HIV, TB, malaria, neglected tropical diseases, noncommunicable diseases, mental health and substance abuse.”

Given below are the service coverage indicators in the 2018 Global Reference List of 100 core health indicators (plus health-related SDGs):

Reproductive, Maternal, Newborn, Child and Adolescent

- ◆ Demand for family planning satisfied with modern methods [SDG 3.7.1]
- ◆ Contraceptive prevalence rate
- ◆ Antenatal care coverage
- ◆ Births attended by skilled health personnel [SDG 3.1.2]
(Also: institutional delivery – overall and in “baby-friendly” institutions)
- ◆ Postpartum care coverage - women
- ◆ Postnatal care coverage - newborn
- ◆ Care-seeking for symptoms of pneumonia
- ◆ Coverage of diarrhoea treatment
- ◆ Vitamin A supplementation coverage

Immunization

- ◆ Immunization coverage rate by the vaccine for each vaccine in the national schedule [SDG 3.b.1]

HIV

- ◆ People living with HIV who know their status
- ◆ Prevention of mother-to-child transmission
- ◆ Antiretroviral therapy (ART) coverage
- ◆ HIV viral load suppression

¹ 2018 Global Reference List of 100 Core Health Indicators (plus health-related SDGs) WHO/HIS/IER/GPM/2018.1
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HIV/TB

- ◆ Coverage of treatment for latent TB infection (LTBI)
- ◆ HIV test results for TB patients
- ◆ HIV-positive new and relapse TB patients on ART during TB treatment

Tuberculosis

- ◆ Drug susceptibility testing coverage for TB patients
- ◆ TB treatment coverage
- ◆ Treatment coverage for drug-resistant TB

Malaria

- ◆ Intermittent preventive therapy for malaria during pregnancy (IPTp)
- ◆ Use of insecticide-treated nets (ITNs)
- ◆ Treatment of confirmed malaria cases
- ◆ Indoor residual spraying (IRS) coverage

Neglected Tropical Diseases

- ◆ Number of people requiring interventions against neglected tropical diseases [SDG 3.3.5]
- ◆ Coverage of preventive chemotherapy for selected neglected tropical diseases

Screening and Preventive Care

- ◆ Cervical cancer screening

Mental Health

- ◆ Coverage of services for severe mental health disorders

Substance Abuse

- ◆ Treatment coverage for alcohol and drug dependence [SDG 3.5.1]

Essential Health Services

- ◆ Coverage of essential health services [SDG 3.8.1]

Out of the above service coverage indicators, some indicators were selected to be included in the Annual Health Bulletin 2018 based on the availability of information through the current routine health information system. Further, related indicators suggested by the service providing agencies were also included in this section.

9.2 Reproductive, Maternal, Newborn, Child, Adolescent and Youth Health (RMNCAYHP) Services Coverage

9.2.1 Reproductive Health

Family planning is an important component of reproductive health services provided by the Ministry of Health. The objective of the National Family Planning Programme is to enable all the couples to have the desired number of children with optimal timing and spacing. Sri Lanka records the best family planning performance in the region, and it has contributed to the impressive health indicators and socioeconomic development.

Two main outcome indicators are used to assess the Family Planning Programme. These are new acceptor rates and current usage rates. Two definitions are used in describing the indicators:

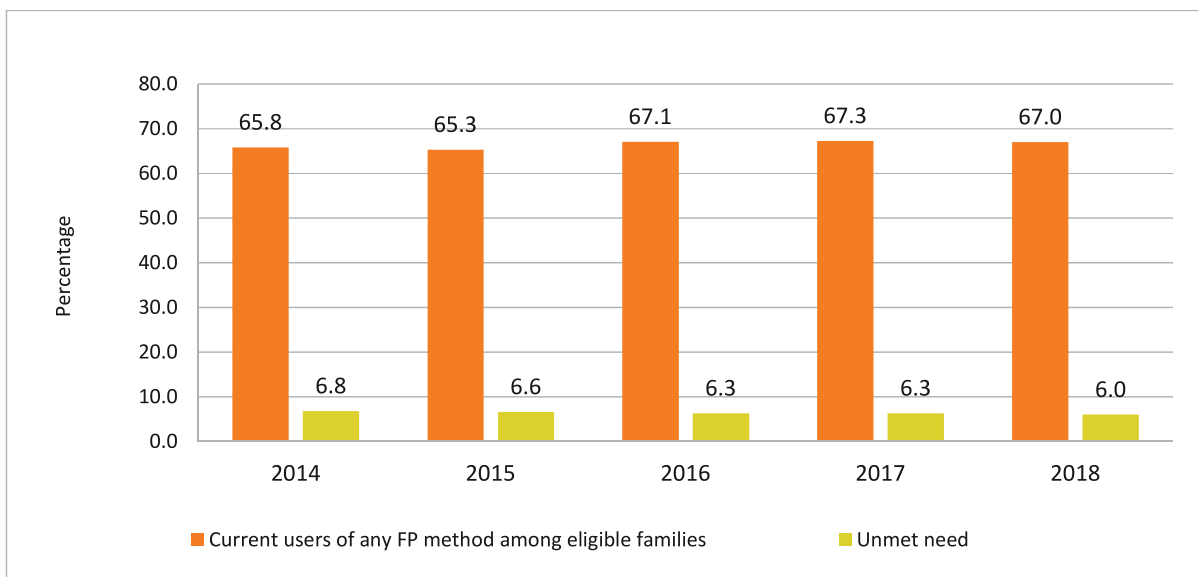
- ◆ The current user is a woman/man (eligible family) who uses any method of contraception at a given point of time. This indicator provides the Contraceptive Prevalence Rate (CPR) among eligible families for a given year.
- ◆ A new acceptor is defined as a woman/man using a particular modern contraceptive method for the first time from any service provider belonging to the national programme.

Unmet need for family planning means a fertile woman married or living in union, not using any contraception, not wanting any more children, or wanting to postpone for at least two years.

Contraceptive Prevalence Rate and Unmet Need for Family Planning

Of the eligible families registered by PHM (n= 3,805,213), 67% had been using any method at the end of the year 2018. The proportion of modern methods and traditional methods users were 58.4% and 9.2%, respectively. A consistent decline in the unmet need for family planning is observed in the recent past (a 15% decline since 2013). However, the overall contraceptive prevalence has been stagnant since 2016. Further reduction in unmet need is also important if the maternal morbidity and mortality are to be reduced further.

To improve this situation, new strategies like targeting special groups and involvement of the private sector are being explored.



Eligible families – as reported by the PHM in H 509

Figure 9.1 : Contraceptive Prevalence Rate and the Unmet Need for Family Planning, 2014 - 2018

Source: RHMIS, Family Health Bureau

Women with unmet need are those who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child. The concept of unmet need points to the gap between women's reproductive intentions and their contraceptive behaviour (WHO).

New Acceptors of Family Planning

During 2018, 171,397 couples had been recruited for various contraceptive methods (i.e.

new acceptors). Out of the total new acceptors, 90.8% had accepted temporary methods as a new method from the programme during 2018.

Table 9-1 : New Acceptors of Contraceptive Methods by Method, 2014 - 2018

Item	2014	2015	2016	2017	2018
No. of New Acceptors	127,130	153,901	157,191	168,120	171,397
IUD	40,813	44,916	37,517	32,986	29,382
Oral Pills	26,644	33,279	27,609	26,080	26,188
Sterilizations	11,657	14,919	14,806	16,106	15,783
Injectable	8,195	14,491	36,322	49,262	53,208
Implants	39,821	46,796	40,937	43,686	46,836

Source: RHMIS, Family Health Bureau

The prevalence of modern family planning methods shows a pattern similar to the overall contraceptive prevalence rate. The prevalence of modern methods indicates a good method mix. The most popular temporary method of contraception in 2018 has been injectables (11.3%), followed by IUDs (10.8%), condoms (9%) and OCPs (8.8%). Among the eligible families 12.5% practice female sterilization (LRT) for fertility control.

However, the steady decline of the prevalence of permanent methods, especially the male method of permanent contraception, needs attention.

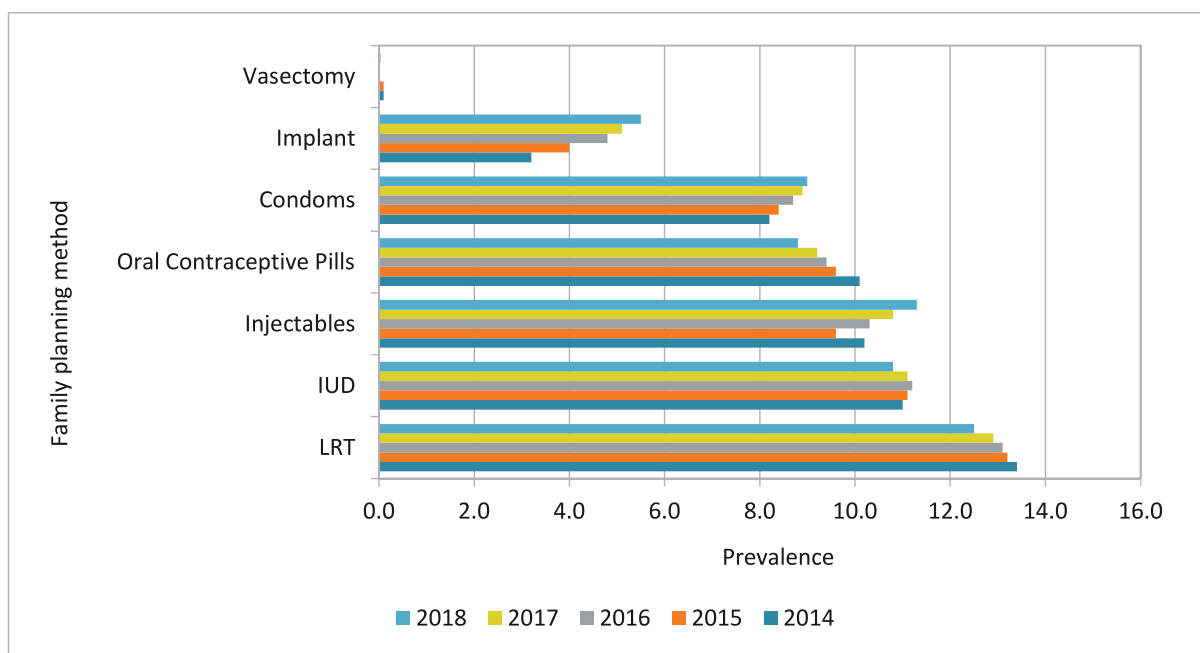


Figure 9.2 : Modern Family Planning Methods Used by Eligible Families, 2014 - 2018

Source: (MCH Quarterly Return - H 509) RHMIS, Family Health Bureau

Services for Sub Fertile Couples

The provision of services for subfertile couples is an important component of the National Family Planning programme. Field staff identify subfertile couples among the families registered in the Eligible Family Register and refer them for further management. However, reporting of subfertility is low and in 2018 it was only 3% which again is a grossly under-reported value.

Reporting of subfertility is low, and in 2018, it was only 3% of eligible families

9.2.2 Pre-Pregnancy Care

Sri Lanka is one of the countries in the region to commission a pre-pregnancy care package which was initiated in 2012. The Care Package includes creating awareness, health promotion, screening and other appropriate interventions to reduce risk factors that might affect future pregnancies of the reproductive-aged women.

In 2018, out of all primi mothers registered by PHMs, 54.4% had attended at least one session of pre-conception care and 26.6% have attended both sessions.

In 2018, 54% of primi mothers attended at least one session of pre-conception care

9.2.3 Antenatal Care Coverage

The registration of pregnant mothers has been more than 90% over the years and in 2018 it was 98.3%. Out of them, over 79.8% registered for care before 8 weeks of amenorrhea and this number has been rising over the last few years from 72% to 79.8%. Protection for Rubella with immunization before pregnancy, protection for Tetanus, antenatal screening for Syphilis and testing for blood group at the time of delivery has achieved almost universal coverage.

In 2018, 98% of all pregnant mothers registered for antenatal care services

Table 9-2 : Pregnant Mother Registration and Provision of Care through the National Programme, 2014 - 2018

Indicator	2014	2015	2016	2017	2018
Pregnant mothers registered by PHMs out of estimated pregnancies	91.2	93.5	99.1	95.6	98.3
Pregnant mothers registered before 8 weeks	76.2	77.1	78.5	79.4	79.8
Pregnant mothers registered between 8-12 weeks	17.4	16.5	14.9	14.3	13.8
Pregnant mothers protected with Rubella at registration	98.2	97.6	96.6	98.2	98.5
Pregnant mothers tested for VDRL at the time of delivery	98.1	98.7	99.9	98.7	99.1
Pregnant mothers blood group tested at the time of delivery	97.8	99.0	99.9	99.4	99.6
Pregnant mothers protected for Tetanus out of reported deliveries	97.8	99.3	99.9	99.3	99.5

Source: Family Health Bureau

In 2018, 91.9% of registered pregnant women were visited at least once at home by the PHM, and 95.8% of them attended at least one field clinic visit.

Table 9-3 : Antenatal Service Coverage by Public Health Staff for the Past Five Years, 2014 -2018

Indicator	2014	2015	2016	2017	2018
Registered pregnant mothers visited at least once at home by PHM	90.2	88.5	90.3	90.9	91.9
Registered pregnant mothers attending at least one field clinic visit	95.5	94.6	94.7	96.3	95.8

Source: (MCH Quarterly return - H 509) RHMIS, Family Health Bureau

9.2.4 Peri-Natal and Post-Natal Care Coverage

Pregnancy outcome was reported for 90.5% of pregnancies registered with the PHM. Almost all reported deliveries in 2018 had taken place in institutions, and the percentage of home deliveries has decreased to a very minimum level (0.06%) over the years. The caesarean section rate had gradually increased to 40.8% in 2018. Obstetric transition, indirect maternal mortality causes and over-medicalisation have been recognized as emerging issues in maternal care.

During the important postpartum period, approximately 83.8% of mothers were visited at home by PHMs at least once during the first 10 days, and 66% during the first five postpartum days. On average, most mothers received two postpartum home visits.

Almost all reported deliveries had taken place in healthcare institutions while four out of ten reported deliveries were caesarean sections

Table 9-4 : Pregnancy Outcome and Postpartum Care for Mothers Registered, 2014 - 2018

Indicator	2014	2015	2016	2017	2018
% of Pregnancy outcome reported out of registered pregnancies	93.7	95.8	85.0	86.4	90.5
% of Deliveries reported out of total live births registered	91.6	96.2	93.7	92.3	93.5
% of Deliveries reported out of total estimated pregnancies	75.3	78.4	91.4*	83.9	85.0
% of Institutional deliveries out of the total reported deliveries	99.7	99.9	99.9	99.9	99.9
Number of home deliveries	525	280	222	246	248
% of Home deliveries out of the total reported deliveries	0.09	0.09	0.07	0.08	0.06
% of Postpartum visits by PHM around 42 days (out of estimated births)	65.0	63.3	79.0	77.5	76.5
Postpartum mothers receiving at least 1 visit by PHM during 1 st 10 days out of estimated births	79.3	73.6	76.2	80.8	83.8
Postpartum mothers receiving 1 visit by PHM during 1 st 5 days out of estimated births	-	67.2	66.1*	63.5	66.0
% of Caesarean sections out of total reported institutional deliveries	32.1	33.8	36.3	37.3	40.8
Average number of home visits during first 10 postpartum days	1.7	1.7	1.7	1.7	1.8

*Out of live births registered by RGD for the year

Source: (MCH Quarterly return - H 509) RHMIS, Family Health Bureau

9.2.5 Infant and Childcare Service Coverage

Coverage of Infant and Childcare Services by Field Staff

The PHM should register infants for domiciliary and clinic care which includes immunization, growth assessment and development. In 2018, 95.6% of infants have been registered by PHMs, and out of registered infants, 50.7% have been visited by PHM at least once with an average of 7 visits per infant. All the infants registered (100%) have been seen by a MOH in their clinics (Table 9-5).

While the percentage of infants weighed was 88.1%, it was 81.9% in the 1-2-year age group and, 80.2% among the 2-5-year age group. More attention should be paid to increase the weighing coverage of the 1-2 and 2-5-year age groups by field staff. More than 80% of children in each targeted age groups received their dose of Vitamin A. The under-reporting of vitamin A coverage needs to be addressed at all levels.

Table 9-5: Infant and Childcare Provided by the Field Staff, 2014 - 2018

Indicator	2014	2015	2016	2017	2018
% of Infants registered by PHMM out of estimated births	90.6	89.3	95.3*	94.1	95.6
% of Infants having at least 1 home visit after 42 days out of registered infants	58.0	53.7	53.4	50.3	50.7
Average number of home visits per infant	7.5	7.0	7.2	6.9	7.0
Weighing					
% of Infants weighed	84.3	88.2	88.4	87.5	88.1
% of Young children (1-2 years) weighed	77.1	80.2	79.2	78.7	81.9
% of 2 - 5 year old children weighed	63.0	78.7	80.5	80.3	80.2
Clinic attendance					
% of Infants making at least one clinic visit (of registered infants)	99.1	100	100	100	100
The average number of clinic attendance for an infant	5.3	4.5	4.7	4.7	4.9
Vitamin A supplementation					
% of Estimated infants given Vitamin A at 6 months	68.8	71.6	80.5	78.7	84.5
% of Estimated children given Vitamin A at 18 months	71.9	74.9	80.6	86.1	86.1
% of Estimated children given Vitamin A at 3 years	73.1	74.5	90.5	91.2	92.9

Source: eRH MIS, Family Health Bureau

*Data for 2016 were based on the number of births registered by RGD for the year

9.2.6 Coverage of School Medical Inspections

School medical services include School Medical Inspection (SMI) of children and making relevant referrals. In small schools (with less than 200 students) all the children are examined once a year, while in the larger schools (with more than 200 students) all students in grades 1, 4, 7 and 10 are examined annually.

In 2018, out of 353 MOH areas, 258 (73.1%) submitted the Quarterly School Health Returns (H 797) for all four quarters. There were 10,715 schools and 1,690,863 children to be examined out of the enrolled 4,165,964 children. The SMIs were conducted in 10,515 schools resulting in an overall school coverage of 98.1%.

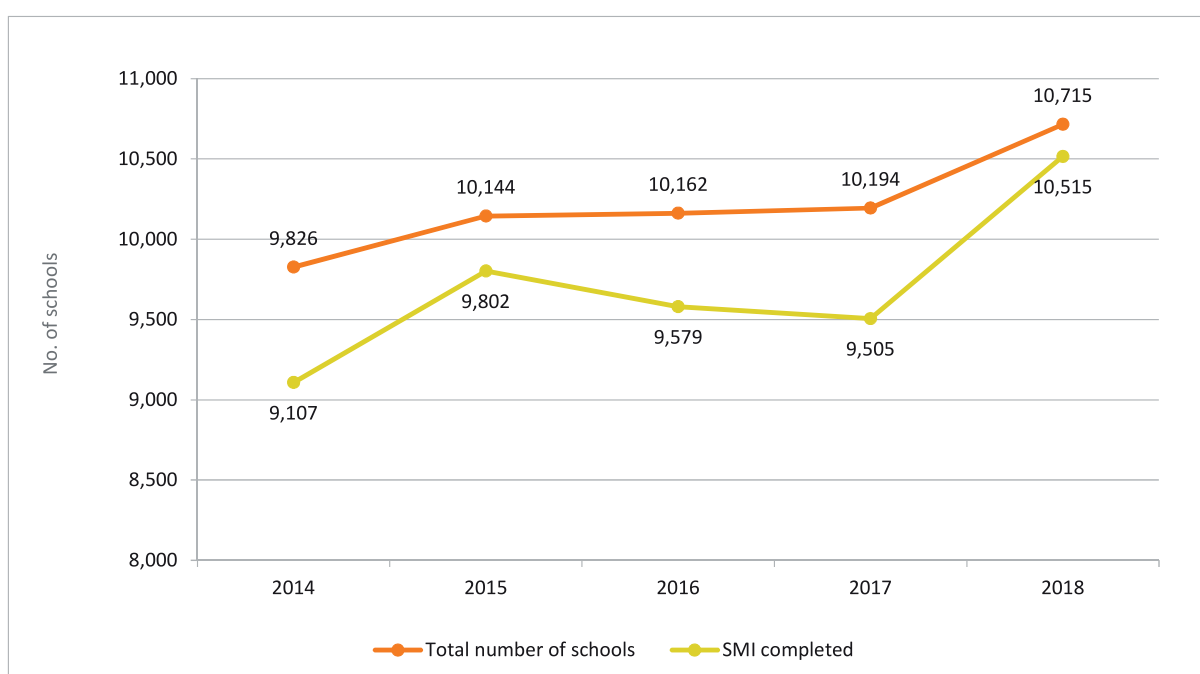


Figure 9.3 : Total Number of Schools and Number of Schools where SMI were Conducted, 2014 - 2018

Note : 2018 data included government, pirivenas and some international schools as well

Source: (School Health return - H 797) RHMIS, Family Health Bureau

Overall school coverage of SMI was 98.1%

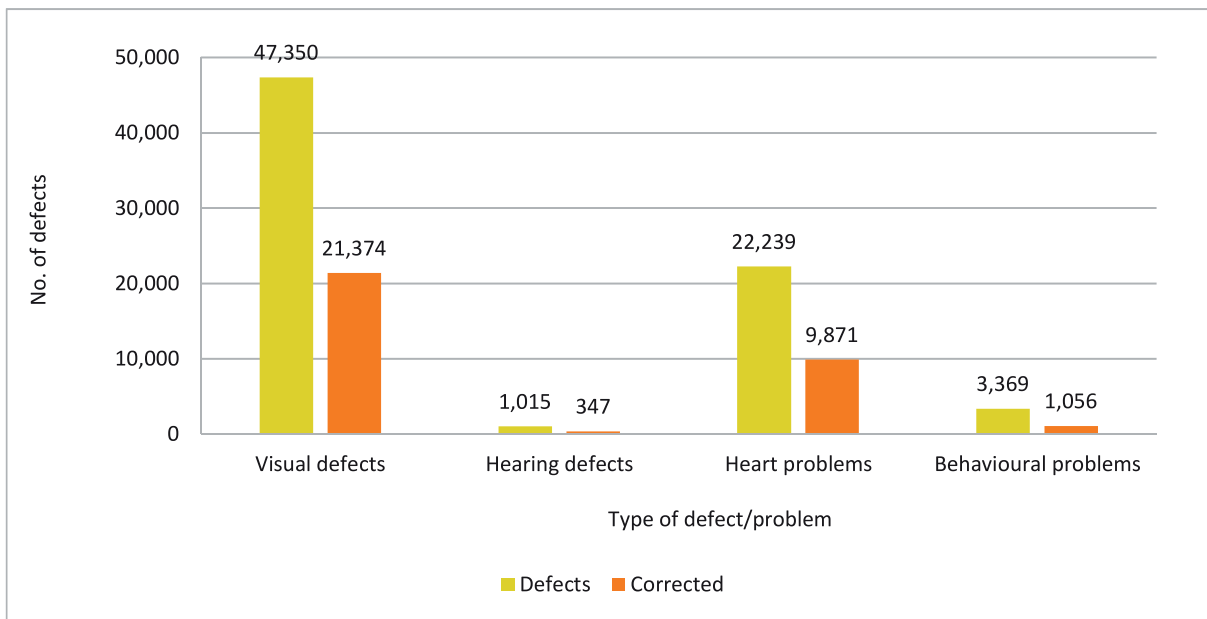


Figure 9.4 : Total Number of Some Selected Defects among Examined School Children and Corrected Number of Defects, 2018

Source: Family Health Bureau - eRHMIS

School Health Surveys

It is the responsibility of the range PHI to complete the school health survey annually. It should be completed, preferably within the first quarter of the year for timely action. During 2018, school health surveys had been conducted in 98.7% of the schools islandwide. The proper sanitation, hygiene and use of safe water are vital in providing a safe school environment. Nearly 87.4% of schools had adequate toilet facilities while 75.4% had drinking water source.

9.3 Immunization Coverage

National Immunization Programme of Sri Lanka is one of the best performing public health programmes in the region and globally. Due to the high coverage of all EPI vaccines, delivered through the Expanded Programme on Immunization (EPI), there has been a low incidence of Vaccine-Preventable Diseases (VPD).

Immunization coverage for all vaccines of the EPI is above 90%

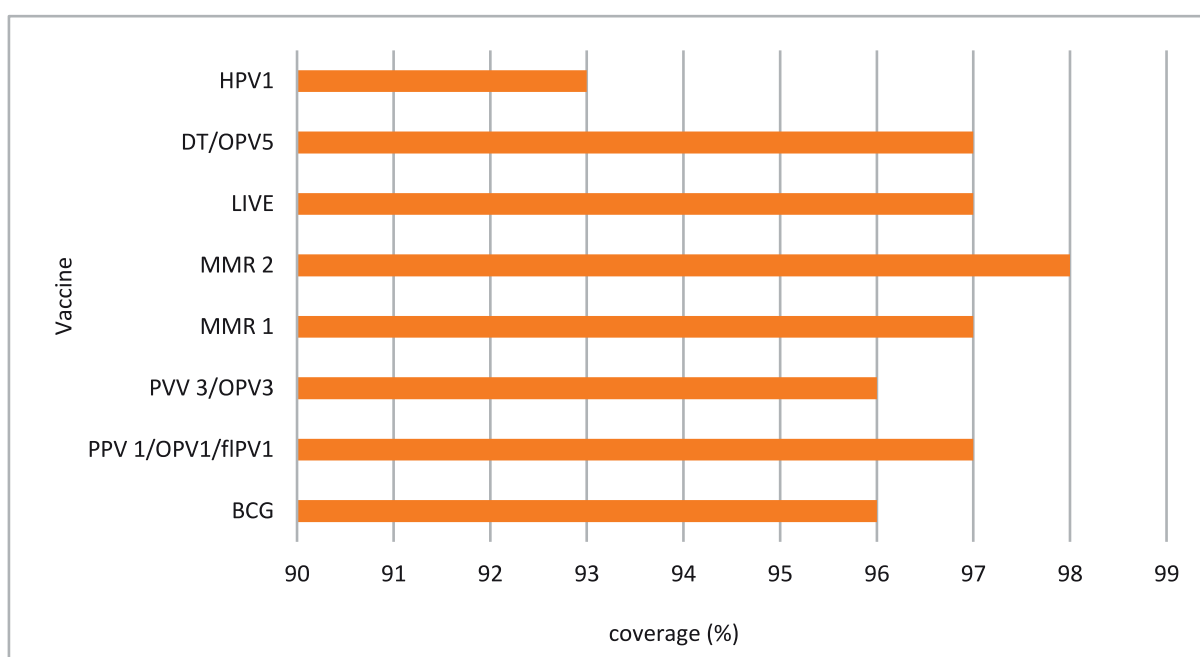


Figure 9.5 : National Immunization Coverage by the Vaccine, 2018

Source: Epidemiology Unit

Note : The vaccination coverage is given as a percentage of live births for BCG based on the delivered district, other vaccinations for surviving infants for the compatible age cohort. HPV-1 coverage is given for female students in Grade 6.

Immunization coverage for all vaccines of the Expanded Programme of Immunization (EPI) is above 95% except for HPV 1 (Figure 9.5). Please see Annexure II for more details on;

- ◆ Incidence of Expanded Programme of Immunization (EPI) Target Diseases, 1955 – 2018 (Annexure II : Table 9)
- ◆ Immunization Coverage by RDHS Area, 2018 (Annexure II : Table 10)
- ◆ Number of Selected Adverse Events by Vaccination, 2018 (Annexure II : Table 11)

9.4 HIV Service Coverage

9.4.1 People Living with HIV Who Know Their Status

According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), 90-90-90 treatment targets need to be achieved to get the goal of “Ending AIDS Epidemic”. 90-90-90 treatment targets are given below.

- i. 90% of all PLHIV know their HIV status
- ii. 90% of all PLHIV diagnosed receive ART
- iii. 90% of all people on ART have viral suppression

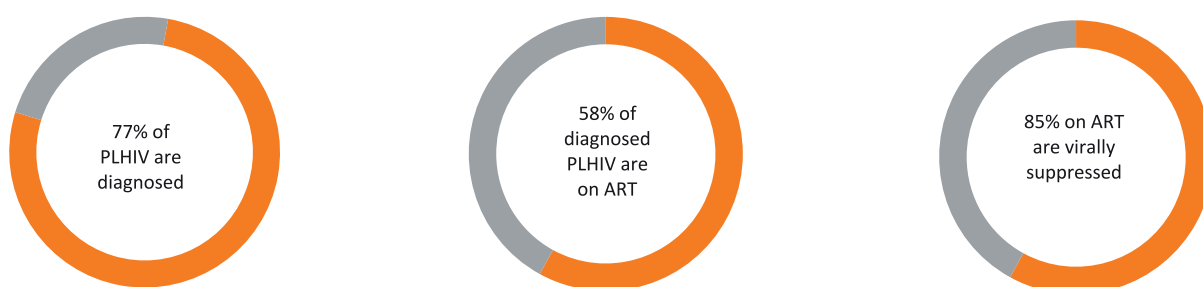


Figure 9.6 : Cross-sectional HIV Treatment Cascade as of End of 2018

Source: STD-AIDS Control Programme

In Sri Lanka as of the end of 2018;

1. 77% of the estimated people living with HIV (PLHIV) know their status.
2. 58% of the diagnosed PLHIV are on antiretroviral treatment.
3. 85% of the PLHIV on treatment are having suppressed HIV viral levels (viral loads).

9.5. Tuberculosis

9.5.1. TB Treatment Coverage

In 2018, the TB treatment coverage for all forms of tuberculosis is 64.1%. Figure 9.7 gives the TB treatment coverage by RDHS area. All RDHS areas have similar treatment coverage.

TB treatment coverage is the number of new and relapse cases that were notified and treated in a given year, divided by the estimated number of incident TB cases in the same year, expressed as a percentage.

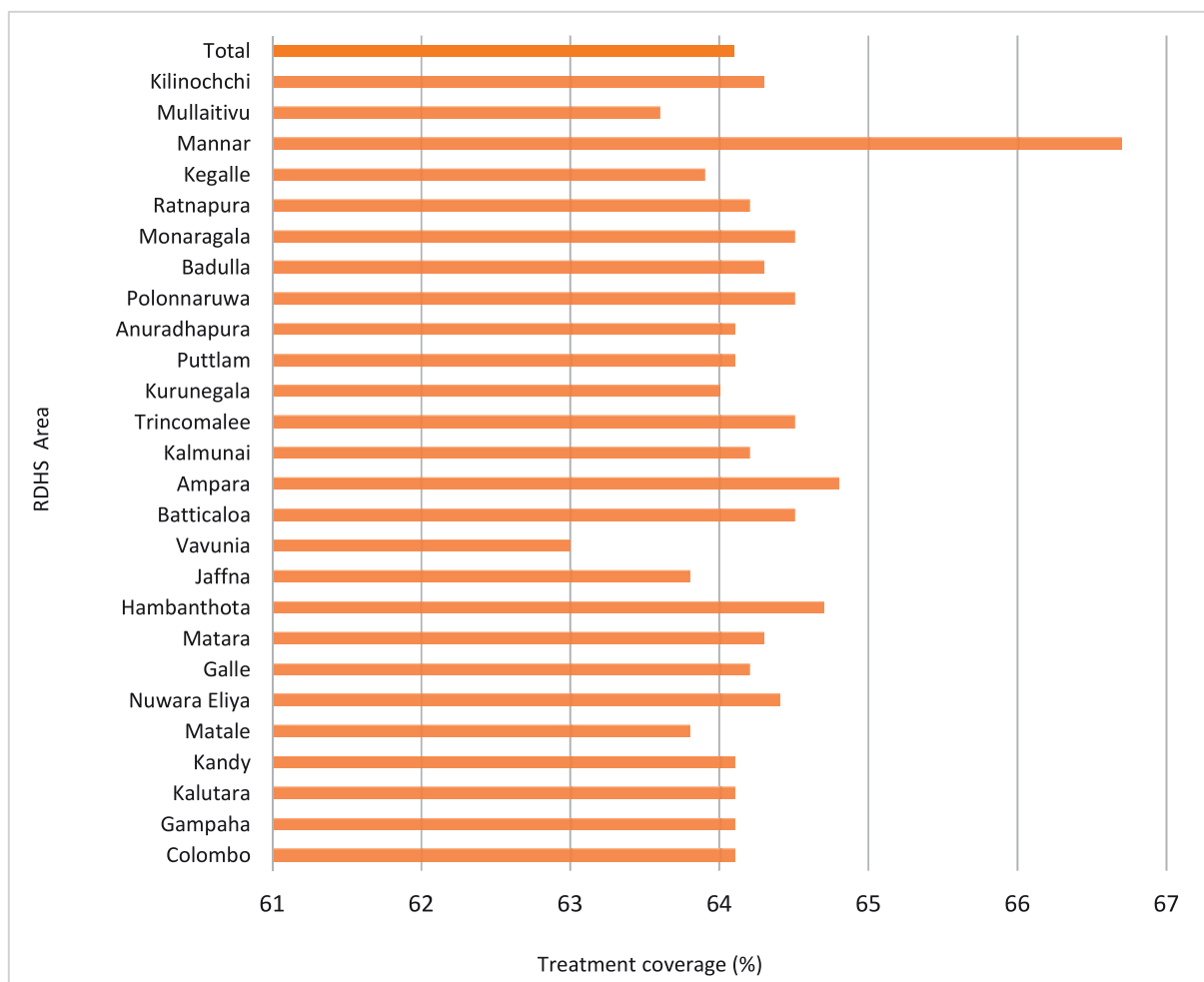


Figure 9.7 : TB Treatment Coverage of All Forms of TB by RDHS Area, 2018

Source: National Programme for Tuberculosis Control & Chest Diseases

9.6. Screening and Preventive Care

9.6.1. Well Women Service Coverage

Sri Lanka successfully implemented the Well Woman Programme at the primary healthcare level with the aim of improving the health status of women. Since 1996, well woman services are offered through a network of Well Woman Clinics. There were a total of 805 clinics in 2018. Well Woman Clinics (WWC) are conducted by Medical Officers of Health (MOHs) and they

screen women for hypertension, diabetes, breast, thyroid, cervical cancers (pap smears) and obesity. In addition, WWCs provide family planning services, health education and counselling on issues related to reproductive tract infections, menstrual cycle and menopause.

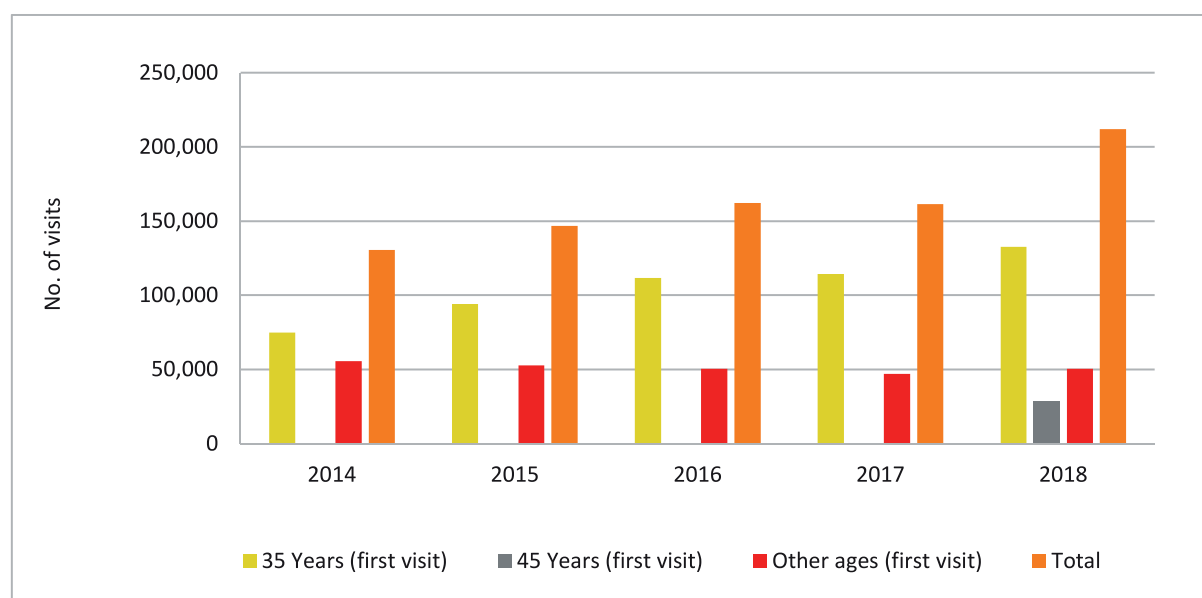


Figure 9.8 : Number of First Visits of Women Attending WWCs by Age Groups, 2014 - 2018

Source: Family Health Bureau

The main target population for well-woman services are women aged 35 years and 45 years (since 2018). The Public Health Midwives (PHM) in the MOH area, identify women aged 35 years (those born in 1983) and 45 years (those born in 1973) from the eligible families registered and

motivate them to attend WWCs. Figure 9.8 shows the number of first visits of women attending WWCs by age 35 years, 45 years and other age groups from 2014 to 2018.

The coverages of women aged 35 years and 45 years attending Well Woman Clinics from 2014 to 2018 are given in Figure 9.9.

The coverage (%) of women aged 35 years attending the WWC has increased by 27% from 2014 to 2018.

However, there were disparities across districts (Figure 9.10). Data for the 45-year cohort was not available before 2018 as that cohort was included in the target population only in 2018.

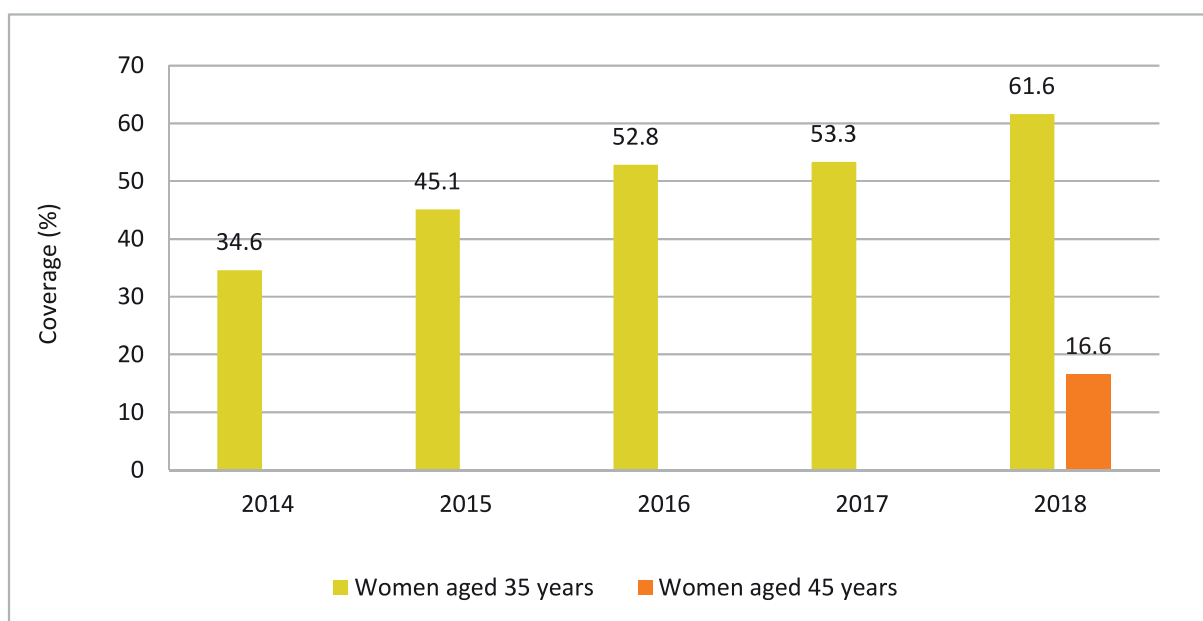


Figure 9.9 : Coverage of Women Aged 35 Years & 45 Years Attending WWCs, 2014 - 2018

Source: Family Health Bureau

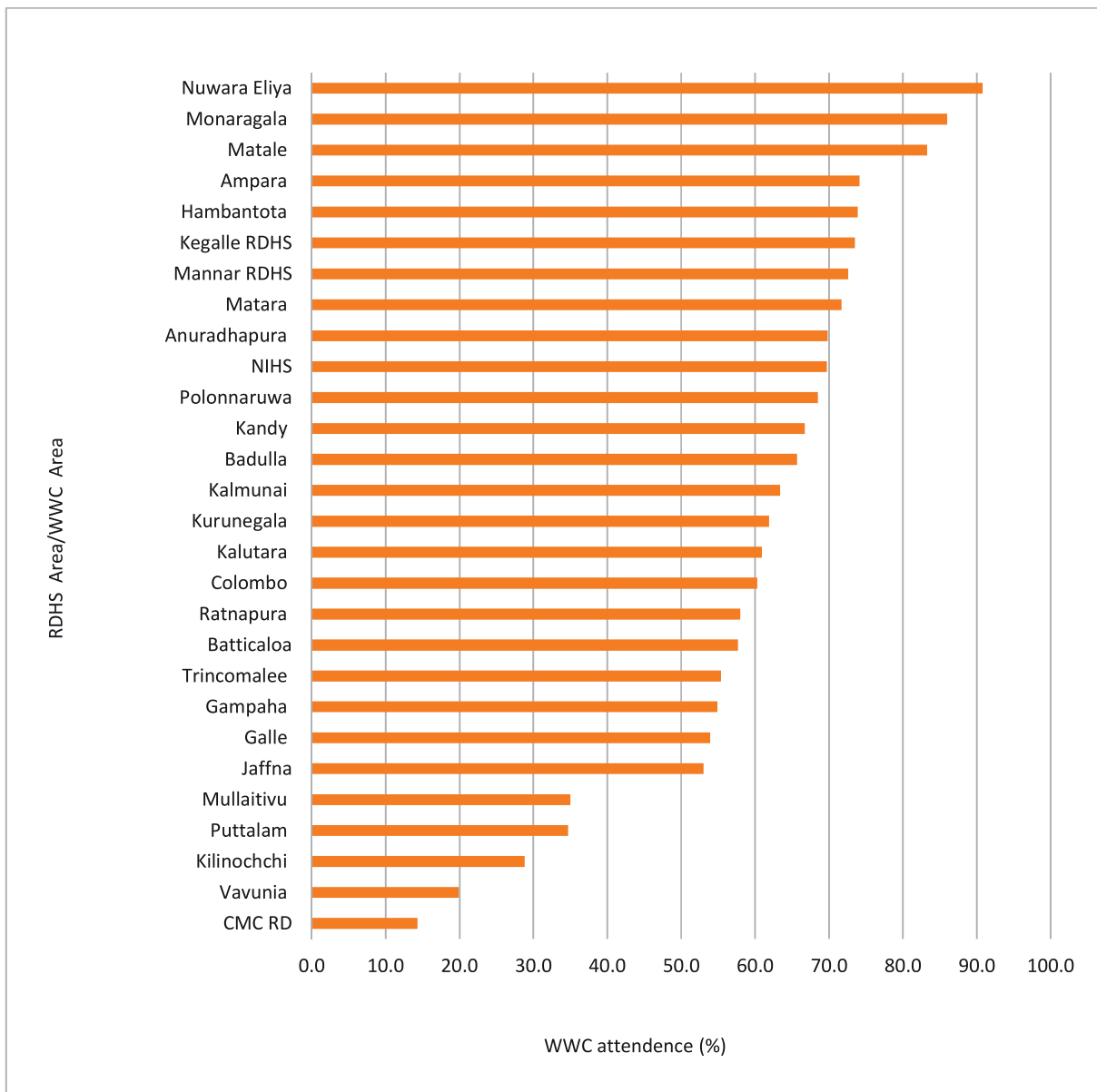


Figure 9.10 : Percentage of 35 Year Age Cohort Attendance to WWCs, 2018

Source: Family Health Bureau

9.7. Non-Communicable Diseases Service Coverage

9.7.1. NCD Screening at Healthy Lifestyle Centres

NCD screening is carried out by 922 HLCs established in primary care settings. In 2018, the HLCs screened around 10.7% of the target population across the country. However, it is noteworthy that male participation at HLCs was low with a 2.4:1 female: male ratio.

At HLCs clients were screened for BMI, blood pressure, blood sugar (fasting blood sugar or random blood sugar), total Cholesterol and for lifestyle risk factors such as tobacco use

(including smokeless tobacco) and alcohol consumption. For women, some HLCs are equipped to conduct breast examination and PAP smear tests and others refer them to Well Women Clinics. The WHO/ISH risk prediction chart is used to assess the CVD risk within the next 10 years and if necessary, interventions are offered.

In 2018, there were 300 Medical Officer of Health areas with more than 2 HLCs. Figure 9.11 shows the percentage of the target population screened from 2011 to 2018.

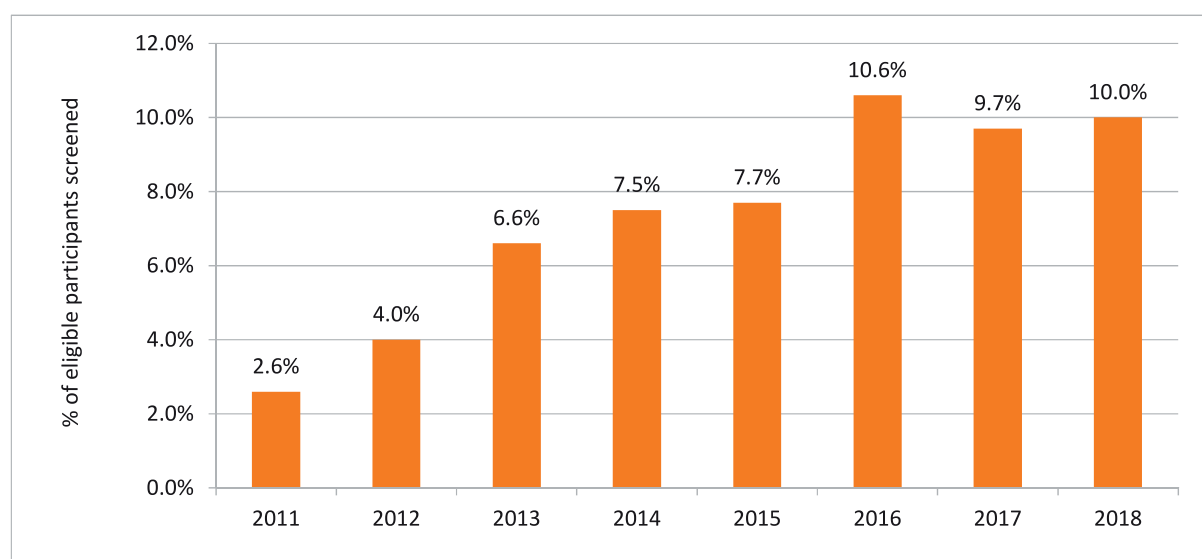


Figure 9.11 : Percentage of Eligible Participants Screened, 2011 - 2018

Source: Directorate of NCD

In 2018, there were 300 Medical Officer of Health areas (out of 353) with more than 2 HLCs

Table 9-6 shows the coverage of screening of the target population by the HLCs across the country.

Table 9-6: Number and Services of Healthy Lifestyle Centres in Sri Lanka, 2012 - 2018

Indicator	2012	2013	2014	2015	2016	2017	2018
Total number of HLCs	420	672	760	814	826	871	922
% of MOH areas in a district with two or more HLCs ^a	-	56.0 (187/334)	69.5 (235/338)	77.1 (263/341)	78.7 (269/342)	81.3 (282/347)	85.0 (300/353)
Percentage of the target population (aged 40–65 years) screened ^b	4.0	6.6	7.5	7.7	10.6	9.7	10.0
Ratio of men:women screened ^a	-	1: 2.7	1: 2.5	1: 2.6	1: 2.7	1: 2.3	1:2.4

^a Data not available for 2012

^b Target population is nearly 25% of the country's population

Source: Directorate of NCD

Health System

Health System



Caesarean rate is 37.2% out of total deliveries occurred in government hospitals.



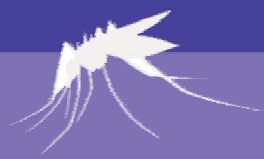
National Intensive Care Surveillance
A network of 85 adult Intensive Care Units (ICUs), 10 paediatric ICUs and 17 neonatal ICUs



Anti-Malaria Campaign conducted more than 2,500 outreach malaria mobile clinics targeting high-risk groups. In total, about **1.1 million** blood smears were examined



Overweight and obesity among school children above 10 years of age has **doubled** within 10 years



Number of patients positive for acute **Filariasis** has **increased** significantly in 2018 when compared with 2017



Total Capital Expenditure through Central & Provincial Ministry of Health is **36,565** million rupees.

10. Curative Care Services

The government sector is the leading healthcare provider of the country, and by the end of 2018 there were 641 curative care hospitals in government health services providing inward treatments. Detailed information of those hospitals is provided in the Annexure I : Detailed Table 07.

OPD care is delivered by all hospitals and Primary Medical Care Units and the needs of higher treatment and patient care are directed to inward care or to the nearest larger hospital when facilities are unavailable.

Specialized care is provided through Base, District General, Provincial General, Teaching and some selected specialized hospitals. There are occasional outreach clinics conducted by specialists where continuous series of treatments are thereby managed for identified cases.

10.1. Distribution of Beds and Bed Strength

Hospital beds play a key role in measuring of patient capacity of the hospital system. The total bed strength in the government health institutions is 84,728 in 2018. It is a rate of 3.9 beds per 1,000 population. The details of the distribution of hospital beds are illustrated in Annexure I : Detailed Table 07.

The number of government health institutions and patient beds in Sri Lanka over the period from 2012 to 2018 are presented in the following table (Table 10-1).

Table 10-1 : Number of Health Institutions and Hospital Beds, 2012 - 2018

Item	2012	2013	2014	2015	2016	2017	2018
Hospitals ¹	621	624	622	631	629	628	641
Hospital Beds ¹	76,087	78,243	80,105	80,581	81,580	83,275	84,728
Hospital Beds per 1,000 Population	3.8	3.8	3.9	3.8	3.8	3.9	3.9
Inpatient Beds per 1,000 Population	3.5	3.5	3.6	3.5	3.5	3.6	3.6
Central Dispensaries/Primary Medical Care Units	487	461	475	473	480	496	515
MOH Areas	337	334	338	341	342	347	353

¹ Includes Primary Medical Care Units and Maternity Homes

Source: Medical Statistics Unit

The distribution of hospital beds by type of institution is illustrated in the following table.

Table 10-2: Availability of Hospital Beds by Type of Institution, 2018

Type of Institution	Total Number of Institutions	Hospital Beds (Range)	Average Number of Hospital Beds	Number of Hospitals Having Less than Average Number of Hospital Beds
Teaching Hospitals	17	359 - 3,302	1,303	11
Provincial General Hospitals	2	1,533 - 2,051	1,792	1
District General Hospitals	19	202 - 1,233	656	11
Base Hospitals - Type A	28	23 - 676	343	16
Base Hospitals - Type B	48	40 - 408	182	29
Divisional Hospitals - Type A	51	26 - 231	106	19
Divisional Hospitals - Type B	132	9 - 114	67	64
Divisional Hospitals - Type C	299	2 - 76	29	154
Primary Medical Care Unit and Maternity Homes	9	5 - 22	13	5
Other Hospitals *	36	2 - 1,420	182	26

* Teaching hospitals of Cancer, Mental and Dental are categorized under "Other Hospitals" and Military, Police and Prison Hospitals are also included under "Other Hospitals"

Note: Average number of hospital beds was calculated based on the number of institutions from which data was received.

Source: Medical Statistics Unit

10.2. Service Utilization

10.2.1. Attendance to Out Patient Departments (OPD) of Hospitals

Outpatient attendance showed a slight decline in 2014 - 2016, but it again increased in 2017 and further increased in 2018. OPD attendance in 2018 is 57,363,473. It is an increment of 3.5%

from 2017. The district-wise distribution of OPD visits are presented in the Annexure I : Detailed Table 31.

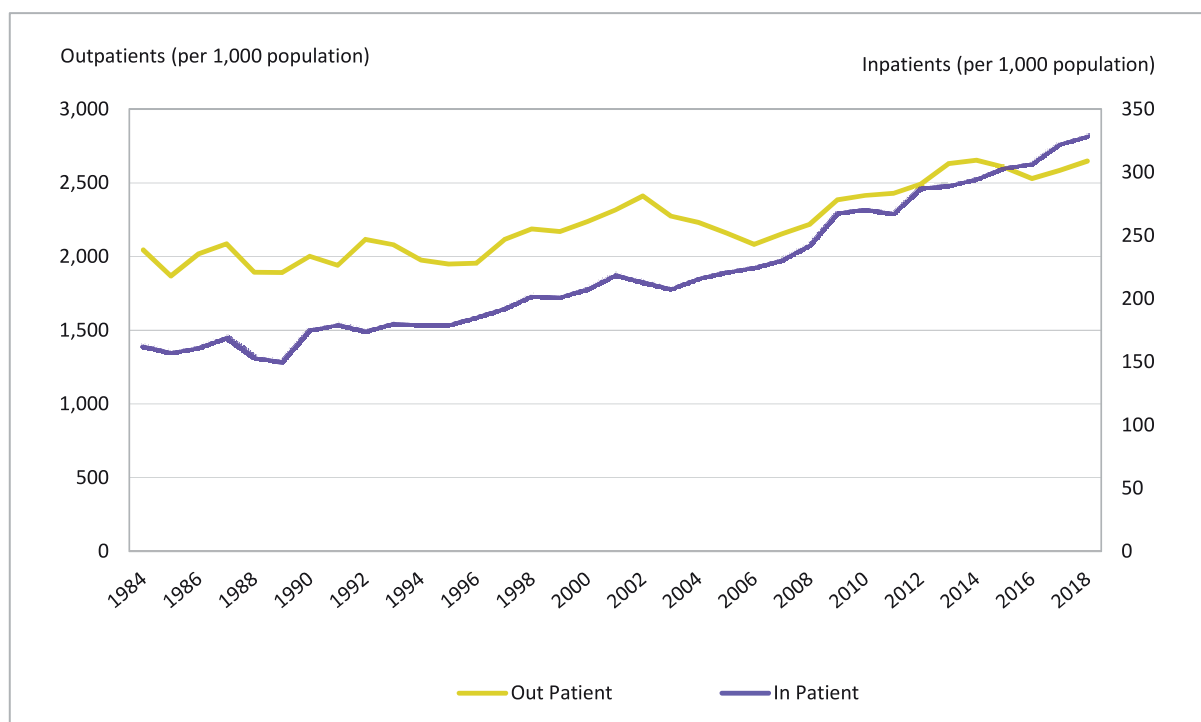


Figure 10.1 : Inpatient and Outpatient Attendance in Government Medical Institutions, 1984 - 2018

Source: Medical Statistics Unit

10.2.2. Attendance to Curative Care Health Clinics

There were 29,844,925 clinic visits in 2018, which was a continuation of the increasing trend shown in the previous years. (Annexure I : Detailed Table 34).

Although there are comprehensive categorization of clinics in the major hospitals, majority of the clinics in Divisional Hospitals and Primary Medical Care Units are functioning under the main categorization of clinics such as Medical, Surgical, Paediatric, etc.

10.2.3. Maternal Services

Table 10-3 illustrates the maternal services provided by different types of government health institutions. The total number of

deliveries that took place in the government hospitals was 300,691 in 2018.

Table 10-3 : Maternal Services by Type of Institution, 2018

Type of Institution	Outcome of Delivery			Total Deliveries		Method of Delivery			
	Single Deliveries	Twin Deliveries	Other Deliveries	Number	%	Normal (Vaginal)	Forceps	Caesarean	
								Number	%
Teaching Hospitals	93,755	1,178	50	94,983	31.6	57,222	1,137	36,624	38.6
Provincial General Hospitals	17,756	211	8	17,975	6.0	10,414	54	7,507	41.8
District General Hospitals	80,754	845	14	81,613	27.1	49,097	558	31,958	39.2
Base Hospitals (Type A)	65,446	586	10	66,042	22.0	42,324	415	23,303	35.3
Base Hospitals (Type B)	34,583	229	4	34,816	11.6	21,984	299	12,533	36.0
Divisional Hospitals (Type A)	1,516	6	-	1,522	0.5	1,521	-	1	0.1
Divisional Hospitals (Type B)	2,422	3	-	2,425	0.8	2,424	-	1	0.0
Divisional Hospitals (Type C)	1,235	7	-	1,242	0.4	1,240	1	1	0.1
Primary Medical Care Units and Maternity Homes	73	-	-	73	0.0	73	-	-	-
Total	297,540	3,065	86	300,691	100.0	186,299	2,464	111,928	37.2

Source: Medical Statistics Unit

Out of total deliveries in government hospitals 65% occurred in Teaching, Provincial General and District General Hospitals.

Caesarean rate is 37.2% out of total deliveries occurred in government hospitals.

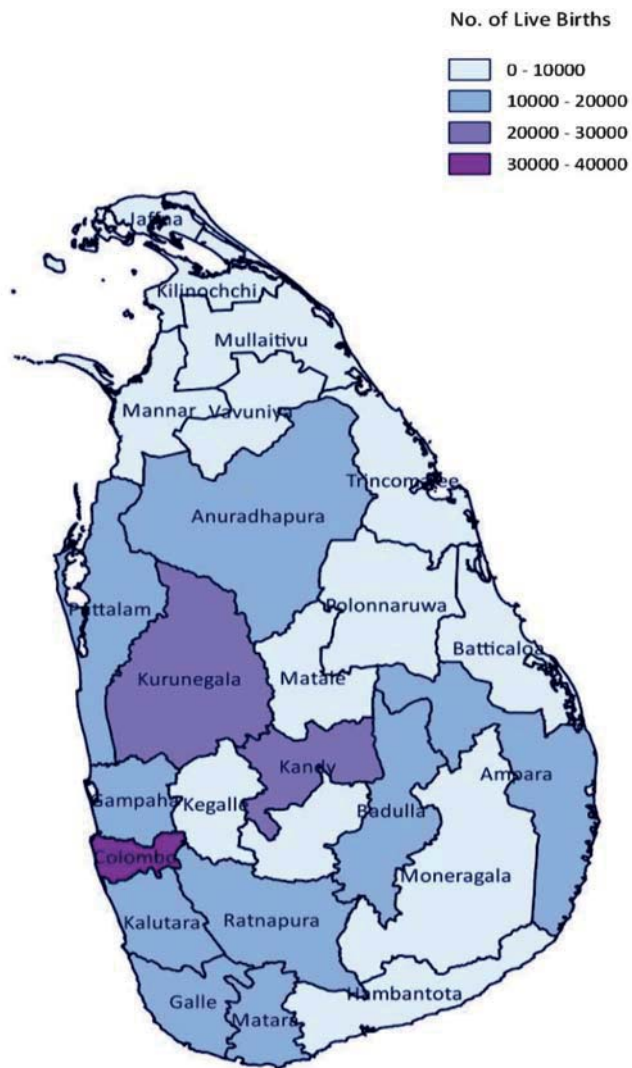


Figure 10.2 : Distribution of Hospital Live Births by Place of Occurrence in Sri Lanka, 2018

Source: Medical Statistics unit

Hospitals in Colombo district has the highest number of live births followed by Kandy and Kurunegala districts.

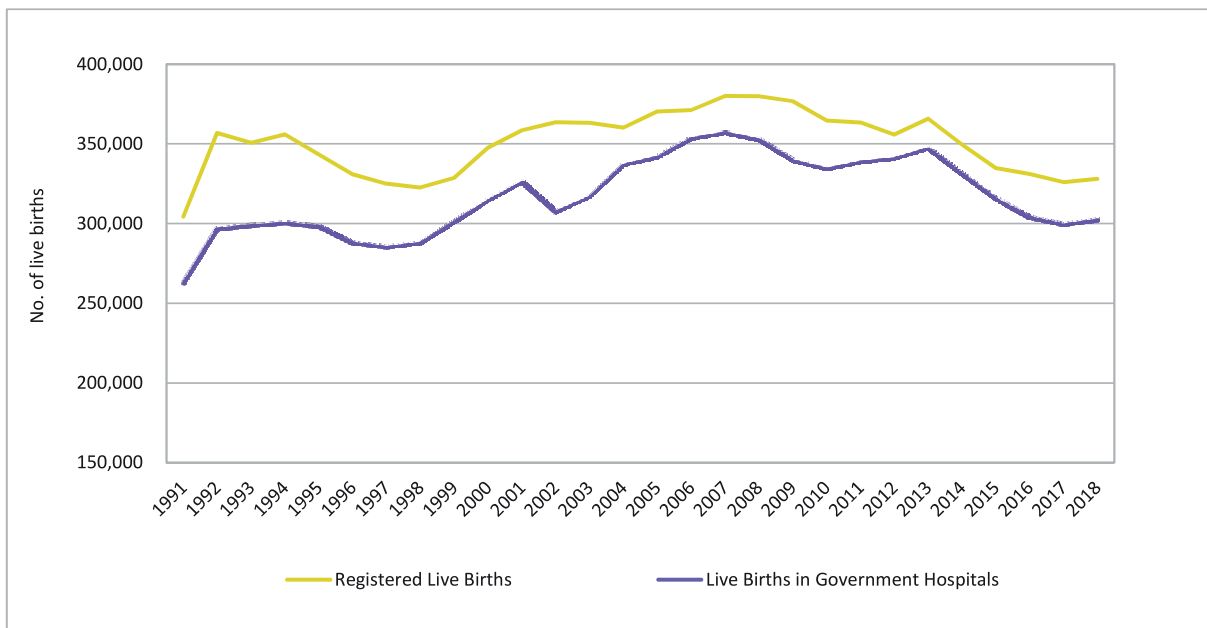


Figure 10.3 : Registered Births Vs. Hospital Live Births, 1991 - 2018

Source: Registrar General's Department and Medical Statistics Unit

Figure 10.3 shows the changing pattern of the registered live births and government hospital live births, by time. In 2018, 92.1% of live births occurred in government health institutions

10.2.4. Utilization of Medical Institutions

A proper referral system has not been enforced in the curative sector of Sri Lanka. Patients are free to visit any type of institution for necessary treatments. The common social attitude gained by some institutions is based on resource availability or some other unknown facts, and it may highly affect on the selection of a hospital by patients. However, it is still an unstudied area. Due to this situation, many small institutions are underutilized and some major institutions are overcrowded.

Several indicators are used to measure the utilization of medical institutions.

Average Duration of Stay (ADOS) -

Average number of days a patient stay in the hospital (excluding healthy newborns).

Bed Occupancy Rate (BOR) -

The percentage of inpatient beds occupied over a given period.

Bed Turnover Rate (BTR) -

The number of times, a hospital bed, on an average changes occupants during a given period of time.

The average duration of stay clearly varies with the hospital type. It is significantly high in specialized hospitals such as Mental, Chest, Leprosy and Rehabilitation (Annexure I : Detailed Table 39). As experienced continuously in the past decades, the average duration of stay is usually high in Teaching Hospitals and Provincial General Hospitals than the other remaining hospital types.

National Institute of Mental Health, Leprosy Hospital - Hendala, Rehabilitation Hospital - Ragama, Rehabilitation Hospital - Leliambe , Divisional Hospitals - Muwandeniya, Unawatuna, Ampan, Mental Health Center - Meedunpitiya , Mental Rehabilitation Center - Dematanpitiya and Prison Hospital - Mahara are reported as the institutions having the highest average duration of stay.

In 2018, bed occupancy rates of Teaching Hospitals and Provincial General Hospitals are in the range of 60% to 90%, except Sirimavo Bandaranayaka Children's Hospital, which records a BOR of 49.6%. Most of the District General Hospitals (DGHs) are also in the same range. But Nuwara Eliya, Monaragala and Embilipitiya DGHs have reported the BOR over 90%. The BOR of Embilipitiya is 99.5% and it means almost all the beds are occupied during the year. BOR of Nawalapitiya, Vavuniya, Mullaitivu and Ampara DGHs are in the range of 50% to 60%, but Kamburugamuwa DGH has reported the BOR as 32.8%.

BOR of Base Hospitals, both in type A and B, varies from 12% to 110%. BOR exceeds 100% in Kahawaththa (Ratnapura District), Dambulla, Thambuththegama and Welimada Base Hospitals, which implies the inadequate number of patient beds, has been an issue for the above hospitals.

BOR is relatively low in most of the Divisional Hospitals and it is less than 60%. But in some Divisional Hospitals, it is higher than that. It is a result of being same-day discharges taken into account. However, it indicates the higher usage of the institution. Athurugiriya, Malwathuhipitiya, Parasangawewa, Gonaganthanna, Mahadiwulwewa, Handapanagala and Manipay are some Divisional Hospitals having a BOR higher than 100%.

Bed Turnover Rates in Teaching Hospitals (TH) are varying between 65 and 130. In 2018, Colombo South Teaching Hospital has reported the highest BTR among THs, which is 128. It means that, on average, a hospital bed in Colombo South Teaching Hospital is used by 128 patients. Provincial General Hospitals are also in the same range of BTR, but the BTR of District General Hospitals is between 43 and 158.

In Base Hospitals, BTR is in the range of 30 to 239. Kiribathgoda, Panadura, Dambulla and Thambuththegama are the Base Hospitals having a BTR higher than 200.

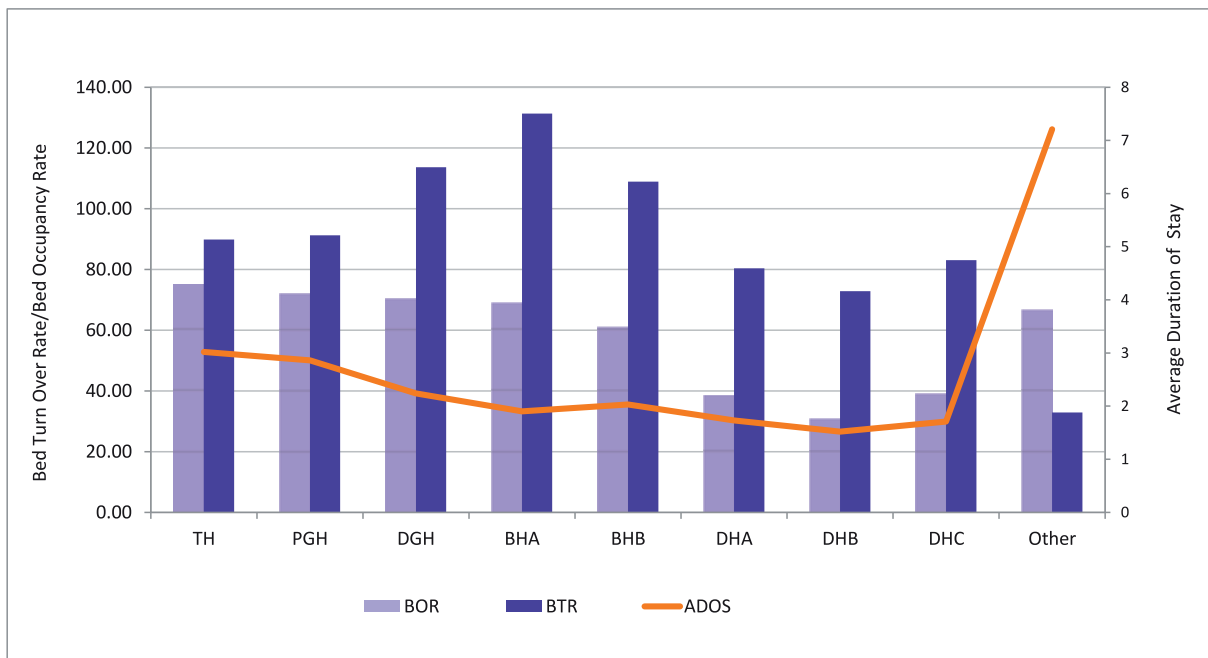


Figure 10.4 : Utilization of Medical Institutions, 2018
 Source: Medical Statistics Unit

11. Public Health Services

(Preventive Health Services)

Community health services are organized into health units and most of them share the boundaries of the Divisional Secretariat areas geographically. These are commonly known as Medical Officer of Health (MOH) areas. There are 353 MOH areas in Sri Lanka and each is headed by a Medical Officer responsible for a defined population. The MOH is supported by field public health staff. The average population for a MOH is approximately 60,000. Each member of health staff (Public Health Nursing Sister, Supervising Public Health Inspector, Supervising Public Health Midwife, Public Health Inspector and Public Health Midwife) is also responsible for a subdivided area and a respective population.

The overall responsibility for the management of community health services lies with the Provincial Health Authorities.

The scope of public health is divided among two Deputy Director Generals at the line Ministry level.

11.1. Deputy Director General - Public Health Services I (DDG - PHS I)

Main responsibilities of the DDG PHS I include leading and managing public health system of the country related to communicable diseases. However, some responsibilities in Non-Communicable Diseases are also among the designated scope.

The main responsibilities are performed through the directorates of the concerned subject areas.

01. Epidemiology Unit
02. Directorate of Environment Health, Occupational Health & Food Safety

03. National STD, AIDS Control Programme (NSACP)
04. National Programme for Tuberculosis Control and Chest Diseases (NPTCCD)
05. Anti-Malaria Campaign (AMC)
06. Anti Filaria Campaign (AFC)
07. Anti Leprosy Campaign (ALC)
08. Public Health Veterinary Services (PHVS)
09. Quarantine Unit
10. Principal Public Health Inspector (PPHI)
11. National Dengue Control Unit (NDCU)
12. Chronic Kidney Disease Unit (CKDU)

11.1.1. Epidemiology Unit

Epidemiology Unit in the Ministry of Health is the focal point for the National Immunization Programme (NIP) and surveillance of communicable diseases in the country. In addition, surveillance of Chronic Kidney Disease (CKD) is also carried out by the Epidemiology Unit.

The Epidemiology Unit is a training centre for medical postgraduates and health staff on activities related to communicable disease control and the National Immunization Programme. The unit also functions as a WHO collaborative centre for training on immunization activities in the South-East Asia Region.

Disease Surveillance

Disease surveillance programme involves routine notification, special surveillance on selected diseases such as vaccine-preventable diseases, leptospirosis, human rabies and dengue fever. In addition, sentinel site surveillance is being carried out for influenza like illness and severe acute respiratory illness which are potential to be endemic.

The Unit acts as the emergency response unit for disease control activities in disasters, emergencies and handles outbreak investigation and control.

National Immunization Programme

Epidemiology Unit is the focal point for the National Immunization Programme (NIP). It is responsible for developing policy and strategies for vaccine introduction, coordinating provision of logistics, supply of vaccines and injection safety items and monitoring and evaluation of the NIP. National Immunization Programme of Sri Lanka is one of the best performing public health programmes in the region and in the world as well. In addition, the unit involves in training medical postgraduates and health staff on activities related to communicable disease control and the National Immunization Programme. It also serves as an international training center on disease prevention and control and the childhood immunization programme.

11.1.2. Directorate of Environment Health, Occupational Health and Food Safety

The Directorate is technically responsible for all environmental health activities including hospital waste disposal and treatment, occupational health and food safety. These activities are carried out with the support of the other relevant ministries, provincial councils, local governments, other directorates of the Ministry of Health, respective hospital administration and the public health teams in MOH offices.

Food Control Administration Unit (FCAU)

Food Control Administration Unit (FCAU) which comes under the Directorate of Environmental Health, Occupational Health and Food Safety is aimed at ensuring the availability of safe and wholesome food to consumers.

Objectives of FCAU

- ◆ To protect consumers from preventable health risks
- ◆ To provide information to consumers to enable better consumer choices
- ◆ To protect consumers through a fair and effective, science-based food regulations that support competitive markets
- ◆ To coordinate national food surveillance, enforcement and food recalls
- ◆ To support food safety at ports of entry

The relevant food legislation is the Food Act No.26 of 1980 with its regulations published in terms of section 32 of the Food Act. Currently the food regulation system in Sri Lanka focuses on the end-product checks rather than on a preventive risk-based approach. Food Advisory Committee (FAC) has been setup under the Food Act to advise the Hon. Minister of Health on policy matters relating to food safety. Following committees facilitate the functions and the activities of the FAC.

- ◆ Regulation Formation Sub Committee
- ◆ Health Claims Sub Committee
- ◆ Food Technical Sub Committee
- ◆ National Codex Committee

Two new subcommittees were formulated during 2018 namely:

- ◆ Food Laboratory Services Subcommittee
- ◆ Technical Advisory Subcommittee on Food Safety.

Advocacy, formulation of regulations, inspection, enforcement, testing and coordination between different stakeholders at national and provincial level are all important areas in food safety that is required to be accomplished by FCAU of the Ministry of Health at the national level while the Regional Directors of Health Services are designated to supervise and coordinate food safety at district level. Food and Drug Inspectors (FDI) attached to

RDHS office, ensure implementation of Food Act and its regulations at the district level. The Medical Officer of Health is the Food Authority to ensure food safety at the divisional level with the support of the Public Health Inspectors.

Food control activities conducted by FCAU are broadly categorized into three areas namely import control, issuance of export (health) certificates and domestic control. Despite a cadre of 30 FDI, only 15 are available to carry out food control activities at the national level including the seaport, airport, Grey line 1, Grey line 2 and RCT (Rank Container Terminal) and their service is commendable.

Import Control Activities

Food import control procedure is implemented at the borders by FCAU to ensure that the food arrives in Sri Lanka are safe for human consumption. Import control activities are carried out by FDI in sea port, airport and RCT and inspection of documents, food and food sampling according to the sampling plan are done by them.

Table 11-1 : Food Inspection Activities at Ports of Entry, 2017 - 2018

Ports of Entry	Activities	2017	2018
Rank Container Terminal	Number of consignments inspected	40,459	41,135
	Number of consignments rejected	3	163
	Total number of samples sent for analysis	6,494	10,314
	Number of samples sent to Atomic Energy Authority	4,649	4,869
	Number of samples sent to ITI	201	192
	Number of samples sent to NIHS	1,644	2,859
	Number of samples sent to other laboratories	-	2,394
	Total Number of samples unsatisfactory	60	311
Sea port	Number of consignments registered	1,812	2,559
	Number of samples taken	20	18
Air port	Number of consignments received and inspected	4,201	3,765
	Number of consignments referred to FCAU	16	5
	Number of samples sent for analysis	-	1
	Number of consignments destroyed under supervision	-	1
	Number of consignments rejected	-	3

Source: Directorate of Environmental Health, Occupational Health & Food Safety

It was noted during March 2018 that imported canned fish had an excess of dead parasites. A total of 454 canned fish samples were tested for parasites and 160 (35%) samples were detected as positive for parasites. All of them were either re-exported or destroyed.

Import Food Surveillance

Import food surveillance is conducted randomly to ensure the safety of the particular food.

During the past few years, the surveillance was conducted and in 2018 the surveillance was strengthened for chillies. Based on the aflatoxins

levels of dried chillies being high, all importers were given an orientation on the harmful effects of aflatoxins and the levels to be adhered.

Table 11-2 : Summary of Import Food Surveillance

Item	Tested for	Laboratory	No. of Samples	No. Unsatisfactory	Percentage Unsatisfactory
Potato	Pesticide residue	Bureau Veritas	150	Nil	0%
Potato	Heavy metal	Bureau Veritas	40	Nil	0%
Frozen fish	Formaldehyde	NIHS	796	20	2.5%
Dry Chili	Sudan Dye	Bureau Veritas	167	Nil	0%
Dry Chili	Aflatoxins	SGS	288	07 (>30ppm)	2.43%
Dry Chili	Aflatoxins	Bureau Veritas	1,389	39 (>30ppm)	2.81%

Source: Directorate of Environmental Health, Occupational Health & Food Safety

Export Certification

Export certificates for exporting food consignments are issued on request by FCAU certifying that the food is fit for human consumption. Exporting company must be

registered at the FCAU as a prequalification for issuing a health certificate for its products. A team from FCAU inspect the facilities and necessary measures will be taken before registering export food factories.

Table 11-3 : Export Control Activities of the Unit, 2017 - 2018

Activity	2017	2018
Number of health export certificates issued	11,320	10,848
Number of food factories newly registered	49	55
Total number of factories registered as an export food factory at FCAU	797	853
Number of factories visited	17	31

Source: Directorate of Environmental Health, Occupational Health & Food Safety

Domestic Control

There are 61 Food and Drug Inspectors at the district level and about 1,700 Public Health Inspectors ensuring food control activities throughout Sri Lanka. They are involved in obtaining food samples, prosecution and seizing when needed under the Food Act and its regulations and conducting awareness programmes in the community.

Directives were issued under the Food Act on inspection and strengthening food safety measures of school canteens, canteens within hospitals and hotels/eateries surrounding the hospitals and hotels used by long-distance bus travellers in 2018.

Bottled Water Registration Activities

All bottled or packaged natural mineral water and bottled or packaged drinking water have to be registered under the Bottled or Packaged Water Regulation - 2005. Factory inspections are carried out by a team from FCAU before issuing registration for products and in 2018, legal actions were taken against two companies, which did not meet the criteria.

Table 11-4 : Registration of Bottled or Packaged Water Manufacturing Facilities, 2017 - 2018

Activity	2017	2018
Total number of factories	153	166
Number of bottled drinking water facilities newly registered	13	14
Number of mineral water facilities newly registered	-	-
Number of bottled drinking water facilities registration renewed	50	31
Number of mineral water facilities registration renewed	2	-
Total number of factories visited	52	36

Source: Directorate of Environmental Health, Occupational Health & Food Safety

Iodized Salt Regulation Activities

All premises used for iodization of edible common salt or transportation of non-iodized common salt are registered under the Iodization of Salt Regulation - 2005. Inspections of the facilities are carried out prior to registration of the products.

Renewal of edible salt license is done annually. All imported common salt samples were checked for meeting the standard.

Table 11-5 : Issue of Permits for Common Salt, 2017 - 2018

Activity	2017	2018
Number of new permits issued	19	26
Number of factories registered at FCAU	19	26
Number of factories visited	19	26
Number of factories newly registered	-	06

Source: Directorate of Environmental Health, Occupational Health & Food Safety

Domestic Food Surveillance

Food surveillance activities enable FCAU to deliver its public health and consumer protection obligations rationally. An island-wide survey was conducted to assess the level of contaminants in commonly consumed food items in Sri Lanka from June to December in 2018. Samples were collected from all 26

RDHS divisions by authorized officers and these samples were tested by reputed government laboratories such as Food Laboratory at the Government Analyst's Department (GA), Food Laboratory at National Institute of Health Sciences (NIHS), Kalutara, Microbiology laboratory at MRI, NARA Laboratory and Sri Lanka Standard Institute (SLSI).

Table 11-6 : Summary of Domestic Food Surveillance

Item	Tested for	Laboratory	No. of Samples	No. of Samples Unsatisfactory
Fruits	Pesticide residues	GA, NIHS	398	40 (10.05%)
Vegetables			198	23(11.62%)
Green leaves			85	35(41.18%)
Salt	Lead, Arsenic, Cadmium, Mercury	SLSI	84	Nil (0%)
Fish	Mercury	NARA	71	Nil (0%)
Fish	Formaldehyde	NARA	72	2 (2.78%)
Red raw rice	Artificial colouring	NIHS	82	16 (19.51%)
Tea		NIHS	81	Nil (0%)
Coconut oil	Aflatoxin	NIHS	80	1 (1.25%)
Peanut		NIHS	80	4 (5%)
Chili powder		NIHS	80	9 (11.25%)
Yoghurt	microbiological contamination	MRI	5	Nil (0%)

Source: Directorate of Environmental Health, Occupational Health & Food Safety

Vegetables, green leaves and fruits were tested for 21 pesticides, and of them, Maximum Residue Limits (MRL) were not specified for 8 pesticides in the Control of Pesticides (Time Limits) Regulation published under the Pesticide Act No.33 of 1980. Total of 398 fruit samples consisting of papaya, banana, mango, watermelon, pineapple, guava and grapes were tested for pesticide residues, and 5,694 tests were carried out for individual pesticides where 46 tests (0.81%) exceeded MRL. Guava (“Kilopera”) showed the highest number of pesticide residues exceeding MRL 30 (4.02%) and the second-highest was detected in grapes (n=03, 2.78%). Total of 198 vegetable samples comprising of tomato, brinjal, leeks, carrot, beans, long beans, ridged gourd, snake gourd and ladies fingers were checked for pesticide residues and 3,009 tests were done for

individual pesticides in which 23 (0.76%) were above MRL. The highest amount of pesticide residues 07(1.3%) exceeding MRL were detected in tomato. The commonest pesticide detected in vegetable samples was profenofos. Forty-one Gotukola and 44 Mukunuwenna samples were examined for pesticide residues, and 1,375 tests conducted for individual pesticides where 43 (3.13%) were above MRL. Though artificial colouring was detected in 16 (19.51%) redraw rice samples, these were approved food colours but prohibited to be used in rice. MRL for aflatoxin was taken as ≥ 30 ppm.

Water Surveillance

Routine water surveillance continues to be carried out based on the circular No. 01-23/2007 (revised) dated 01.10.2010, but the quality of data and the actual need for the surveillance need to be revisited. During the year 2018, 9,054 water samples were checked for chlorine, and 7,936 (87.7%) samples were satisfactory. Total 11,553 water samples were checked for bacteriological parameters, and 4,167 (36.1%) samples were satisfactory. Water samples had not been sent by some RDHS areas as per circular, and zero reporting was noted in Kandy, Galle, Trincomalee, Polonnaruwa, Gampaha and Kalutara RDHS areas. Currently, due to poor monitoring of this program at the national level and district level, no meaningful comparison or interpretation can be made.

Electronic Information System: eEOHFS

The Public Health Inspector's 'Monthly Return' is the key tool that extracts ground level information and data. Since the data collection was carried out by manual basis by PHIs, it has been difficult to make use these data for advance analysis and thereby unable to support for effective contribution in health policy decision process. The paper-based monthly return of Public Health Inspectors was converted to a digital system (eEOHFS) in 2018, with the support of the Health Informatics Society and the Family Health Bureau.

Regulatory Activities

The following regulations were drafted in the year 2018.

- ◆ Food (Meat and Meat Products)
- ◆ Food (Fish and Fish Products)
- ◆ Food (Fruits and Vegetables)
- ◆ Food (Registration of Products)
- ◆ Food (Oils and Fats)
- ◆ Food (Food for special dietary use and special medical purposes)

It is expected that these regulations will be enacted in 2019 to improve food safety. In the year 2018, Office of the Registrar of Pesticides nominated and issued identity cards for 52 authorized officers for institutional proceedings and conducting prosecution under the control of Pesticides Act No.33 of 1980.

Capacity Building of the Staff

Authorized officers were trained locally and internationally to improve their knowledge on food safety management through the entire food chain. Three-day training programme on Good Manufacturing Practices (GMP) for PHI and supervising Public Health Inspectors (SPHI), a training programme on Pesticide Act for authorized officers and Training of Trainer's series on internal food safety best practices (with the collaboration of UNIDO) were conducted locally. Twenty-two authorized officers and one Regional Epidemiologist were trained on "Food safety and Hygiene" and two Microbiologists and 15 laboratory staff members were trained on "Risk analysis and ISO/IEC 17025:2017 accreditation" internationally in 2018.

National Review Meetings

Two national reviews, one in Colombo and the other in Badulla were held with the participation of all Supervising Public Health Inspectors at district level (SPHID) and FDI, in order to discuss the food safety issues at the peripheral level. Necessary actions were taken to improve the food safety at the grass root level. Two review meetings were held for national food surveillance on food contaminants with more than 150 participants.

Food Safety Week

Two food safety weeks during festival seasons; in early April 2018 and in mid-December 2018 were conducted with the support of the authorized officers at provincial, district and divisional levels. The activities included inspecting the food establishments, grading of food establishments, destroying food that are not suitable for human consumption, conducting awareness programmes for general public and educating food handlers on the food safety theme. At national level with the support of Health Promotion Bureau, FAO and UNIDO, 20,000 posters or wallcharts or both on food safety principles in Sinhala, English and Tamil medium were printed and distributed across the island. A media conference was held in collaboration with the Health Promotion Bureau to educate media on food safety weeks and an awareness campaign for food handlers was conducted in the Colombo Municipal Council area with the support of the Chief Medical Officer of Health, Colombo Municipal Council and his staff.

Analytical Capacity

Food that are imported, exported and those available in the market are tested for physical, chemical and microbiological parameters. There is a network of seven food laboratories which continued to support the testing of food and water samples for surveillance and contamination. Four of them come under Ministry of Health, namely Food Microbiology Laboratory at the MRI, Food Laboratory at NIHS Kalutara, Food Laboratory at Anuradhapura and Provincial Food Laboratory at Kurunegala, while Government Analyst, City Analyst Colombo and City Analyst at Kandy also support the Ministry of Health in testing food and water samples during food surveillance.

Microbiological samples (both solid and water) are tested at Microbiology Laboratories at MRI and NIHS. Outbreak investigations are done in Enteric Reference Laboratory (Faeces and vomitus) of the MRI. Chemical Food Laboratory of the NIHS has the capacity of testing aflatoxin levels in food items and Food Laboratory at Anuradhapura test heavy metals of the food samples. During the year 2018, total 36,027 food samples were tested by these laboratories.

Directorate, in collaboration with UNIDO is in the process of strengthening and accreditation of food laboratories-ISO 17025:2017(2). Preliminary and mid assessments were done for all food laboratories in 2018. Training of the laboratory staff in many aspects such as in ISO 17025: 2017, manual writing, calibration and measurement uncertainty and internal audit was done accordingly. Food laboratory at MRI is at the final stage in the process of accreditation.

Activities of Codex/WTO-SPS Contact Point

The Deputy Director General of Environmental Health, Occupational Health and Food Safety is the contact point for International Food Safety Authorities Network (INFOSAN) and is also the designated National Codex contact point for Sri Lanka. National Codex contact point was strengthened with the appointment of two staff members. One officer was trained in modern technology used in Codex work in India in 2018.

In 2018, four INFOSAN alerts were received, and the necessary actions were taken to correct the notified situations, and three RASFF notifications were received, and all were investigated, and corrective actions were taken.

11.1.3. National STD/AIDS Control Programme

The National STD/AIDS Control Programme (NSACP) is the focal point for the prevention and control of sexually transmitted infections (STI), including HIV. As a specialized public health programme under the Ministry of Health, NSACP is responsible for coordinating, planning, implementing, monitoring and evaluation of the national response to the control and prevention of STI including HIV.

Actions Taken in 2018

- ◆ In order to increase the number of PLHIV who know their status, HIV screening has been rolled out to many setups. Scaling up of HIV screening has been done via the introduction of rapid tests to base hospitals and above, general practitioners and at community-based testing.
- ◆ A poster with indicator conditions for HIV screening was developed and distributed islandwide to increase the provider-initiated HIV testing and the HIV testing algorithm was updated.
- ◆ Islandwide coverage of HIV screening among the antenatal mothers has been achieved under the scaling up of elimination of mother to child transmission of HIV and syphilis (EMTCT).
- ◆ To increase awareness regarding HIV and testing, numerous activities were conducted by NSACP such as World AIDS day activities including the World AIDS Day walk, lectures, media conferences, awareness programmes and social media campaigns.
- ◆ HIV screening among vulnerable populations such as prisoners was done through STD clinics in collaboration with the multi-sectoral unit.
- ◆ Under the “Test and treat” policy, all PLHIV who were linked to HIV care services were offered to initiate antiretroviral treatment.
- ◆ Four antiretroviral drugs were newly included in the national formulary.
- ◆ AIDS Epidemic Model is a tool for HIV estimations which was introduced to Sri Lanka in 2018. It is considered as a suitable software for Asian types of HIV epidemics.
- ◆ Through the AIDS Epidemic Model, it was identified that the highest proportion of new HIV infections will be contributed by the MSM population in the future.

- ◆ During 2018, 33 STD clinics functioned full time, and among them, 21 had the capacity to prescribe ART for the PLHIV.
- ◆ Central Clinic, Colombo has provided more than 20,000 consultations in 2018 and a total of 209,476 clinic visits were generated by all the STD clinics.
- ◆ STD clinics provide services for patients with sexually transmitted diseases as well as for categories in need of testing such as pre-employment, visa screening, ANC blood testing on OPD basis, etc.
- ◆ Of the total 26,245 new patients, 15,424 have been diagnosed with STIs and had received services through an island-wide network of STD clinics.
- ◆ The STI laboratories provide STI services with screening and confirmatory testing for syphilis island-wide. Gonococcal testing services are provided with microscopy in all the laboratories and with culture in some of the laboratories. The NRL provides the reference facility for antibiotic sensitivity, identification of *Neisseria* species and the molecular testing facilities for HSV. Testing for Hepatitis B and Hepatitis C are also available at the reference laboratory of NSACP. The diagnosis of other STIs is supported with microscopy in all the laboratories.
- ◆ During the year of 2018, a total of 91 programmes (Inservice, Preservice and capacity building) were conducted by the training unit of the NSACP, with the participation of nearly 1,202 healthcare personals of different categories in the STI services.
- ◆ During 2018, 341,099 condoms have been distributed via STD clinics. This is a 12% rise in the distribution compared to 2017.
- ◆ The programme continued the multidisciplinary approach with the involvement of the Family Health Bureau, Maternal and Child Health Services, provincial and regional health authorities, tertiary care hospitals, STD clinics and National Reference Laboratory of NSACP.
- ◆ EMTCT guide for health care workers was printed in all three languages and distributed to all MOH offices through STD clinics.
- ◆ A rapid assessment survey was done in the postnatal units of the major tertiary care units by the area STD clinic staff to understand the coverage, quality and accessibility to EMTCT services.
- ◆ A private hospital survey was done in November during 2017 and 2018 by the Epidemiology Unit of NSACP, and the findings were used to improve services further.
- ◆ Sixteen (16) HIV positive women delivered in the year 2018. All 16 infants were started on nevirapine prophylaxis, and early diagnostic tests were arranged, including DNA PCR at birth, at 8 and 16 weeks. All mothers who received EMTCT services for HIV delivered uninfected babies.
- ◆ The services for early infant diagnosis were further improved in 2018 by establishing DNA PCR testing at the National Reference Laboratory of NSACP and DNA PCR tests were offered at birth, at 2 and 4 months after delivery. None of the babies born during 2018 was infected with HIV.
- ◆ In the year 2018, two children were identified comprising of a two-and-half-year-old and a four-year-old from Anuradhapura and Nuwara Eliya respectively. None of the children who were delivered during 2018 were diagnosed with HIV.
- ◆ Finalized the procurement of hardware and distributed them to islandwide STD clinics.

- ◆ Completed the STD clinic management system, HIV care, ART management, monitoring system and pharmacy management system.
- ◆ Initiated digitalization at the NSACP and STD clinics, Kalutara and Balapitiya.
- ◆ Health care staff was trained.
- ◆ Developed the rest of the modules in order to complete the system.
- ◆ Initial planning was done for the development of a dashboard.
- ◆ Introducing 10 new STD clinics to BH - Awissawella, BH - Horana, BH -Panadura, DGH - Gampaha, BH - Tangalle, BH - Mahiyanganaya, BH -Dambulla, BH - Kuliyaipiya, BH - Puttlam and BH - Galgamuwa.
- ◆ Providing specialist services to island-wide STD clinics
- ◆ Improving the laboratories in the STD clinics further in relation to infrastructure as well as human resources
- ◆ Filling the gaps in the healthcare worker carder to provide continuous treatment and care services

Actions to be Taken in 2019

- ◆ Scaling-up of HIV testing services further to increase detection via community-based testing
- ◆ Scaling-up of reaching out to key populations through STD clinic services
- ◆ To make available newer antiretroviral drugs like dolutegravir as per WHO recommendation
- ◆ To further scale up laboratory testing for the management of PLHIV in district STD clinics
- ◆ HIV drug resistance testing to be initiated in the reference laboratory of NSACP
- ◆ National reference laboratory of NSACP is planning to obtain accreditation of laboratories by Sri Lanka Accreditation Board
- ◆ Pilot study to explore the possibility of introduction of pre-exposure prophylaxis for MSM in Sri Lanka
- ◆ Scaling up of HIV testing services through targeted testing
- ◆ Interventions specific to MSMs with the involvement of peers will be carried out through STD clinics
- ◆ Introducing mobile apps which helps to assess the risk for HIV and link to care services
- ◆ Incorporating peer-led targeted interventions to the STD clinic services
- ◆ Scaling up of preventive services through awareness programmes, social media and IEC material
- ◆ Further strengthening of the STD clinics, MOH areas and Base hospitals to provide the ideal care for HIV or syphilis infected pregnant mothers
- ◆ Capacity building of the health care workers in STD clinics, MOHs and obstetric units in relation to these services as refresher trainings
- ◆ Compiling the country report for the WHO validation process
- ◆ Applying for the certification of WHO validation for the EMTCT programme of Sri Lanka
- ◆ Completing the system by developing the rest of the modules
- ◆ Introducing the system island-wide
- ◆ Developing the DIHS 2 and incorporating the systems
- ◆ Training and capacity building of the STD clinic staff to use the EIMS
- ◆ Strengthening the infrastructure needed to continue uninterrupted use of the EIMS

11.1.4. National Programme for Tuberculosis Control and Chest Diseases

The National Programme for Tuberculosis Control and Chest Diseases is the national focal point for prevention and control of TB in the country. The services are provided through a network of 26 district chest clinics, 1 sub chest clinic, 108 branch clinics and more than 150 microscopic centers. Diagnostic culture facilities are available at National TB Reference Laboratory (NTRL) and Intermediate TB Laboratories at Rathnapura, Kandy, Jaffna and Galle.

Actions Taken in 2018

- a) Sri Lanka has committed to achieve the WHO's end TB strategy targets by the year 2025. Reaching these targets requires intensive integrated strategic actions at the national and subnational level. As recommended by the mid-term review conducted in Sri Lanka in July 2017, NPTCCD introduced a pilot district programme that included rigorous actions to overcome the key challenges identified in eliminating TB. The pilot programme was initiated by recruiting Kalutara, Kegalle and Gampaha districts in 2018. This will be expanded in a stepwise manner so that all 25 districts will be covered by 2021.
- b) Decentralization of diagnostic services beyond DCC was done by establishing microscopic centres and introducing 'Presumptive TB Register' at the OPD setting to enhance case detection.
- c) Conducting Chest X-rays in presumptive TB patient is recommended as one of the initial tests to improve case detection and even contact investigation. To achieve universal TB patient management, the diagnostic

algorithm was reformed by incorporating chest X-rays as an initial screening test to improve its sensitivity in order to integrate more presumptive TB cases and contacts into diagnostic services.

- d) NPTCCD purchased and distributed 17 digital X-ray machines to district chest clinics and health institutions in order to create a patient-friendly environment at health institutions and thus enhanced TB case detection.
- e) Gene X-pert assay is a novel integrated diagnostic device for the diagnosis of tuberculosis and rapid detection of drug resistance in clinical specimens. NPTCCD procured and distributed 12 Gene X-pert machines to health institutions for early and effective case management.
- f) With the provision of Global funds, NPTCCD procured an X-ray mounted vehicle to initiate island-wide TB screening activities especially among high-risk groups.
- g) In addition to the routine screening activities, a mobile screening team conducted intensified screening activities in prisons and detention homes in Western Province utilizing the mobile X-ray vehicle.
- h) NPTCCD with joint collaboration with the College of Pulmonologists and the College of Paediatricians developed a National Guideline on the management of tuberculosis in children. This updated manual aims to be a valuable tool for undergraduates and postgraduates in medicine, paediatrics, pulmonology, specialists of other specialties and all medical personnel who manage paediatric patients with TB.
- i) In order to overcome the drawbacks incorporated in the paper-based information management system, NPTCCD launched an electronic patient information

management system (e- PIMS). This has been piloted in 3 districts (Colombo, Matara and Kurunegala) and will be expanded island wide in the near future.

Actions to be Taken in 2019

- a) Implementation of cross programmatic activities to increase case detection: MCH/school health/NCD/HIV - drug addicts/estate and urban health.
- b) Intensify support from district public health team – CCPs, REs, MOOH, SPHIDs, PHII (Need administrative support) for field activities e.g. contact screening, community empowerment.
- c) Establishment of patient information system for private sector hospitals and private sector engagement in treatment provision under supervision.
- d) Conduct more targeted community-based interventions in high-risk localities.
- e) Implementation of Inbound Health Assessment (IHA) for the migrants applying for resident visa for more than 6 months.
- f) Adaptation and scaling up of WHO Latent TB Guideline.
- g) Rolling out of 'Pilot District Concept' to five more districts (Kurunegala, Puttlam, Badulla, Monaragala and Rathnapura).

11.1.5. Anti-Malaria Campaign

Sri Lanka was certified by the World Health Organization as a malaria-free country on 6th September 2016, at the 69th session of the Regional Committee for South-East Asia in Colombo after continuous effort over four decades by the Anti Malaria Campaign. Currently Sri Lanka is in the phase of prevention of the reintroduction of malaria.

Actions Taken in 2018

Sri Lanka has maintained the malaria-free status during the last 5 years. Sustained surveillance activities are in keeping with the ministerial declaration signed on 29th November, 2017 in New Delhi by all Health Ministers of SEAR countries on accelerating and sustaining malaria elimination in the South-East Asian Region aiming malaria-free South-East Asian Region (SEAR) in 2030.

Accordingly, strategies for prevention of reintroduction of malaria are mainly focused on,

- ◆ Detecting and treatment of imported cases - During 2018, 47 imported malaria cases were reported majority from India and African countries. One introduced case was reported from Monaragala district, which was managed accordingly to stop the local transmission. AMC has extended prompt service, free of charge with malaria diagnostics and treatment facilities, to both government and private health institutions to manage these imported malaria cases.
- ◆ Screening and following up of high-risk population - Steps were taken to ensure that all malaria patients entering the country were diagnosed promptly and treated effectively to ensure malaria-free status. At ports of entry, special screening programmes were continuously carried out for high-risk groups returning from malaria-endemic countries in collaboration with security forces, International Organization for Migration (IOM) and United Nations High Commission for Refugees (UNHCR).
- ◆ Providing chemoprophylaxis to travelers to malaria-endemic countries - Sri Lankans traveling abroad to malaria-endemic countries were provided with the necessary guidance and preventive treatment free-of-charge by the AMC to prevent malaria during their overseas travel.
- ◆ Enhanced parasitic and entomological surveillance - Entomological surveillance was continued with nearly 30 sentinel sites and proactive surveys in vulnerable areas as well as reactive surveys when imported malaria cases occur throughout the country to monitor behavior of malaria vector mosquitoes and targeted vector control measures were taken as and when necessary. Long-lasting insecticide-impregnated bed nets were distributed for selected target groups to prevent reintroduction of malaria.
- ◆ Selective vector control activities - Urban malaria vector which was detected from six districts in Northern and Eastern provinces during 2017 – 2018 was successfully controlled due to intensified entomological surveillance and vector control activities and is currently limited to three districts.
- ◆ GF last grant cycle NFM – successfully completed and applied for budget support in transitional phase from Global Fund (GF) in 2018. GF has approved their budget support for 2019 - 2021.
- ◆ The AMC has taken several measures to verify the absence of malaria transmission within the country. In 2018, AMC conducted more than 2,500 outreach malaria mobile clinics targeting high-risk groups. In total, about 1.1 million blood smears were examined as a part of parasitological

surveillance which also includes passive surveillance in hospitals and screening of blood bank slides.

- ◆ Quality assured and quality-controlled malaria diagnostic services have been scaled up throughout the country. Malaria diagnostic services were scaled up and continued with Rapid Diagnostic Test kits (RDT) for hospitals throughout the country.
- ◆ WHO external competency was carried out in 2017 – 2018 for accreditation of human resources in malaria diagnostic services. Training programmes were conducted to ensure the quality of diagnosis and ensure that WHO standards of quality assurance are met.
- ◆ In 2018 infrastructure development was initiated for 100 island-wide laboratory services providing malaria diagnostic services.
- ◆ AMC has taken series of interventions to keep the momentum of public interest on malaria by conducting public awareness programmes for teachers, village leaders, etc.
- ◆ World Malaria Day in 2018 was celebrated, giving more attention to create public awareness on malaria. In addition to media briefings, key messages were disseminated through newspapers, radio and television. New website for Anti Malaria Campaign was launched at the Malaria Day media briefing held on 24th of April, 2018.
- ◆ Sri Lanka sponsored a highly successful malaria side event with other countries such as China, Maldives at the World Health Assembly held on May, 2018.

Actions to be Taken in 2019

In addition to routine activities planned in the annual strategic plan, following special development activities are being planned for prevention of reintroduction of malaria, in 2019.

- ◆ Incorporation of GIS mapping for prevention of malaria reintroduction activities such as entomological and parasitic surveillance
- ◆ Introduction of DHIS 2 information system for malaria case-based surveillance

11.1.6. Anti Filariasis Campaign

Anti Filariasis (AFC) of the Ministry of Health, Sri Lanka collaborates with other partners such as WHO, Gates Foundation, Liverpool school of Tropical Medicine-UK, University of St. Louise-USA and National Institute of Health-USA.

Actions Taken in 2018

- ◆ Developed Guidelines and Standard Operation Procedures (SOPs) for entomological and parasitological surveillance techniques
- ◆ Reviewed surveillance activities conducted by AFC/Head Quarters and by Regional Filariasis Units (RFUs) in endemic areas (monthly review of RMOO, district reviews)
- ◆ Planned, coordinated and conducted mass screening programme in two high-risk MOH areas in Galle district; Balapitiya and Habaraduwa, through xenomonitoring guided enhanced parasitological surveillance programme and detected 51 patients with active infection
- ◆ Planned and coordinated special surveillance programmes in non-endemic districts; Anuradhapura, Monaragala and Trincomalee
- ◆ Developed a surveillance mechanism to screen all the migrant labour workers working in the construction industry.
- ◆ Introduced new online forms and paper-based format for surveillance activities (case notification, lymphedema patient registration, case investigation, migrant case investigation and revision of parasitological data collecting forms)
- ◆ Developed a Human Resource database for AFC/HQ and RFUs

- ◆ Raised awareness among Medical Officers of Health (MOOH), clinical staff, undergraduates, postgraduates (Community Medicine, Medical Administration and Family Medicine), para-medical staff (PHLT, PHI, PHFO, HEO) and TOTs of National Institute of Education
- ◆ Developed job descriptions and duty lists for all staff categories in AFC: CCP, MO, PHFO, PHLT, HEO, PHNS, PHI and Entomologists
- ◆ Strengthen social mobilization campaigns: review and revised communication material and developed leaflets and posters for Night Blood Filming and Lymphoedema management, developed a booklet for school children on filariasis, launched a facebook campaign to overcome miscommunications communicated through social media (facebook page, advertisement on night blood filming), developed a video clip for community awareness together with Health Promotion Bureau, implemented a community mobilization campaign in Galle district

Actions to be Taken in 2019

- ◆ Printing of SOPs and train all relevant staff categories on SOPs
- ◆ Capacity building of all staff categories
- ◆ Training clinical staff and patients with lymphoedema on Morbidity Management and Disability Prevention
- ◆ Carryout non-endemic surveys to ensure no re-emergence of the disease in non-endemic areas
- ◆ Enhance case detection, treatment and follow up of patients with active infection who contribute to ongoing transmission
- ◆ Regular review of implementation activities in endemic areas

11.1.7. Quarantine Unit

The Quarantine unit of the Ministry of Health is responsible for maintaining border health security by working with several other sectors in Sri Lanka.

The legal frameworks supporting the activities are the Quarantine and Prevention of Diseases ordinance of 1897 and International Health Regulations (IHR) - 2005.

Sri Lanka is also legally bound to comply and obliged to implement the IHR - 2005 with the other member states in accordance with the purpose and scope to protect, prevent and control of international spread of diseases as well as public health risks, especially leading to Public Health Emergency of International Concern (PHEIC) while avoiding unnecessary interference with international traffic and trade. The Quarantine unit and the Epidemiology Unit of the Ministry of Health (MoH) are identified as the IHR Co-National Focal Points (NFP). NFP should be accessible at all times and coordinate with WHO IHR focal points. Activities related to implementation of IHR - 2005 in Sri Lanka are being carried out by both units in collaboration with each other.

In Sri Lanka, Colombo Port and Bandaranaike International Airport (BIA), Katunayake are the designated Points of Entry (PoEs). Designated PoEs should have the core capacities to act during all times and during a PHEIC situation.

Actions Taken in 2018

- ◆ National Steering Committee meetings on IHR - 2005 were conducted in 2018 to improve the coordination of IHR related activities with different sectors under the chairmanship of Director General of Health Services.
- ◆ Passengers from yellow fever endemic countries should get the yellow fever vaccination and this has been included as a visa requirement in Electronic Travel Authorization when travellers applying visa with the assistance of the Department of Immigration and Emigration and Ministry of Foreign Affairs.
- ◆ Meetings conducted with legal draftsman to amend the Quarantine Act as approved by Cabinet of Ministers.
- ◆ Ship Sanitation Inspection and Issuance of Ship Sanitation Certificate Training Programme (online and face to face components) was conducted in Sri Lanka with the assistance of WHO for the Doctors of Quarantine Unit and Doctors and Public Health Inspectors of Port Health Offices in 2018.
- ◆ Conducted desktop drill to review public health contingency plan for Bandaranaike International Airport (BIA).
- ◆ Introduced regular quarterly review system for Quarantine Unit.
- ◆ Conducted Joint External Evaluation of IHR 2005 implementation status in Sri Lanka with several stakeholders including health and non-health sectors in the country and the mission of WHO in June 2018.
- ◆ The report was submitted to MoH based on Joint External Evaluation with the scores and priority actions for each technical area.

- ◆ Preparation of five year National Action Plan for Health Security (NAPHS) based on the priority actions identified in Joint External Evaluation with the involvement of several health and non-health stakeholders. Quarantine Unit involved as a stakeholder as well as the coordinator for preparation of NAPHS. NAPHS was published in December 2018.
- ◆ State Party Annual Reporting Tool of IHR - 2005 of WHO was filled with the involvement of health and non-health stakeholders and sent to WHO.
- ◆ Initiated developing of a web-based Quarantine Health Record Management and Surveillance System for record management and surveillance of activities of Quarantine Unit, Airport and Port Health Offices.

Actions to be Taken in 2019

- ◆ Planning to get the legal authority to Chief Medical Officers at Public Health Offices at Points of Entry similar to Medical Officer of Health and Director General of Health Services has instructed the Legal Department of MoH to find a mechanism to do this
- ◆ Completion of a web based system to link data between Quarantine Unit and Public Health Offices at Points of Entry
- ◆ Conduct National Steering Committee on IHR - 2005 regularly
- ◆ Purchase equipment to strengthen the activities of Quarantine Unit and Public Health Offices at PoEs with ADB funds
- ◆ Amendment of Standard Operation Procedures for prevention, early warning and response to public health events at PoEs
- ◆ Support to implement migration health policy by establishing in-bound health assessment procedure for long stay visa applicants
- ◆ Planning to conduct in-bound health assessment for resident visa holders

11.1.8. Anti-Leprosy Campaign

In 1954, the vertical structure, Anti Leprosy Campaign (ALC) was started as the national programme for leprosy control activities including diagnosis management, rehabilitation and control activities.

Leprosy control activities implemented through the vertical organization ALC, were integrated into General Health Service in 2001.

Actions Taken in 2018

- ◆ Monitoring and evaluation of the central, provincial and district level leprosy control activities through regular onsite reviews.
- ◆ Fifteen house-to-house surveys, 65 community screenings activities and 51 training programs for health staff were carried out in the country with special emphasis on high endemic areas in 2018.

Actions to be Taken in 2019

- ◆ Social marketing campaign in accordance with findings of KAP study is to be conducted
- ◆ Strengthening the district level activities of community screenings

11.1.9. National Dengue Control Unit

The National Dengue Control Unit (NDCU) is the central organization in planning and coordination for dengue control and prevention in Sri Lanka, since its establishment in 2005. However, there were several major cyclical epidemics over the past decade together with the number of dengue cases reported growing annually at an exponential rate. Therefore, a sustainable programme through a comprehensive, integrated approach aiming to reduce both morbidity and mortality to such an extent that it will no longer be a major public health issue needed to be developed.

The aims of NDCU are to achieve case incidence below 100/100,000 population and to reduce and maintain case fatality rate below 0.1 % by the year 2023 by adhering to the comprehensive set of activities included under specific objectives given in the National Action Plan on Prevention and Control of Dengue, 2019 - 2023.

Outbreak Response - Emergency Dengue Control Programme

- ◆ Weekly reporting of data revealed that the highest number was reported in 27th week (1,942 cases) of which more than 37.3% were from the Western Province (WP) in 2018. To curtail this outbreak situation promptly, an emergency dengue control programme was initiated in WP and other high-risk districts.
- ◆ A series of mass-scale premises inspection programmes were continued targeting houses, schools, construction sites, institutions, public/religious places and bare lands etc. A Civil-Military Cooperation (CIMIC) activity involving approximately 36,000 personnel from Tri Forces, Civil Defence Force, Police and Health Services was conducted during the year 2018.

- ◆ This emergency dengue control programme was targeted primarily at the GN divisions in selected high-risk Medical Officer of Health (MOH) areas based on epidemiological data in the districts of Colombo, Gampaha, Kalutara (including Colombo MC and NIHS Kalutara) and other provinces. This activity was primarily aimed at the detection of mosquito breeding sites and their elimination through source reduction on-site augmented by health education, other vector control methods such as larviciding and fogging when needed and enforcing legal action when necessary.
- ◆ Ten successful mass scale premise inspection campaigns were conducted during 2018 in high-risk districts of Sri Lanka. Activities are summarized in Annexure II : Tables 2 and 3.
- ◆ Two National Mosquito Control Weeks were declared before the anticipated monsoonal seasons. Extensive media coverage focussing behavioural outcome for specific breeding places were disseminated to empower the community (Annexure II : Tables 2 and 3).
- ◆ The national review meeting on dengue control activities was held on 13.03.2018 chaired by the Secretary, Health.

11.2. Deputy Director General – Public Health Services II (DDG PHS II)

Deputy Director General Public Health Services II is mainly assigned public health areas outside the scope of communicable diseases. This work is performed through different directorates under the DDG PHS II.

Directorates under DDG (PHS) II

1. Maternal and Child Health (FHB)
2. Health Education and Publicity (HEB)
3. Directorate of Nutrition
4. Nutrition Coordination Unit
5. Directorate of Nursing (Public Health Services)
6. Directorate of Estate and Urban Health (EUH)
7. Directorate of Youth, Elderly and Disability (YED)

11.2.1. Maternal and Child Health (Family Health Bureau)

Family Health Bureau (FHB), is the central level institution in the Ministry of Health that is responsible for planning, implementing, monitoring and evaluating the Reproductive, Maternal, New-born, Child Adolescent and Youth Health programme (RMNCAYH).

FHB provides technical guidance for the provincial health care system on its implementation. In addition, FHB advocates the Ministry of Health on matters related to policy, finance, infrastructure, human and other resource requirements relevant to RMNCAYH programme. Quality control, monitoring and evaluation of the RMNCAYH programme also come under the purview of FHB. FHB has several units that cover the different components of the RMNCAYH programme.

These include:

- ◆ Maternal Health
- ◆ Maternal and Child Morbidity and Mortality Surveillance
- ◆ Intrapartum and New-born Care
- ◆ Child Health, Development and Special Needs
- ◆ Child Nutrition
- ◆ School Health
- ◆ Adolescent and Youth Health
- ◆ Gender and Women's Health
- ◆ Family Planning
- ◆ Planning, Monitoring and Evaluation
- ◆ Oral Health
- ◆ Research and Development

Each of these units is headed by a Consultant Community Physician (a public health specialist), who is the national programme manager for areas under the unit's purview.

Each unit possesses a separate staff responsible for advocacy, policy and strategic analysis, programme development, technical guidance, evaluation and supervision related to the respective programme components. Figure 11.1 shows the administrative and technical guidance pathways that facilitate the organization and implementation of RMNCAYH programme activities through the national health system. The red and blue lines in the diagram depict the administrative and technical supervision pathways relevant to different levels of health systems that are involved with the RMNCAYH programme.

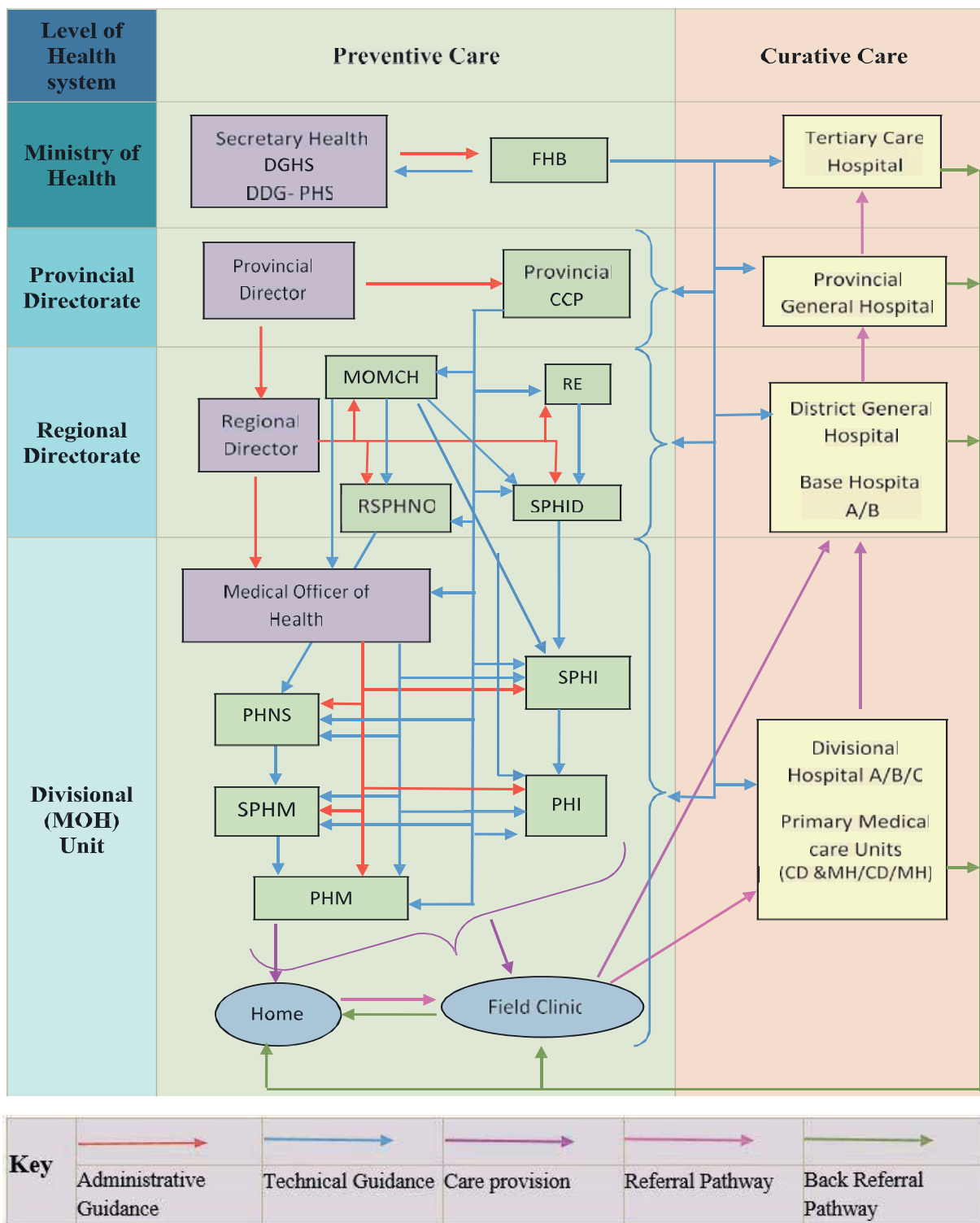


Figure 11.1 : Organization of RMNCAHY Programme at Different Levels of Health System

Source: Family Health Bureau

The diagram also depicts the referral and back referral pathways available for people confronted by health conditions related to family health (childbirth, childhood illness, etc.) in pink lines. The administrative and technical guidance relevant to the RMNCAYH programme is integrated into the usual multi-tier organizational arrangement of the Ministry of Health. Tiers include, Ministry of Health headed by the Secretary of Health, nine Provincial Directors and twenty-six Regional Directors.

At the Ministry of Health, policy-making and financial allocation related to RMNCAYH programme is the responsibility of Secretary to the Ministry. The overall administration including logistical supply comes under the purview of the Director General of Health Services (DGHS). FHB is the directorate which technically guides the RMNCAYH Programme. FHB provides policy and strategic advocacy to the Ministry of Health and provincial and regional directorates.

11.2.2. Health Education and Publicity (Health Promotion Bureau)

The Health Education Bureau, which was upgraded to the status of the Health Promotion Bureau (HPB) in January 2018, is the key wing of the Ministry of Health, Sri Lanka, responsible for Health Promotion (HP), Health Communication (HC) and Media Publicity. The HPB promotes and encourages voluntary, positive behaviour change towards healthy living with special focus on non-communicable diseases, nutrition through life course approach, sexual and reproductive health, communicable diseases and oral health.

Programmes of the HPB, which are planned, implemented, monitored and evaluated, are based on advocacy, HC, community empowerment, community mobilization and life skills that are core components of HP. The programmes of the HPB aim to empower communities in specified settings: village, preschool, school, hospital and workplace, to make healthy choices, the best choice and adopt appropriate positive behaviours.

Major activities of the HPB are aimed towards capacity building of staff for health promotion from health /non-health disciplines, private/government sectors, civil society groups and communities, facilitation and creation of supportive environments for healthy lifestyles, development and production of Information Education & Communication (IEC) material on key health issues, coordination with all government and non-governmental institutions and international agencies in promoting the health of communities through HP initiatives, education of the general public on health issues through mass media, new media and telehealth services and monitoring and evaluation of all HP and HC activities at national, provincial and district levels.

Health Education Officers (HEOO) attached to offices of the Provincial Departments of Health Services, act as process specialists for HP and HC and are responsible for capacity building of Nursing Officers/Health Education attached to healthcare institutions and public health field staff on HP and HC. In addition, they facilitate HP infomasing in the selected settings through advocacy, mediation and enabling, coordinating and conducting publicity events on priority health issues and supporting district technical focal points in the development of Information, Education & Communication material (IEC).

Actions Taken in 2018

Several initiatives were undertaken to streamline and strengthen health promotion and health education activities from the national to grass root levels. Consultative conferences on health promotion and health education were conducted in all nine provinces of Sri Lanka, with the participation of technical experts from the HPB and provincial and district health administrators and technical experts as well as representatives of community groups. These conferences provided a platform to initiate the development of the National Health Promotion Programme and the three year strategic plan for HP. In addition, the development of guidelines on community health promotion was initiated and the guideline on preschool health promotion was finalized. Further, eleven technical units each coordinated by a Consultant were established in par with the core areas of HP, with a view to improving programme implementation.

The 'Happy Village' project, which is a community based HP programme in the village setting, was initiated with a view to addressing risk factors for Non Communicable Diseases (NCDs). Relevant IEC material required for this project – Interactive Food Panel, stickers with key messages on behavioural modification to reduce the risk for NCDs, t-shirts, caps and badges for volunteers who are involved in the project were developed, too. Advocacy programmes for relevant stakeholders were conducted prior to the commencement of this project as well.

Further, capacity building programmes on health communication for Nursing Officers attached to Hospital Health Education Units, counselling (generic and on nutrition) programmes for healthcare staff from curative and preventive sectors were conducted. Capacity building on

Oral Health Promotion for School Dental Therapists, Regional Dental Surgeons, Nursing Officers in Health Education Units and Life Skills for the education sector were conducted as well.

The guideline on the establishment of Mothers' Support Groups (MSG) was revised and advocacy programmes were conducted to strengthen existing MSGs and establish new MSGs.

IEC material (leaflet, poster and audio visual material) to support a pilot project to promote HPV vaccination in Kalutara district, were developed.

Reviews on HP and Health Education (HE) at the national level with the participation of district HEOO for four quarters and National MSG review were conducted, too.

Conducting media seminars and media briefings to commemorate special health days in collaboration with relevant public health campaigns, curative sector and professional bodies and strengthening of the 'Suwaseriya' 24 hour health hotline were few of the other activities conducted by the HPB.

Actions to be Taken in 2019

It was planned to develop or finalize guidelines for selected categories of health promotion settings: preschool, workplace and hospital. In addition, identification of mechanisms to collaborate with other partners in health during the implementation process of health promotion both at the national and provincial level, streamlining media events to monitor and evaluate the outcome, facilitation of district review meetings on HP and HE, development of a handbook for members of MSG, development of a resource kit for MSG members, conducting

advocacy programmes for health and non-health sector on establishing HP settings, establishing an electronic version of the review formats used at national reviews on HP & HE were the other major activities planned to be conducted in 2019.

11.2.3. Nutrition Coordination Division (Nutrition Coordination Unit)

Nutrition Coordination Division is mandated to formulate a National Nutrition Policy and guidelines and to coordinate all nutrition-related activities within the institutions of the Ministry of Health - e.g. Family Health Bureau, Health Education Bureau, Medical Research Institute, Non-Communicable Disease Unit, Food Control Unit, Nutrition Division, Young, Elderly & Disabled Unit, other Provincial Authorities and other Ministries and Non-Governmental Organizations.

Achievements in 2018

1. District Nutrition Action Plan (DNAP)
Implementation of district-specific targeted interventions to overcome nutrition problems:
District-based nutrition action plans were developed by district programme managers. These activity plans were reviewed by panels of national managers in the presence of district representative professionals and accepted as the plan of the district to upgrade nutrition problems. These planned activities were funded island-wide. The total amount released for the districts was 22.5 Mn LKR and reported expenditure by 31st December 2018 is 17.15Mn LKR.
2. Nutrition aspects of Early Childhood Development Programme:
(Multi sectoral approach programme)
Improve nutrition knowledge among preschool teachers via Teacher Training Programmes, Preschool Nutrition Programmes (Teacher Training) was carried out in collaboration with the Child Secretariat. Twenty-eight programmes were conducted during 2018.
Total expenditure by 31st December, 2018 is 0.7Mn LKR.
3. Strengthening Nutrition Surveillance-National Nutrition Surveillance System:
This is a surveillance system to monitor food security using health and non-health parameters. Revision of surveillance indicators in consultation with health and non-health partners was done. Available information was entered into the system.
Total expenditure by 31st December, 2018 is 0.03Mn LKR.
4. Strengthening Nutrition Surveillance-District Nutrition Monitoring System:
This is a surveillance system to monitor individual nutrition status in children with nutrition problems and summary figures can be viewed at varying levels. This is done using a mobile app by PHMS. New training programme was conducted in Jaffna district to introduce the system to all PHMM and they were trained on data entry to DNMS. Revisited the district to assess the progress of the work. Total expenditure by 31st December, 2018 is 0.14Mn LKR.

5. Conducted pilot testing of new supplementary food for Moderate Acute Malnourished children (MAM):
Trials were being conducted and MAM product was developed. The new product has higher energy content than the Thripasha. However, more product developmental trials will be conducted to improve the product.
6. Improve storage facilities and purchasing equipment for Thripasha Programme:
Twenty two Thripasha storages were built; Kurunegala-2, Puttlam-2, Ampara-1, Trincomalee-5, Kalmunai-2, Kegalle-3, Galle-2, Hambanthota-4, Moneragala-1. Areas for buildings were selected based on the requests made by the district officials. Total expenditure by 31st December, 2018 is 20.35Mn LKR.
7. Thripasha warehouse training was conducted island-wide to improve Thripasha handling at the regional level. It was funded by WFP.
8. Conduction of Nutrition Steering Committee:
Nutrition Steering Committee is a higher-level decision-making platform for nutrition issues and committee is chaired by the Secretary, Health. Meetings were conducted at quarterly intervals and three meetings were conducted in 2018.
9. Conduct National Nutrition Month activities to aware general public on current nutrition problems:
National Nutrition Month event was conducted in the Colombo district to advocate policymakers and to raise awareness of the general public with the theme “Right Way to Reduce Abdominal Obesity”

IEC materials on the “Right Way to Reduce Abdominal Obesity” theme were disseminated to district level program managers for district-level implementation of targeted activities. These include booklet and leaflets on “Right Way to Reduce Abdominal Obesity” and these were disseminated to national and district level Nutrition Programme Managers. The total expenditure for the activity, 1.6Mn LKR, was funded by GOSL.

11.2.4. Directorate of Youth, Elderly and Disability (YED)

The Directorate of Youth, Elderly and Disabled Persons is the national focal point for working on the health of youth, elderly and persons with disabilities in Sri Lanka. The goal of this unit is to improve the quality of health among youth, elderly and disabled persons through the improvement of health facilities, disability prevention and health promotion by coordinating, planning, implementing, monitoring and evaluating of activities related to programme areas. Elderly population is rapidly increasing in the country and there are many significant health implications. Activities are in progress to face the health implications of ageing in a sustainable manner and an outcome measure of promotion of active ageing.

Table 11-7 : Trends in Total Population and Aging Population in Sri Lanka, 1946 - 2012

Census Year	Total Population	Population over 60 Years	Population over 60 Years (Percentage)	Annual Growth Rate	
				Total Population	Ageing Population (60+ Years)
1946	6,657,339	359,496	5.4		
1953	8,097,895	437,286	5.4	2.8	2.8
1963	10,582,064	634,923	6.0	2.6	3.7
1971	12,689,897	799,463	6.3	2.2	2.8
1981	14,846,750	979,885	6.6	1.7	2.2
2001	18,797,257	1,729,348	9.2	1.2	2.8
2012	20,359,439	2,524,570	12.4	0.7	3.5

Source: Thematic Report, Census of Population and Housing, 2012

Actions Taken in 2018

Availability of the National Elderly Health Policy which reflects the commitment of the government to ensuring comprehensive elderly health care services to all senior citizens of Sri Lanka. Activities were carried out considering the policy statements and the strategies. Elderly health care delivery plan was established based on the service needs and the unmet needs of the elderly population in the country.

National guideline for disability rehabilitation is in place. It provides the structure, process, content procedures and networking that comprise rehabilitation based on the right based approach. Activities on disability care, rehabilitation and disability prevention are progressing with a focus of service delivery, structure and role of interdisciplinary rehabilitation teams, rehabilitation in the community, access to the built environment, human resource development, capacity building and rehabilitation information management.

Improving knowledge attitudes and life skills among youth to reduce youth health problems and improve their wellbeing is the vision for the programme areas of youth. Successful achievements were obtained in conducting activities to minimize lifestyle risk factors among youth using the elderly as a resource group to youth.

Capacity building of the service providers and the community was achieved with marked improvement of results, following the practicing of low-cost modern interventions and networking with different disciplines of multi-stakeholders.

Actions to be Taken in 2019

- ◆ Address long term health care facilities for the elderly. Convert underutilized health care institutions to intermediate care and long term care facilities.
- ◆ Availability of trained caregivers for elderly specially for frailed elders at community level.
- ◆ Promotion of active healthy ageing programme at different settings including pre-retirement seminars.
- ◆ Improve inter and intrasectoral coordination with multi-stakeholders for all programme areas.
- ◆ Human resource development and infrastructure development to strengthen community-based rehabilitation services.
- ◆ Capacity building of identified target groups on all three-programme areas.
- ◆ Develop an information management system for all three areas, including promotion of research.

11.2.5. Public Health Veterinary Services (PHVS)

Rabies is a fatal viral zoonosis with great public health importance. Dogs are the principal reservoir of the virus and are responsible for most of the human cases. Canine-mediated human rabies kills approximately 60,000 people every year in the world. Consequently, controlling rabies in dogs is considered critical in the quest to eliminate rabies in both canine and human populations. Successful treatment of patients with clinical signs related to rabies infection has only rarely been reported and case

fatality approaches virtually 100%.

Strong evidences suggest the existence of rabies in Sri Lanka for centuries. Although official statistics are available only from 1970s, existing records reveals that the government concerned about the disease in the country over the decades, and identification of the publiuc health importance of the disease in Sri Lanka from early 1950s.

Activities Implemented by the Central Programme

PHVS office of the Ministry of Health carry out the development of policies and strategies, training public health and hospital staff on relevent curative and preventive measures, monitoring and evaluation of the control activities, conducting mass awareness campaigns, supply of drugs, vaccines and other major inputs and research.

Activities Implemented by the Provincial Level

Provincial health authorities conducted rabies awareness programmes.

Provision of Post Exposure Treatment is carried out by both line ministry and provincial hospitals.

Milestones in 2018

In keeping with multi-sectoral involvement for 'One Health Strategy', responsibility of the animal rabies control was handed over to the DAPH in the year 2018.

Modular Training Programme on Rabies Education

Harnessing support for community awareness on rabies prevention is crucial for rabies elimination. A training workshop was designed and conducted for curative and preventive health staff and facilitated to obtain international Rabies Educator Certificate from Global Alliance for Rabies Control.

Actions Taken in 2018

- ◆ It was possible to maintain human rabies free status in twelve districts, namely Ampara, Trincomalee, Kalmunai, Nuwara Eliya, Puttalam, Jaffna, Mannar, Kilinochchi, Vauniya, Kegalle, Colombo and Kalutara.
- ◆ Human rabies deaths in 2018 were contained to 25.
- ◆ Stray and 152,738 domestic dogs were vaccinated in the year 2018.
- ◆ In the year 2018, 260,000 human rabies vaccine vials were provided for human rabies prevention.
- ◆ Twenty three (23) Rabies Educator Certificate programmes for District Rabies Control PHII and curative nursing staff were conducted.

12. Medical Services

Medical Services are organized under two Deputy Director Generals.

12.1. Deputy Director General (Medical Services) I

Division of Deputy Director General (Medical Services) - I

The Division of Deputy Director General (Medical Services) – I caters to a wide range of services pertaining to Human Resource Management functions of Intern Medical Officers, Postgraduate Trainees, Specialist Medical Officers and Medical Administrators as well as supervision, coordination and monitoring of Medical Services especially Tertiary Care Services (TCS). Yearly, more than 1,450 Intern Medical Officers are appointed, and around 3,000 postgraduate trainees are following around 50 different specialties ranging from Diplomas, Masters Degrees and Doctoral Studies (MD). Nearly 1,850 Specialist Medical Officers are providing specialist care for the nation, and 280 Medical Administrators are distributed in health institutions at different levels of care: Base Hospitals, District General Hospitals, Provincial General Hospitals and Teaching Hospitals, as well as in Public Health Programmes, Specialized Medical Institutions and Ministry of Health. In addition, the National Transplant Programme (NTP) in the government sector and the Quality Assurance programme in the health sector falls under the direct purview of DDG (MS) I.

Development of tertiary-level medical facilities in major hospitals and other institutions including establishing essential infrastructure facilities, providing medical equipment with high technology and providing administrative support are the major functions of the division.

Priorities under DDG (MS)-I for 2018

1. Establishment of National Transplant Programme
2. Accreditation of healthcare institutions as well as quality and safety in the health sector
3. Capacity building of Medical Administrators (Scaling up medical administrative abilities and innovative management) and Specialist Medical Officers in related areas
4. Upgrading of services of all hospitals above the level of Base Hospitals Category B

There are four directorates under the purview of DDG (MS) - I

1. Tertiary Care Services (TCS)
2. Healthcare Quality and Safety (HQ&S)
3. Registered Medical Officers (RMO)
4. Nursing-Medical Services (Nursing-MS)

12.1.1. Tertiary Care Services

Functions of Tertiary Care Services

- ◆ Recruitment and deployment of Medical Administrators
- ◆ Recruitment and deployment of all Medical Specialists in the government health services
- ◆ Postgraduate training of the medical professionals, including overseas training
- ◆ Internship training of medical graduates from state and foreign universities
- ◆ Human resource management functions in relation to Relief House Officers, PGIM Trainee Medical Officers, Specialist Medical Officers, Medical Officers and Medical Administrators
- ◆ Coordination, supervision and monitoring of medical services in Teaching Hospitals and Specialized Institutions

Achievements of Tertiary Care Services

- ◆ Deputy Administrative Grade appointments were given to 146 officers
- ◆ Near completion of Medical Service Minute revision
- ◆ Near completion of transfer policy of Specialist Medical Officers and Medical Administrators
- ◆ Streamlining of annual transfers of Specialist Medical Officers
- ◆ Database for Medical Administrators and Specialist Medical Officers with the online application process
- ◆ Infrastructure and cadre improvement
 - Internal IT network of TCS unit
 - Online inquiry management system
 - File management and tracking system
 - Video conference and email communication system

12.1.2. Directorate of Healthcare Quality and Safety

Directorate of Healthcare Quality and Safety (DHQS) was commenced in the year 2012 with the principles of 'A centrally driven, locally lead, clinically oriented, patient-centered continuous quality improvement'. The National Policy on Healthcare Quality and Safety was published in the year 2015 with the following seven key result areas.

1. Customer/patient satisfaction
2. Managerial systems and process improvement
3. Clinical effectiveness
4. Risk management and safety
5. Enabling culture for quality improvement
6. Staff development and welfare
7. Research for quality improvement and patient safety

Main Activities Conducted under National Policy on Healthcare Quality and Safety

1. Conducting capacity building programmes for healthcare staff on 5S-CQI-TQM implementation in Sri Lanka, workshop on patient safety
2. Conducting performance review meetings of line ministry and provincial ministry institutions with expansion into semi-government hospitals
3. Preparatory activities for National Accreditation process with foreign assistance (Continuation from 2016)
4. Development of National Guidelines on quality and safety

Actions Taken in 2018

Activity 1

Two types of training programmes were conducted in 2018 with the participation of medical administrators, medical officers, nursing officers and paramedical staff. These training programmes covered up to base hospital level in all provinces.

1. Training of master trainers on 5S, CQI & TQM:
Three 5 day programs were conducted, and a total of 166 healthcare staff were trained.
2. Training on Patient Safety:
Four 3 day programs were conducted, and a total of 152 healthcare staff were trained.

Activity 2

Semi government hospitals such as Sri Jayawardenapura General Hospital and Wijaya Kumarathunga Memorial Hospital were incorporated to quarterly review process under line ministry institutions.

Quarterly review meetings of line ministry institutions and mid-term reviews of provincial ministry institutions had been conducted and developed a platform for experience sharing on best practices of healthcare quality & safety.

Out of line ministry institutes, 97% participated at quarterly review meetings in first two quarters. Out of provincial ministry institutes 66% participated in bi-annual review meetings. Compared to 2017, the percentages of participation are higher in both types of review meetings.

Activity 3

Activities related to accreditation

- ◆ Conducted the Surveyor Induction workshop for 30 local participants with foreign assistance (Australian Council for Health-Care Standards). Selected 12 local Surveyors.
- ◆ Conducted Gap Analysis in six hospitals in collaboration with ACHS.

Activity 4

As the focal point of developing national guidelines, DHQS had developed “National Guideline on MRI Safety” by conducting a series of consultative meetings with the participation of stakeholders in year 2018.

Under the guidance of DHQS, there had been significant improvement in the quality and safety of hospitals. Examples include,

- ◆ Development of Healthcare Waste Management System in BH Akkaraipattu
- ◆ Improvements in adverse event reporting system in DGH Monaragala.
- ◆ Introduced “U tube” to prevent hypothermia in neonates in TH Ratnapura

- ◆ Introduced a new process to early diagnosis of cancer patients and further management in BH Rikillagasada
- ◆ Patient safety initiatives in BH Horana, introduced a method to identify allergic patients in wards, introduced colour code to identify patients with chronic diseases, when they are sending for surgeries

Actions to be Taken in 2019

1. Development of 5-year strategic plan for quality & safety
2. Development of National guidelines on,
 - Management of Central Sterile Supplier Department
 - Infection Prevention and Control
3. Development of National Action Plan on Medication Safety
4. Strengthening of clinical audits in hospitals by conducting training programmes for healthcare staff
5. Conduct pilot on hospital “Open Day”
6. First ever global patient safety day celebration on 17th September 2019 in collaboration with World Health Organization (WHO)

12.1.3 Directorate of Registered Medical Officers

Directorate is responsible for managing the human resource functions of Registered Medical Officers and Assistant Medical Officers in Health Services.

12.1.4 Directorate of Nursing (Medical Services)

Directorate of Nursing (Medical Services) is responsible for improving the quality and productivity in nursing service care.

12.2. Deputy Director General (Medical Services) II

Human resource management of Grade Medical Officers and capacity development of medical services of the government hospitals constitute the main functions of this unit other than production, disciplinary actions and termination. Additional responsibilities include management of Prison Medical Services, organization of Hospital Directors Meeting, coordinating mobile health services, facilitating progress review meetings, Provincial Directors' meetings and implementing Parliamentary Select Committee decisions. Additionally, the unit assists in monitoring and coordination of private health sector.

The Areas of Development under the Deputy Director General Medical Services Branch

1. Measures taken to improve health care services
2. Measures taken to improve health care manpower and human resources
3. Infrastructure development in the health sector
4. Training centers - establishment of national and provincial simulation centers in all 9 provinces
5. Sports medicine - health screening of athletes

12.2.1. Measures Taken to Improve Health Care Services

The Medical Service Branch has achieved a remarkable progress during 2018, which includes the following areas and has improved in quantitatively and qualitatively with regard to health care services.

Accident & Emergency Care Service

Under the Accident & Emergency Care Project, policy objective is to provide a framework to establish comprehensive Accident & Emergency care system in at least 75% of health care institutions within 3 years from implementation of this policy.

It includes establishment of accident and emergency care units in 28 selected line ministry hospitals in the island and covering all the provinces in the country, which indirectly improves the standards of health care services in the country. The policy was developed in 2013 and approved in 2014 by the cabinet of ministers, but it was launched in 2016. The project progress was remarkable, as accordance with project monitoring done through Disbursement Link Indicators. The relevant standard was achieved by 46.4% (recommended 40%) for 2018. Following areas were developed in 2018.

Table 12-1 : Summary of DLI Achievements by End of 2018

Area of Development (DLI)	Definition	Indicator	Target
Availability of drugs	Availability of essential drugs 1.Lignocaine 2.Adrenelaine 3.Dopamine 4.Medozolam 5.Susxamethonium	Availability of essential drugs at established /upgraded A&E unit	Over 98%
Availability of equipment	Essential equipment needed for the basic functioning of A&E level 1.Multipara monitors 2.Nebulizers 3.Defibrilltors 4.ECG machines 5.Pulse oximeters 6.Equipment for intubation 7.Infusion pumps-syringe pumps	Availability of essential equipment	Over 98%
Capacity building	Training of all staff categories in A&E (Consultants/Medical Officers, Nurses/Supportive Staff)	% of Staff trained on A&E in each category	Over 85%
	Introduction of Triage system	Availability of standard Triage system conducted by a nurse under supervision by a Medical Officer	Over 98%
	Introduction of information technology for A&E units	Availability of E - Base registry Availability of prior informed referrals (transfers)	Development level
Quality improvement	Service quality improvement	Conduction of regular review meetings	98%

Source : Directorate of Medical Services

Providing of Equipment and System Improvement

The Ministry of Health has allocated 1300Mn rupees to upgrade A&E units in line ministry institutions in 2018.

Capacity Building under A & E project

Programmes were carried throughout the years 2017 and 2018, which includes local and foreign trainings, as follows.

Staff Empowerment - Capacity Building under A&E Project

Capacity building of the staff was a major pillar under the Medical Services Branch, which included local training and foreign training.

Local Training

1. Training of Post Intern Medical Officers - Outbound training programme collaboration with College of Medical Administrators of Sri Lanka. Conducted a two-day resident workshop for 100 Medical Officers at Kukuleganga Resort in 2018.
2. Post-intern workshop for 1,100 Medical Officers on Hospital Administrative Procedures at Temple Trees, Colombo.
3. Pre-intern training in collaboration with Professional Colleges of Sri Lanka on Accident & Emergency Care Services.

Table 12-2 : A & E Local Training for Pre-Intern Medical Officers

Year	Repeat Batch	Proper Batch
2014	355	1,100
2015	332	1,215
2016	320	1,194
2017	308	-
2018	1,146	308

Source : Directorate of Medical Services

Table 12-3 : Foreign Training of Staff Attached to Accident & Emergency Care Units, 2018

Training Program	Country	Numbers Trained
Tan Tock Seng Hospitals - Specialist Programme	Singapore	40
Tan Tock Seng Hospitals - A&E Care Services	Singapore	20
Health Care Management Improvement Training	Vietnam	12

Source: Directorate of Medical Services

12.2.2. Measures Taken to Improve Health Care Manpower and Human Resources

1. Appointing Medical Officers who have completed their internship, to all institutions in the provinces for opening of new units and reopening of closed institutions.

Table 12-4 : Post-Intern Appointments, 2014 - 2018

2014		2015		2016		2017		2018
Batch 1	Batch 2	Batch 1	Batch 2	Batch 1	Batch 2	Batch 1	Batch 2	Batch 1
1,267	1,150	324	1,030	308	1,198	308	1,146	270

Source: Directorate of Medical Services

2. Annual transfer orders have been implemented on 1st of January as per the Public Service Commission guidelines.

Table 12-5 : Annual Transfers Implementation, 2014 - 2018

2014	2015	2016	2017	2018
3,311	2,924	2,930	3,507	2,621

Source: Directorate of Medical Services

3. Attachment of Medical Officers to new stations following their completion of PGIM training.

Table 12-6 : Appointments Given to PGIM Training Completed Medical Officers, 2015 - 2018

2015	2016	2017	2018
133	179	430	231

Source : Directorate of Medical Services

12.2.3. Infrastructure Development in the Health Sector during 2018

Table 12-7 : Status of A & E Units Establishment in 2018

Hospital	Status
<ol style="list-style-type: none"> 1. TH Jaffna 2. DGH Kalutara 3. DGH Polonnaruwa 4. BH Kalmunai North 5. TH Batticaloa 	Completed in 2018
<ol style="list-style-type: none"> 6. TH Kandy 7. DGH Trincomalee 8. GH Gampola 9. BH Mulleriyawa East 10. GH Chillaw 11. BH Gampola 12. TH Kegalle 	Commenced in 2018

Source : Directorate of Medical Services

Table 12-8 : Upgrading of Accident & Emergency Care Units in Line Ministry Institutions, 2018

Target for 2014	Target for 2015	Target for 2016	Target for 2017	Target for 2018
(10% of centrally managed health facilities have established) 10%	20%	30%	40%	50%
1. DGH Nuwara Eliya 2. TH Karapitiya 3. TH Kurunagala	4. LRH 5. DGH Monaragala 6. PGH Rathnapura	7. SBSC Peradeniya 8. DGH Hambanthota 9. BH Akkaraipaththu	10. TH Batticaloa 11. CSTD Kalubowila 12. BH Kanthale 13. DGH Polonnaruwa	14. TH Jaffna 15. DGH Kalutara 16. CNTH Ragama 17. BH Kalmunai North
Achieved Percentage:				
10.7%	21.4%	32.1%	46.4%	60.7%

Source : Directorate of Medical Services

12.2.4. Establishment of National and Provincial Simulation Centers in All 9 Provinces

Simulation Centers were established at the following institutions in order to train the front-line staff who are handling accidents & emergencies in the province. These simulation centers are equipped and upgraded with relevant necessary infrastructure, training materials and manikins to train staff. All master trainers trained in foreign countries were

incorporated to these provincial Simulation Centers which are located in,

1. TH Jaffna
2. TH Karapitiya
3. TH Kurunagala
4. TH Kandy
5. TH Batticaloa
6. TH Anuradhapura
7. BH Mulleriyawa (National Simulation Center)
8. PGH Badulla

Table 12-9 : A & E Provincial based Simulation Training, 2018

Province	No. of Staff Trained
TH Anuradhapura	300
TH Batticaloa	120
DGH Rathnapura	200
TH Jaffna	95
TH Kurunegala	68
TH Karapitiya	120
BH Mulleriyawa	180
PGH Badulla	150

Source : Directorate of Medical Services

12.2.5. Sports Medicine

Health Screening of Athletes

Main focus was on school and professional athletes' health, diagnosis, treatment and injury prevention.

Established Sports Medical Units for every General Hospital and then staff was trained in these institutions in sports medicine covering all provinces since 2014. Around 1,920 Medical Officers were trained to assess and issue medical certificate fitness assessment certificates. These medical officers are spread throughout the country covering all the provinces. Particularly in 2018 around 1,000 Medical Officers were trained in all 9 provinces.

12.3. Primary Care Services

12.3.1. Prison Medical Services

1. Prison Medical Services is under the purview of Deputy Director General Medical Service II, and the Director, Medical Services is currently in acting capacity for the Director-Prison Medical Services. The Ministry of Health deals only with health care components and the administrative part is being handled by the Department of Prisons.
2. Monthly progress meetings are being conducted with the partnership of the Ministry of Health, Department of Prisons and Ministry of Social & Welfare.
3. Administrative support;
 - Appointment of Medical Officers to all Prison Hospitals in the country.
 - Allocation of Dispensers and Radiographers.
4. Supply of necessary medical supply, including drugs through MSD.

12.3.2. National Intensive Care Surveillance (NICS)

National Intensive Care Surveillance is a critical care registry networking 85 adult Intensive Care Units (ICUs), 10 paediatric ICUs and 17 neonatal ICUs in government hospitals of Sri Lanka. It is a collaboration led by the Ministry of Health and maintains a critical care registry and operates a 24/7 ICU bed availability services for adults, children and now neonates. The main objectives are:

1. To set-up a national critical care clinical registry in Sri Lanka
2. To design a critical care bed availability/information system
3. To provide feedback/reporting to the participating ICUs to improve quality of care

NICS system is involved in gathering, cleaning, analysing and disseminating information from ICUs regarding patients, staffing, beds and other available resources. In addition, NICS captures information to enable benchmarking of ICUs adjusting for severity of illness. NICS also makes it possible to assess 30-day post ICU outcomes and quality of life of critically ill patients.

The benefits from NICS include; having an ICU bed availability system (24/7), enables planning ICU services based on needs, capacity and resources; help coordinate ICU resource management during any national/regional emergency or disaster, improve quality of patient care, improve cost-effectiveness of critical care, capacity building of critical care personnel, promotes local and international audits/research.

The detailed characteristic of each ICU is described in Annexure II : Table 13, including details of paediatric ICU patients. Each ICU is given an ICU ID (used in Figures below) which is shown in column 1 of Annexure II : Table 13, within parenthesis.

Characteristics of Adult ICUs

The age distribution of patients admitted to adult ICUs in 2018 is illustrated in Figure 12.1.

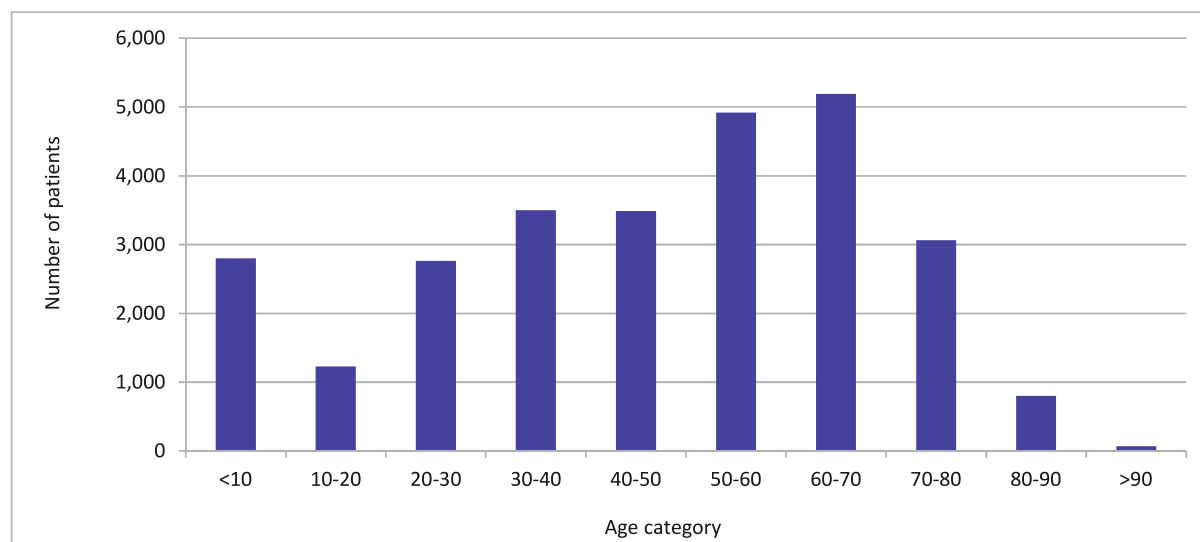


Figure 12.1 : Age Distribution of Patients Admitted to Adult ICUs, 2018

Source : National Intensive Care Surveillance

Table 12-11 describes the twelve commonest APACHE IV diagnoses of patients admitted to adult ICUs in 2018.

Table 12-10 : APACHE IV Diagnosis of Patients Admitted to Adult ICUs, 2018

APACHE IV Diagnosis (N=12,745)	Admissions (%)	Deaths (%)
Neurologic surgery, other	11.22	14.34
GI surgery, other	7.58	12.53
Neurologic medical, other	4.20	19.44
Cardiovascular medical, other	2.85	23.14
CABG alone, coronary artery bypass grafting	2.59	2.73
Overdose, other toxin, poison or drug	2.59	13.03
Pneumonia, other	2.50	35.42
Thyroidectomy	2.40	2.28
Sepsis, other	2.36	34.88
Respiratory- medical, other	2.33	25.59
Cesarean section	1.85	3.39
Trauma surgery, other	1.58	16.83

Source : National Intensive Care Surveillance

The distribution of mechanical ventilation at admission to adult ICUs in 2018 is described in Figure 12.2 while Figure 12.3 shows the

distribution of vasoactive medication use at ICU admissions by survival status.

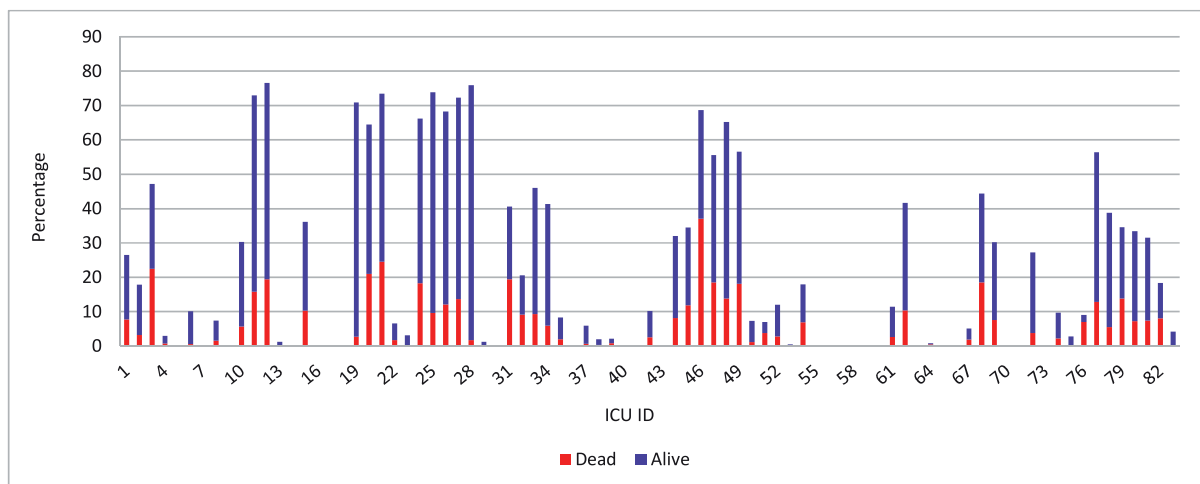


Figure 12.2 : On Admission Mechanical Ventilation in Adult ICUs by ICU Outcome, 2018
 Source : National Intensive Care Surveillance

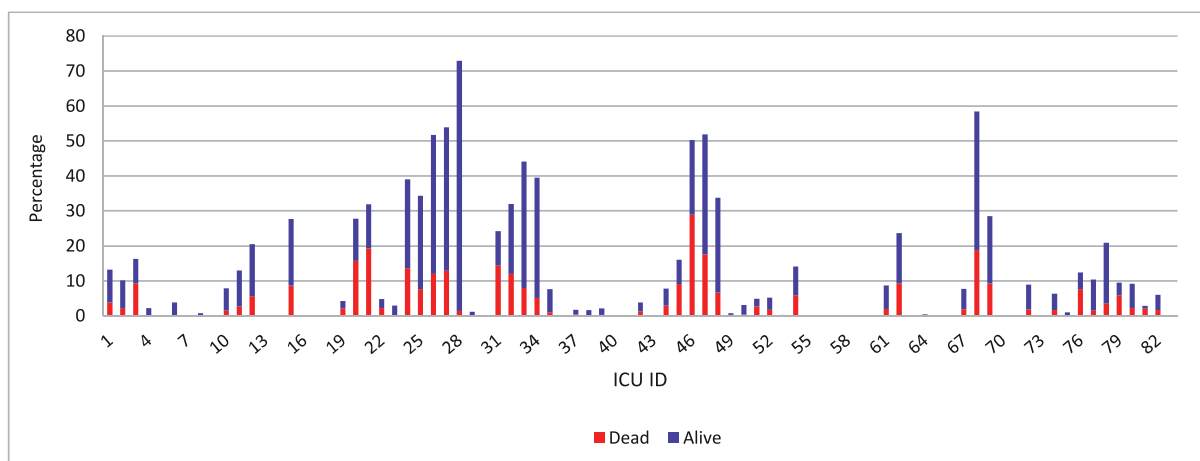


Figure 12.3 : On Admission Vasoactive Medication in Adult ICUs by ICU Outcome, 2018
 Source : National Intensive Care Surveillance

Table 12-11 : Budget Allocations for DDG - MS II

Project		2018	2019	Total
1	Accident & Emergency Care Project	1,969Mn	400Mn	2,369Mn
2	National Stroke Center BH Mulleriyawa	200Mn	200Mn	400Mn
3	Primary Health Care System Strengthening Project		44 Mn	44Mn
Total				2,813Mn

Source : Directorate of Medical Services

12.4. Medical Statistics Unit

Statistics Unit (MSU) has been established in the Ministry of Health around 1960s. The vision of the unit is to provide accurate, unbiased, reliable and timely statistics related to the health sector in Sri Lanka. Medical Statistics Unit collects, compiles and publishes the following statistical information.

1. Indoor Morbidity and Mortality Statistics
2. Maternal Statistics
3. Dental Statistics
4. Out Patient Statistics
5. Clinic Statistics
6. Bed Strength
7. Statistics on Specialists
8. Staff Statistics

MSU provides data for various user requirements, conducts training/awareness programmes to all the staff who are handling data in hospital record rooms and carries out hospital reviews to identify data lapses. In addition, MSU prepares the population estimates for all Medical Officer of Health (MOH) areas annually. The unit also maintains an annually updated list of health Institutions island-wide.

Since 1960, MSU has collected data using paper based formats. In 2010, the Electronic Indoor Morbidity and Mortality Reporting System (eIMMR) was developed and implemented. It is a web based system designed to facilitate collection, storage, analysis and dissemination of inward patients' statistics.

A redevelopment of the eIMMR system will be commenced in 2019 to upgrade the system. The database will be restructured to maintain a larger set of data than the current database. Indigenous medicine diagnoses codes and some analysis features are to be developed and included in the software.

An analytical module is developed and added to the eIMMR system. This provides some selected analysis on the unpublished raw data of the inward statistics for immediate data requirements of the health administration. It facilitates the hospital level and regional level data handling and it leads to evidence based decision making in the hospital and regional levels.

Two new projects have been commenced by the unit, to capture the Indigenous Medicine sector patient data to the eIMMR system and to capture medical procedure data from the operation theatres island wide. The main objective is to fulfill the high demand for the data from the health administration as well as the researchers and many other data users.

Annual Health Bulletin (AHB) is the main publication of the unit since 1980. It has been a good approach to disseminate hospital data. Many units, programmes and directorates have contributed the AHB and it provides a comprehensive image of the health sector of the country.

13. Education, Training and Research

13.1. Deputy Director General - Education, Training & Research (DDG – ET & R)

The ET&R unit is the focal point in policy formulation, provision of technical guidance related to training and coordination of basic training programmes for all staff categories except basic degree programmes for Medical Officers and Dental Surgeons. The unit is also responsible for capacity building of the health workforce through post basic and in-service training programmes. In addition, the unit develops policies and capacity in research related to health and provides financial allowances to the relevant officers for carrying out workplace based research.

The unit also coordinates with Ceylon Medical College Council, University Grants Commission and other relevant academic and professional institutions and organizations in Sri Lanka with the objective of strengthening the human resource capacity of the health sector. The unit is organized under three directorates.

1. Directorate of Education
2. Directorate of Training
3. Directorate of Research

Medical Research Institute (MRI) and National Institute of Health Sciences (NIHS) are under direct administrative and technical supervision of the DDG (ET&R).

13.1.1. Medical Research Institute

Established in the year 1900, Medical Research Institute is well-known among the medical community and the general public as the MRI, provides a range of quality services in the fields of medical research and laboratory services in the country. With the goal of achieving a healthy nation by providing evidence based new knowledge through innovative research and by providing quality laboratory services, MRI contributes to the field of medicine in a major degree.

With a total of twelve departments namely, bacteriology, immunology, virology, mycology, parasitology, histopathology, haematology, biochemistry, nutrition, pharmacology, natural products, and animal sciences, the institution contributes to the control of communicable as well as non-communicable disease in the country. When training is considered other than training of under graduate and postgraduate trainees in different disciplines of medicine, the school of Medical Laboratory Technologists and the school of Entomologists are situated at MRI and provides a valuable service for the improvement of medical services in the country. Being the regional reference laboratory for poliomyelitis the institution provides services internationally further to functioning as the national reference laboratory for Japanese Encephalitis, Measles, Rubella, Rotavirus, Influenza, Leptospirosis,

Toxoplasmosis, Food and Water Microbiology, Immunological investigations, special Parasitological investigations and Platelet aggregation studies. The services are provided as the national control laboratory for National

Authority for Vaccine and Biological and also pre-registration evaluation of pharmaceuticals and reagents are unique to MRI.

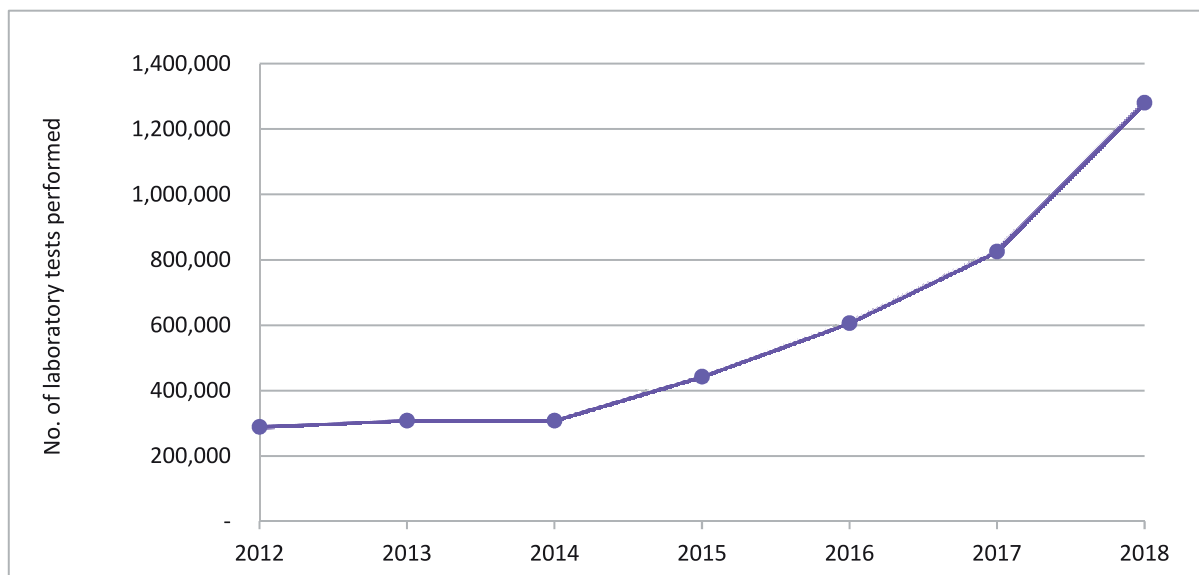


Figure 13.1 : Total Number of Laboratory Tests Performed, 2012 - 2018

Source: Medical Research Institute

Research Activities

The research committee of the Medical Research Institute provide funding for various research projects planned within the institution and by external researchers considering the relevance and the importance of such projects to improve the health status of the community. During the year 2018, a total of 20 such projects have been approved for funding after review while 28 new research projects has been submitted for approval during the year.

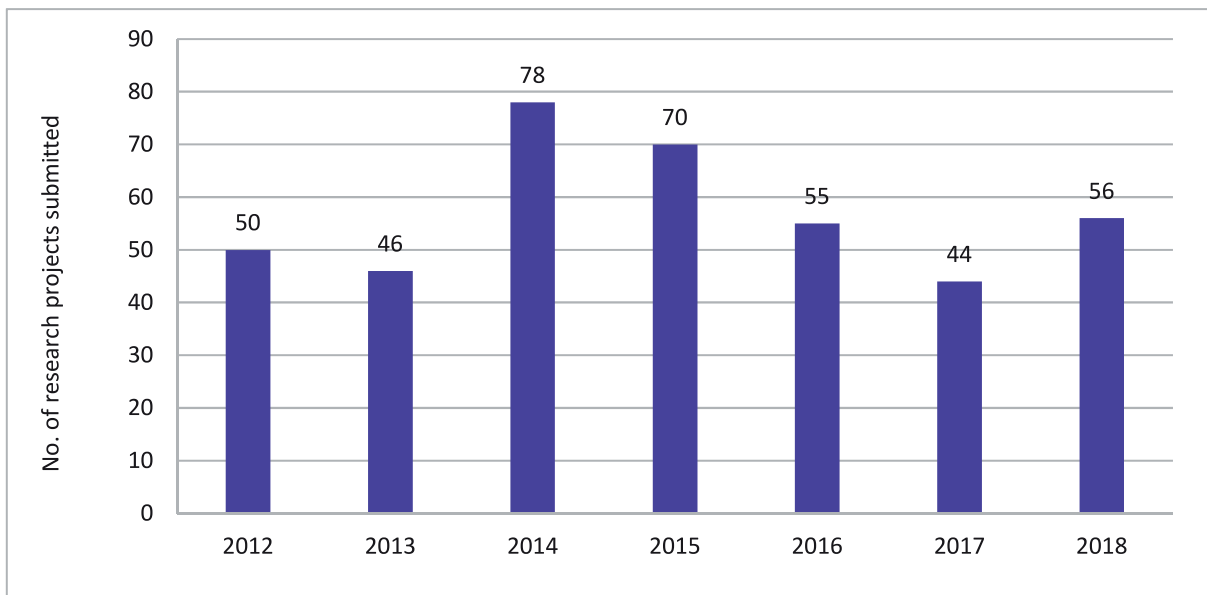


Figure 13.2 : Total Number of Research Projects Submitted, 2012 - 2018

Source: Medical Research Institute

Department of Rabies & Vaccine QC

- Elimination of dog transmitted human rabies by 2025 in Sri Lanka
- Establishment of lot release regulations

Elimination of the dog transmitted human rabies in Sri Lanka by 2025 is a national goal of which Department of Rabies of MRI plays major role in achieving it by providing technical support to the MoH. Rabies being a typical zoonotic disease, control and elimination efforts are under different sectors which need to collaborate under one health concept. Rabies reference laboratory of MRI perform both human and animal rabies surveillance.

Department of Rabies, MRI is the key center for providing technical guidance for the establishment of anti-rabies management units in hospitals of the country and provides expert opinion for the issues related to management protocol and perform onsite visits to the hospitals island wide to improve the management skills of the staff and annually

conduct workshops for doctors working in the hospitals of all over the country to improve knowledge on post exposure management of rabies.

Department of Rabies has taken up the initiative to give up sensitivity testing (ST) before administering equine rabies immunoglobulin (ERIG) this year, which has saved millions of rupees to the government. This decision has conveyed to all hospitals via an amendment to the existing protocol with the DGHS approval and technical support for implementing this change, which has extended by the MRI.

Department of Vaccine QC acts as the National Control Laboratory for the vaccine. The establishment of lot release regulation is an important task initiated this year, and the document is at the draft level.

Actions to be Taken in 2019

Moving from passive to active surveillance of rabies in animal samples and to strengthen the rabies testing facilities of the virology laboratory at TH-Anuradhapura would be the planned activities. Rabies post exposure management

protocol will be revised based on the recently issued (April 2018) revised WHO position paper on Rabies. Next step of lot release regulation is to get the cabinet approval for the final draft and then, implementation for all vaccines imported into Sri Lanka.

Table 13-1 : Total Rabies Tests Performed and the Positive Samples, 2018

Name of the Animal	Number of Samples Tested	Number of Positive Samples
Dog	661	379
Cat	489	74
Bat	1	0
Civert Cat	1	0
Cow	11	9
Grey Mongoose	12	3
Goat	4	3
Hamster	1	0
Human	31	25
Mongoose	2	1
Monkey	2	0
Mouse	1	0
Pole Cat	1	0
R/Mongoose	2	0
R/Squirrel	1	0
Rabbit	6	0
Rat	5	0
Sheep	1	1
Squirrel	58	1

Source: Medical Research Institute

Department of Nutrition

- Overweight and obesity among school children above 10 years of age has doubled within 10 years
- Nutritional problems such as stunting, thinness, overweight, obesity and anemia exists among primary school children, in spite of several interventions that have been implemented.

BMI Categories of School Adolescents Aged 10-18 Years, 2018

Nutritional status of school adolescents aged 10-18 years as identified by BMI categories are presented in Table 13-2. Using variations from the standard deviation on BMI as the criterion, the sample was classified as belonging to: severely thin, thin, normal, overweight and obese.

As shown in Table 13-2, a relatively high percentage of severely thin children as well as obese children were seen among the 10-year-old children. Even though the highest percentage of severely thin children is reported among the 12-year-old group, a decline can be observed from 12 to 16 years.

Considering the subgroups, the percentage of severely thin, overweight, obese and stunted children were higher among the pre-adolescent group than the post-adolescents. Severely thin, thin and obese males are higher than females.

Geographical variations showed that the highest percentage of obese children was reported from the Western province. Lowest prevalence of obesity was reported from the Northern province.

Table 13-2 : Nutritional Status of the Study Population by Selected Background Characteristics, 2018
(n=2570)

Background Characteristic	BMI Categories (%)					Height-for-Age (%)	
	< -3SD (Severe Thin)	<-2SD (Thin ¹)	-2SD to 1SD (Normal)	1SD to 2SD (Over- weight)	>2SD (Obese)	< -2SD (Stunting)	≥ -2SD (Not Stunted)
Age in years							
10	8.8	31.9	54.9	7.7	5.5	14.3	85.7
11	6.4	32.3	55.9	9.4	2.4	13.5	86.5
12	10.4	33.3	57	7	2.6	11.9	88.1
13	9.2	24.8	65.4	7.5	2.3	14.1	85.9
14	7.3	26.4	61.4	8.9	3.3	15.1	84.9
15	6.9	26.5	65.2	6.9	1.5	11.9	88.1
16	4.3	24.1	68.2	6.7	1	12.3	87.7
17	6.3	18.5	72.7	6.3	2.4	20.5	79.5
18	4.8	38.1	57.1	4.8	0	14.3	85.7
Age groups (years)							
10-14	8.2	29	59.8	8.3	2.9	13.8	86.2
15-18	5.8	24.5	67.8	6.7	1.4	13.5	86.5
Sex							
Male	9.8	34.2	56.1	7.1	2.6	11.6	88.4
Female	4.8	20.6	69.6	7.9	1.9	15.5	84.5
Province							
Western	6.7	24	59.7	11.7	4.6	12	88
Central	7.2	23.3	67.7	7.2	1.8	15.4	84.6
Southern	10.3	31.3	60.1	6.8	1.8	13.9	86.1
Northern	10.1	32.1	62.4	4.9	0.7	17.8	82.2
Eastern	6.1	28	63.1	6.5	2.4	17.7	82.3
North Western	4.8	24.3	65.1	7.7	2.9	11	89
North Central	6.5	28.6	59.4	10.1	1.8	5.8	94.2
Uva	5.7	23.7	67.6	5.7	3	14	86
Sabaragamuwa	6.7	27	64.3	7.7	1	15	85
Sri Lanka (95% CI)	7.1 (6.1-8.1)	26.9 (25.2-28.6)	63.3 (61.3-65.1)	7.5 (6.5-8.5)	2.2 (1.6-2.8)	13.7 (12.4-15.0)	86.3 (85.0-87.6)

¹ Includes the values of "Severe thin"

Source: Medical Research Institute

School Children Aged 6-12 Years

Prevalence of Thinness, Overweight and Obesity

Prevalence of thinness for the total sample was 30.2 percent and severe thinness was 9.7 percent. (Table 13-3) Among these children, 6.1 percent were identified as being overweight and

2.9 percent to be obese. Prevalence of obesity is highest in Western province (4.9 percent) and lowest in Uva province (1.7 percent).

Overweight prevalence varied from 10.9 percent in Western Province to 4.0 percent in Southern Province.

Table 13-3 : Distribution of Study Population by BMI Categories and by Background Characteristics, 2018

Background Characteristic	BMI Categories (%)					Number of Children Investigated
	(Severe Thinness) <-3SD	(Thin) -3SD to -2SD	(Normal) -2SD to 1SD	(Over-weight) 1SD to 2SD	(Obese) >2SD	
Age in years						
6	9.0	31.5	55.2	2.5	1.8	597
7	8.5	31.1	54.0	3.9	2.5	1,179
8	8.1	28.5	55.8	5.1	2.5	1,448
9	8.7	28.7	52.6	6.8	3.2	1,490
10	12.1	33.9	44.5	6.5	3.0	1,459
11	10.3	29.6	49.4	8.0	2.7	1,421
12	11.1	28.0	48.9	7.9	4.1	811
Sex of the child						
Female	7.7	25.9	57.3	6.7	2.4	4,254
Male	11.7	34.6	44.9	5.4	3.4	4,151
Province						
Western	6.5	21.4	56.3	10.9	4.9	893
Central	10.8	33.2	48.0	5.6	2.4	951
Southern	12.5	34.8	46.7	4.0	2.0	807
Northern	9.3	31.6	51.4	5.1	2.6	994
Eastern	8.8	30.0	53.4	4.7	3.1	1,049
North Western	12.0	31.7	48.6	5.1	2.6	1,020
North Central	8.3	26.0	53.3	8.7	3.7	912
Uva	8.7	28.9	55.4	5.3	1.7	863
Sabaragamuwa	10.4	34.0	47.6	5.5	2.5	916
Sri Lanka (95% CI)	9.7 (9.1-10.3)	30.2 (29.2-31.2)	51.1 (50.0-52.2)	6.1 (5.6-6.6)	2.9 (2.6-3.3)	8,405

Source: Medical Research Institute

Prevalence of Anaemia

All children who had haemoglobin levels <11.5 g/dl after adjusting for altitude was identified as being anaemic. Severe, moderate and mild anaemia were defined as haemoglobin level <8.0 g/dl, (8.0-10.9) g/dl and (11.0-11.5) g/dl respectively.

Table 13-4 : Prevalence of Anaemia by Background Characteristics, 2018

Background Characteristic	Anaemia (%)			Total Number of Children
	Mild	Moderate	All Forms	
Age category				
6 – 9 years	8.1	5.4	13.5	482
10 – 12 years	5.6	2.6	8.2	390
Sex of the child				
Female	8.6	4.5	13.1	421
Male	5.5	3.8	9.3	451
Province				
Western	5.1	3.0	8.1	99
Central	5.6	7.9	13.5	89
Southern	6.0	0.0	6.0	100
Northern	10.0	2.0	12.0	100
Eastern	1.0	5.0	6.0	100
North Western	8.2	2.1	10.3	97
North Central	6.2	8.2	14.4	97
Uva	6.4	6.4	12.8	94
Sabaragamuwa	18.8	3.1	21.9	96
Sri Lanka (95% CI)	7.0 (6.2-9.9)	4.1 (2.9-5.7)	11.1 (10.1-14.5)	872

Source: Medical Research Institute

Of the total sample, 11.1% were identified as being anaemic. Prevalence of moderate and mild anaemia were 4.1 and 7.0 percent, respectively. Table 13-4 shows the prevalence of anaemia by selected background characteristics.

As shown in table 13-4, prevalence of anaemia was higher among the 6-9 year age group (13.5 percent) compared to 10-12 year age group (8.2 percent). Prevalence was higher among the females.

Actions Taken in 2018

- National Nutrition and Micronutrient Survey among school adolescents aged 10-18 years in Sri Lanka was completed and data was disseminated.
- A survey on “Assessment of Nutritional Status, Dietary Practices and Pattern of Physical Activity among School Children Aged 6-12 years”, was completed and the report was published.
- Discussed at MCN subcommittee and nutrition steering committee to implement suitable interventions.

Actions to be Taken in 2019

- Final report of the “National Nutrition and Micronutrient Survey among School Adolescents Aged 10-18 Years in Sri Lanka” is to be published.
- Implement actions including interventions, programs and policies to reduce under nutrition, overweight and obesity.
- Nutrition steering committee to take up appropriate actions.
- Monitoring the nutritional status among the primary school children to be strengthened.
- Vitamin D control strategy to be implemented.

Department of Parasitology - Medical Research Institute

- There is a significant increase of Toxocara infections in 2018 compared to 2017.
- Number of patients positive for acute Filariasis has increased significantly in 2018 when compared with 2017.

Both above findings were based on the blood samples sent to the Department of Parasitology/MRI for testing, as depicted in Table 13-5.

Actions Taken in 2018

Regarding these diseases discussions were increased in the post graduate microbiology trainees, doctors and medical laboratory trainees via lectures.

Actions to be Taken in 2019

Regarding Toxocara infection, community should be educated about the mode of transmission of the diseases and preventive measures. Filariasis should be controlled by active surveillance of cases, proper treatment and through effective vector control measures.

Table 13-5 : Total Number of Tests Performed for Toxocara/Toxoplasma Infection, 2018

Test	Number of Tests Performed		Number of Positive Tests				Positive %	
	2017	2018	2017		2018		2017	2018
			IgG	IgM	IgG	IgM		
Toxoplasma	7,860	8,770	1,125	638	1,287	180	22.43	16.73
			IgG		IgG			
Toxocara	519	820	193		393		37.18	47.92
FFAT	1,036	1,020	211		465		20.37	45.59
AOC	252	207	08		01		3.17	0.48

Source: Medical Research Institute

Department of Immunology - Medical Research Institute

- Autoimmune encephalitis is an emerging problem.
- Increasing number of patients with primary immune deficiency were detected.

1. Research project initiated in 2018 indicated that NMDAR encephalitis is a main cause for auto immune encephalitis.
2. Research project using next generation sequencing approved and will be started as the next step.

Actions Taken in 2018

1. Initiated auto immune encephalitis screening as a research project.
2. Research project-Identified 83 genes to be tested and formulated testing panel.

Actions to be Taken in 2019

1. Routine testing for NMDAR encephalitis to be initiated for testing patients.

Department of Bacteriology - Medical Research Institute

Department of Bacteriology includes Enteric Reference Laboratory, Food and Water Microbiology Laboratory, Anaerobic Reference Laboratory and the Serology Laboratory.

- **Enteric Reference Laboratory (ERL)**

Enteric Reference Laboratory of MRI provides reference laboratory services to identify foodborne pathogens for clinical, animal, food and environmental samples. In addition, Enteric Reference Laboratory of MRI serves as the reference laboratory for AMR detection of foodborne pathogens. ERL is capable of processing samples and identification of salmonella, shigella, campylobacter, vibrio and clostridium perfringens. Also, processing of clinical samples related to foodborne outbreaks is also carried out. Services are extended both to government and private laboratories for the identification of foodborne pathogens. ERL, MRI participate in the External Quality Assurance Scheme conducted by DTU, Denmark, under the WHO Global Foodborne Network (GFN). National laboratory surveillance of salmonella from human clinical sample is to be commenced by ERL, MRI since July 2019 and expected to send all salmonella isolates from microbiology laboratories to Enteric Reference Laboratory, MRI with the view to generate national data.

- **Food Water Microbiology Laboratory**

Currently, Food and Water Microbiology Laboratory, MRI is the only laboratory in MRI accredited under the Sri Lanka Accreditation Board. (Accredited on ISO 17025:2005) Food and Water Microbiology, MRI serves as the main regulatory (under Food Act-1980), reference and research laboratory on food microbiology in Sri Lanka.

The main test method is a culture-based method and can process any food item for microbial isolates. Parameters include Aerobic Plate Count (APC), yeast and mold count,

indicator organism like E.coli, coliform enumeration and detection and pathogens e.g.; salmonella, staphylococcus aureus, bacillus cereus, E.coli O157, campylobacter, vibrio, listeria and clostridium spp detection.

Surveillance of the water system for legionella is essential to assess and monitor the water system management and to prevent legionella outbreaks. In addition, whenever a case of legionella is reported locally or internationally with a travel history to Sri Lanka, testing samples from the water system is done as a part of laboratory and epidemiological investigation. Water Microbiology Laboratory, MRI is the only laboratory that provides environmental sample collection and processing to detect legionella from water.

Food Microbiology Laboratory has shown satisfactory performance in proficiency testing programme conducted by Public Health England Food and Water Microbiology PT Scheme annually since year 2014. Quality management system in the laboratory is maintained as per ISO 17025; 2005 and accredited for testing of poultry, meat and pepper for five bacteriological parameters.

Accreditation laboratory is a major requirement show evidence of the report generated by the laboratory.

- **Anaerobic Reference Laboratory**

Anaerobic Reference Laboratory is the only anaerobic laboratory in the country capable of processing samples and identification of anaerobic bacteria and equipped with an anaerobic workstation. Capacity includes culture, antigen detection for helicobacter and antibody detection for helicobacter pylori.

- **Serology Laboratory**

Serology Laboratory of MRI provides Immuno Fluorescent Antibody (IFA) detection for rickettsial diagnosis and antibody detection for brucella.

Department of Bacteriology, involves many collaborative research with both local and international partners and has produced many publications.

13.1.2. National Institute of Health Sciences (NIHS)

The NIHS is the leading health sector training institute in the country which coordinates public health manpower development activities under the Ministry of Health. Apart from this primary objective, it also conducts health service research and provides guidance to Ministry of Health on its policy on health manpower development.

14. Management, Development and Planning

14.1. Deputy Director General (Planning)

Management, Development and Planning Unit of the Ministry of Health is headed by the Deputy Director General Planning (DDG Planning). Activities related to planning and development are mainly coordinated and formulated by the unit. Development of long term, medium and annual plans for the government health care delivery system is a core function of the unit. It is also responsible for planning, finance allocation, monitoring and evaluation of health projects conducted by line ministry hospitals and programmes. Moreover, it is responsible for the maintenance of health databases, organization development and performance monitoring and organizing international conferences. In addition, policy development activities and reforms are also undertaken by the unit.

The unit has the following directorates and units functioning under Deputy Director General Planning.

1. Directorate of Planning
2. Directorate of International Health
3. Directorate of Organizational Development
4. Directorate of Health Information
5. Directorate of Finance Planning

14.1.1. Directorate of Planning

Planning Unit

Directorate of Planning is the central coordinating body of the Ministry of Health, which executes planning functions. One of the main functions of the unit is the preparation of the Annual Action Plan of the ministry, compiling all action plans of the line ministry institutions. It describes annual activities and expenditure forecast of its institutions and it is published at the beginning of the year. Monitoring and evaluation of Annual Action Plan is also carried out under this directorate. Planning Unit was given the responsibility for the preparation of Annual Performance Report from mid of the year 2016 and accordingly the Annual Performance Report - 2017 was prepared and tabled in the Parliament.

Strengthening of Planning and Development Units in line ministry hospitals was continued in 2018 under the Second Health Sector Development Project. Six training workshops (2-day) were conducted to improve the capacity of health planning staff. The central Planning Unit and Planning Unit of District General Hospital - Matara was provided office equipment.

Routine activities of the Planning Unit, such as evaluation of new project proposals, submission of approved proposals to the Department of National Planning and obtaining necessary approvals, including Cabinet approval, were also carried out during the year.

Cadre/HR Development

Cadre revision of all line ministry institutions is in progress. Two reports on “Human Resource Profile” as at 31.12.2017 and 1st of January, 2018 - 30th of June, 2018 were published. Developing cadre projection for Medical Specialists was commenced.

Matara District Maternal and Newborn Healthcare Strengthening Project

Through the Matara District Maternal and Newborn Healthcare Strengthening Project, it is planned to upgrade the Korea-Sri Lanka Friendship Hospital (KSFH) in Godagama, Matara as a tertiary referral hospital specialized in maternal and newborn care. Re-modelling of existing building and construction of new 3-storey building were initiated. New generator was imported and installed.

New Development projects

Two Memorandums of Understanding (MoUs) for implementation of the following projects were signed between the Ministry of Health and relevant donors.

- i Construction and equipping a three-storied rehabilitation centre and implementation of a three-year training programme at TH-Jaffna (Sing health Project)
- ii Construction of ten-storied building for Cancer Treatment Unit at TH-Karapitiya (COC Project)

Provincial General Hospital - Ratnapura was upgraded as a Teaching Hospital, to facilitate for clinical training of the medical students of the newly established medical faculty at the Sabaragamuwa University of Sri Lanka.

14.1.2. Directorate of Organizational Development

Organization Development Unit

Organization Development Unit is one of the directorates functions under the Management, Development Planning Unit. It is responsible for the following activities which are linked to deliver the efficient and effective health service for the country.

1. Co-ordination and Performance Monitoring

The Organization Development Unit acts as a secretariat for coordinating national health development network: Health Development Committee meeting (HDC), National Health Development Committee (NHDC) meeting and National Health Council. Five HDC meetings were conducted this year.

National Health Development Committee meeting: In 2018, NHDC meetings were not conducted.

Development of National Health Performance Framework (NHPF): Several consultative workshops were conducted with consultants and program managers to develop high level performance indicators for monitoring health performance at the national level. After the series of workshops, the set of indicators for the health sector was finalized & document was published. It was launched at the World Health Day in year 2018.

2. Policy on Healthcare Delivery for Universal Health Coverage (UHC)

The Health Master Plan 2007-2016 identified the need for a policy on health care delivery for universal health coverage. Series of meetings were conducted with professional colleges, public health experts, provincial health stakeholders and policy was drafted. Policy was approved by the Cabinet and officially launched.

3. Primary Health Care Co-ordination

Preliminary discussions and other coordination activities were done by the Organization Development Unit to implement the Health Sector Enhancement Project (HSEP) funded by the Asian Development Bank (ADB) to strengthen the primary healthcare activities in four provinces: Sabaragamuwa, Central, North Central and Uva. Project Management Unit was established to monitor the project at central level. National steering committee meeting on primary health care strengthening was also coordinated and conducted.

Conference on primary healthcare strengthening towards effective universal health coverage was also conducted in collaboration with World Health Organization.

4. Essential Service Package

Several consultative meetings were conducted in collaboration with the WHO, with consultants, provincial and line ministry health staff to prepare the essential service package for the primary health care institutions.

5. Results Framework Development

Organization Development Unit coordinated several capacity building programs for the development of results frameworks for selected national programs; Mental Health, Nutrition Coordination Division, Cancer Control Unit, Environmental Health.

6. Organizational Structure

Series of discussions with higher ministry officials were conducted to revise the organogram of the Ministry of Health and draft document was prepared for approval.

7. Development of Job Descriptions

Job descriptions of health staff was revised for Senior Assistant Secretary Medical Services, Regional Director of Health Services.

8. Health Care Financing Strategy

Series of discussions were conducted with major stakeholders to develop and draft the health financing strategy document.

9. Migration Health

Consultations on Pre-Departure Health Assessment were done with the technical support of International Organization of Migration (IOM). Memorandum of Understanding was signed with IOM for establishment and implementation of Pre-Departure Health Assessment Program for residence visa applicants to Sri Lanka.

10. National Human Rights Action Plan

Activities of the components of Human Rights Action Plan were coordinated: Rights of Persons with Disabilities, Prevention of Torture, Migrant Health, Women's Rights, Economic Social and Cultural Rights, Rights of Internally Displaced Persons and Returnee Refugees.

14.1.3. Directorate of Health Information

Directorate of Health Information of the Ministry of Health is the national focal point for health information system management. The mission of this unit is to ensure availability and accessibility of valid, accurate and timely health information and continuous improvement of its quality to foster evidence-based decision making in health care provision.

15. Services for Prevention and Control of Non-Communicable Diseases

- The Directorate of Non-Communicable Diseases is the focal point for all prevention and control activities of chronic and acute NCDs in the country.
- The national policy and strategic framework for prevention and control of chronic non-communicable diseases (2009-2020) along with the national multi-sectoral action plan for prevention and control of non-communicable diseases (2016-2020) directs prevention and control activities to combat NCDs in the country.
- The national policy and strategic framework on injury prevention and management directs all the preventive and control activities related to combating acute NCDs (injuries).

15.1. Directorate of Non-Communicable Diseases

The Directorate of the Non-Communicable Disease is the focal point in the Ministry of Health for prevention and control of both chronic and acute NCDs in the country.

The National Policy and Strategic Framework for Prevention and Control of Chronic NCDs and Targets

The national programme for prevention and control of non-communicable diseases mainly focuses on prevention of four major NCDs; i.e. cardiovascular diseases (coronary heart diseases and cerebrovascular disease), cancer, chronic respiratory diseases and diabetes mellitus. Unhealthy diet, physical inactivity, smoking and consuming alcohol have been identified as the four main behavioural risk factors for NCDs.

In view of reducing the burden due to NCDs, nine global and one regional target has been introduced by WHO to be achieved by 2025 by implementing cost effective interventions.

The National Multi-sectoral Action Plan for the Prevention and Control of Non-Communicable Diseases (2016-2020) was developed based on the national NCD policy. This action plan has been formulated under four strategic areas namely;

1. advocacy, partnership and leadership
2. health promotion and risk reduction
3. strengthening health system for early detection and management of NCDs and their risk factors
4. surveillance, monitoring, evaluation and research

The Multisectoral Action Plan for NCD Prevention and Control has identified following targets to be achieved by 2025.

1. A 25% relative reduction in premature mortality from cardiovascular disease, cancer, diabetes or chronic respiratory diseases
2. A 10% relative reduction in the use of alcohol
3. A 10% relative reduction in prevalence of insufficient physical activity
4. A 30% relative reduction in mean population intake of salt/sodium
5. A 30% relative reduction in prevalence of current tobacco use in persons aged over 15 years
6. A 25% relative reduction in prevalence of raised blood pressure and/or contain the prevalence of raised blood pressure
7. Halt the rise in obesity and diabetes
8. A 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
9. An 80% availability of affordable basic technologies and essential medicines including generics, required to treat major non-communicable diseases in both public and private facilities

15.2. Directorate of Mental Health

Directorate of Mental Health is the national focal point of the Ministry of Health responsible for policy development, strategic planning, strengthening of mental health services through improved infrastructure, human resources and monitoring & evaluation of national mental health programme. In implementing this role, a close collaboration is established with professional bodies, provincial health authorities, other relevant ministries and departments, NGOs, civil societies and consumer groups.

15.3. National Cancer Control Programme (NCCP)

National Cancer Control Programme (NCCP) is the national focal point for prevention and control of cancers in the country. It is also responsible for policy, advocacy, planning, monitoring and evaluation of prevention and control of cancers including surveillance of cancers and facilitating research related to cancers.

NCCP coordinates activities related to prevention and control of cancers according to the 'National Policy and Strategic Framework on Cancer Prevention and Control-Sri Lanka' which was approved in year 2015.

16. Laboratory Services

The Deputy Director General and the Directorate of Laboratory Services are responsible for establishing, expanding and formulation of essential and relevant legislation and also for providing technical and managerial guidance for the maintenance of state owned hospital laboratories in compliance with nationally and internationally accepted standards. Furthermore, the unit is responsible for improving the scope of investigation facilities available in Sri Lanka, ensuring quality, reliability and safety of laboratory services.

Laboratory services (LS) mainly consist of:

1. Laboratories in curative care institutions
2. Laboratories in preventive care institutions
Ex.: Special campaigns laboratories (Anti-Malaria Campaign, Anti-Filariasis Campaign, etc.)
3. Public health laboratories (Ex.: Food laboratories)

The Medical Research Institute and the National Blood Transfusion Service also fall under the direct administrative supervision of the DDG (LS).

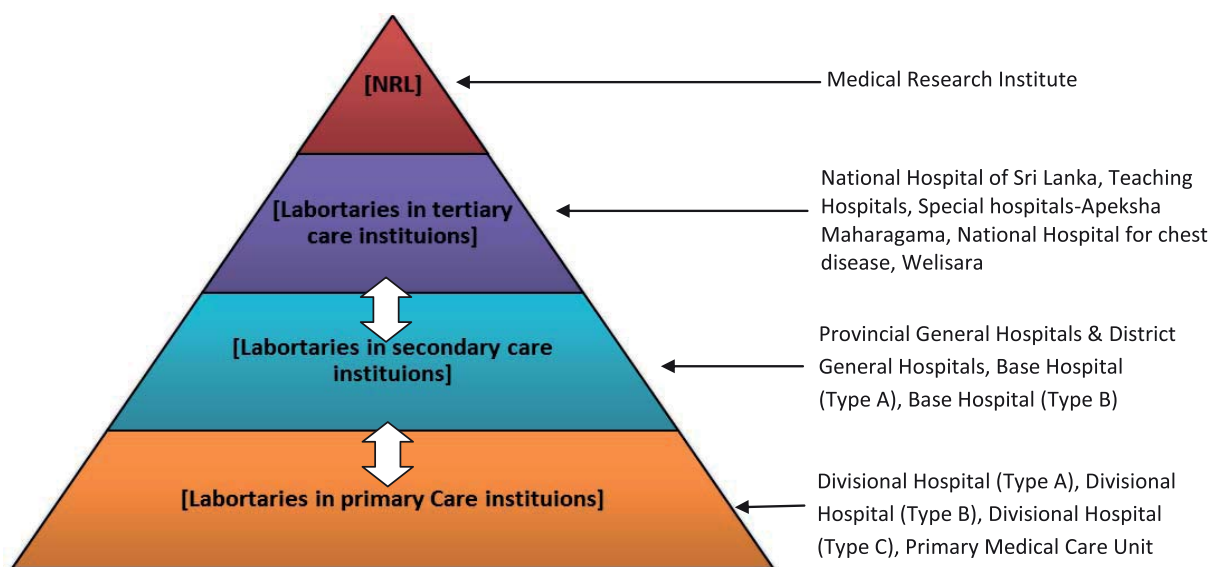
Key Functions of Laboratory Services

1. Policy development relevant to laboratory services
2. Expansion and strengthening of both line ministry and provincial institution laboratory services
3. Provide financial resources for purchasing of new equipment for laboratories
4. Provide financial support for proper maintenance of laboratory equipment
5. Support disease prevention, control, and surveillance
6. Training and education of laboratory staff
7. Quality assurance and laboratory accreditation
8. Partnerships, communication and coordination with stakeholders relevant to laboratory services

16.1. National Laboratory System

The national laboratory system consists of a tiered, country-wide hospital laboratory system which includes laboratories in primary care institutions at the grass root level, secondary care institutions, tertiary care institutions and in the Medical Research Institute (the national reference laboratory) at the apex.

All tertiary care institutions and 96% of secondary care institutions have functioning laboratories. Only 5.4% of primary care institutions have laboratories.



Recommendations

1. Strengthen and establish laboratories in all primary care institutions
2. Expansion of the cluster laboratory system with operationalized laboratory network

Table 16-1 : Laboratory Availability at National Level

Type of Institution	No. of Institutions	No. of Laboratories Available
Teaching Hospital	21	21
Provincial General Hospital	3	3
District General Hospital	19	18
Base Hospital (Type A)	27	27
Base Hospital (Type B)	52	49
Divisional Hospital (Type A)	63	44
Divisional Hospital (Type B)	138	57
Divisional Hospital (Type C)	289	15
Primary Medical Care Unit	506	0

Source: Laboratory Services Division

Laboratory Availability in Health Care Institutions in Sri Lanka under Line Ministry & Provincial Ministries

There are laboratories in 96% of health care institutions under the line ministry and 17% of health care institutions under the purview of the provincial ministry.

Almost all tertiary and most of the secondary care institutions are managed by the line ministry while 99% of primary care institutions are managed by the provincial ministry.

Out of 26 health districts in the country, line ministry health care institutions are situated in 21 districts. All the line ministry hospitals have functioning laboratories except in the Primary Medical Care Unit as shown in the following table.

Table 16-2 : Availability of Laboratories in Health Care Institutions Managed by the Line Ministry

Type of Hospital	No. of Institutions	No. of Laboratories
Teaching Hospital	21	21
Provincial General Hospital	3	3
District General Hospital	10	10
Base Hospital (Type A)	5	5
Base Hospital (Type B)	3	3
Divisional Hospital (Type A)	2	2
Divisional Hospital (Type B)	2	2
Divisional Hospital (Type C)	1	1
Primary Medical Care Unit	1	0

Table 16-3 : Laboratories in Institutions Managed by Provincial Councils

Type of Hospital	No. of Institutions	No. of Laboratories
District General Hospital	9	9
Base Hospital (Type A)	22	22
Base Hospital (Type B)	49	46
Divisional Hospital (Type A)	61	42
Divisional Hospital (Type B)	136	55
Divisional Hospital (Type C)	288	14
Primary Medical Care Unit	505	0

Actions Taken in 2018

1. Strengthening of laboratories in line ministry institutions: Purchasing of laboratory equipment for line ministry laboratories

The laboratory services provide allocation for purchasing of laboratory equipment required for histopathology, haematology, chemical pathology and microbiology services in hospital laboratories.

A total of 1,475 million rupees was allocated for purchasing of laboratory equipment for year 2018. The entire allocation was issued in 2018 (100%) with a physical progress of 597 million rupees. Allocation for line ministry laboratories has increased from 920 million in 2017 to 1,475 million in 2018. Though there is a decline in physical progress compared to 2017, due to lack of imprest, still this can be considered as a significant improvement compared to period 2012-2016.

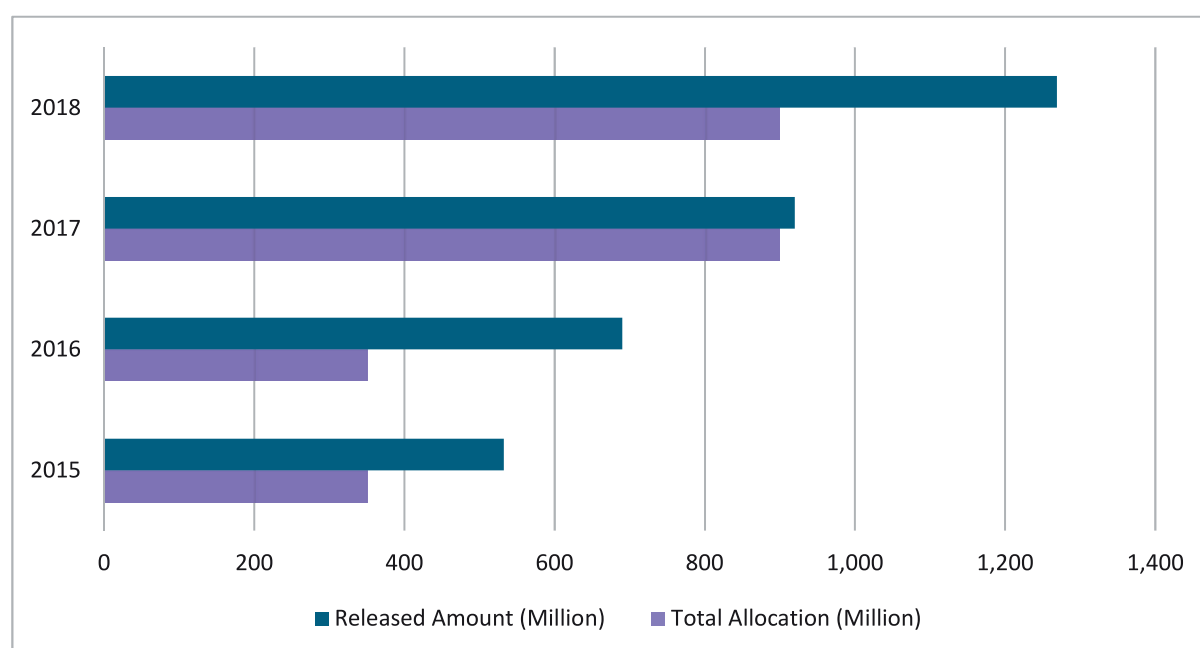


Figure 16.1 : Lab Financing for Purchasing of Laboratory Equipment for Line Ministry Laboratories, 2015 – 2018

Source: Laboratory Services Division

2. Strengthening of mobile laboratory services

Mobile laboratory services were established with the aim to improve accessibility and availability of necessary laboratory investigations to those living in far remote and difficult areas. The services were provided at health camps and mobile health clinics

organized by government and non-governmental, social organizations. In the year 2017, mobile laboratory services were offered to 155 centres all over the country and 42,531 tests were done through the service.

3. Strengthening of Virology laboratory services in the country

With the increasing trend of viral illnesses in the community, and the new advances in medicine, diagnostic virology services have entered the mainstream medical practice providing a rapid accurate diagnosis of infectious diseases.

Until 2016, the virology laboratory services in the government sector was only limited to the Medical Research Institute, Colombo and it was inadequate to meet the priority needs of the country. Furthermore, the services will be further required with the initiation of stem cell transplantation and expansion of solid organ transplant programme. In this context, steps have been taken to expand the availability of virology diagnostic services at several regional centers throughout the country.

The decision was taken to establish regional virology laboratories at Teaching Hospitals, Kandy, Karapitiya, Jaffna and Anuradhapura and also at Apeksha Hospital, Maharagama to accommodate the needs for stem cell transplantation service. The virology laboratory at Teaching Hospital, Kandy was further strengthened and services expanded as a regional laboratory in 2017.

Antimicrobial Resistance (AMR)

Antimicrobial resistance is spreading throughout the world, compromising our ability to treat infectious diseases, as well as undermining many other advances in health and medicine.

Numerous types of anthropogenic activity, including irrational antibiotic use limit the usefulness of these agents, jeopardizing the lives of millions of humans. It is estimated that by 2050, if not curtailed, the number of deaths attributable to AMR will mount up to 10 million by 2050 and the major brunt of the burden will fall on low or middle income countries.

Recognizing the dire threat imposed by antimicrobial resistance on the health of the human population, the 68th World Health Assembly in 2015 endorsed the Global Action Plan for combating antimicrobial resistance.

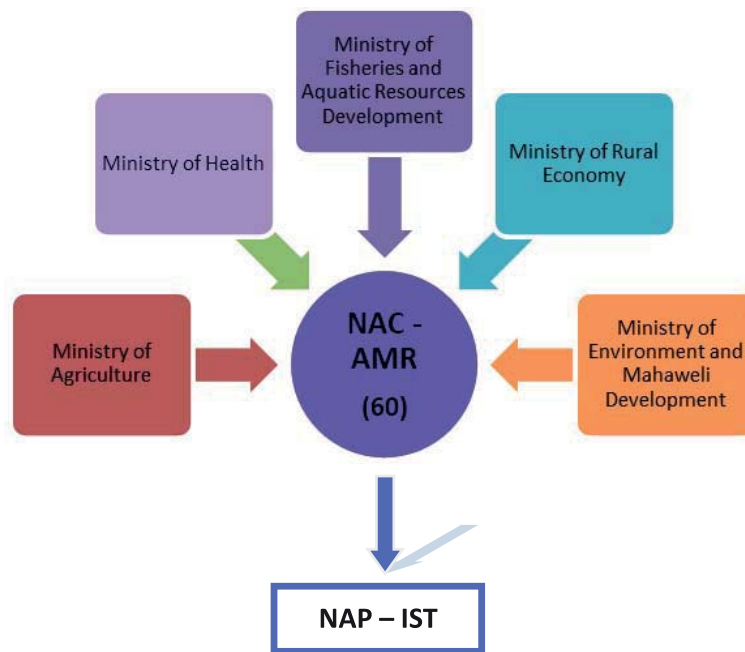
The resistant bacteria may arise in humans, animals or the environment and could spread from one sector to another. Also as antimicrobials used to treat infections in animals may also be used for humans. Therefore it has been identified that combating antimicrobial resistance requires a holistic, multi-sectoral approach.

The Global Action Plan promotes the adoption of national strategic plans customized for each member country, under 'One Health' approach.

National Focal Point for AMR containment in Sri Lanka: Deputy Director General Laboratory services

The National Advisory Committee for Combating Antimicrobial Resistance (NAC – AMR)

- Chaired by** : The Director General of Health Services
- Members** : 60 members
- 4 Sectors** : Human health, veterinary, fisheries, agriculture and environment
- 5 Ministries** : Ministry of Health, Ministry of Rural Economy, Ministry of Fisheries and Aquatic Resources Development, Ministry of Agriculture, Ministry of Environment and Mahaweli Development
- Main Function** : Serves as the apex body for decision making in combating AMR



National Action Plan Implementation Strengthening Team (NAP-IST)

Chaired by : The Deputy Director General (Laboratory Services)

Members : Comprises of 30 members of the advisory committee, identified to coordinate the implementation of activities pertinent to combating AMR.

Aligned with the Global Action Plan, drafting the National Strategic Plan to combat Antimicrobial Resistance (NSP-AMR) was completed in 2017. The NSP-AMR spreads under 5 main objectives:

- Improve awareness and understanding of antimicrobial resistance through effective communication
- Strengthen the knowledge and evidence base through surveillance and research
- Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures
- Optimize the use of antimicrobial medicines in human and animal health

- Prepare the economic case for sustainable investment and increase investment in medicines, diagnostic tools, vaccines and other interventions

The national strategic plan provides guidelines on actions required to implement on each of the five main objectives under 'One Health' approach. The implementation of the plan spans across five years, 2017-2022, with two year and five year milestones. The Deputy Director General is the focal point for implementation of activities of the NSP and the National Action Plan implementation and strengthening team is identified as the monitoring body.

During 2018, under this project, island wide awareness programmes, public awareness campaigns, establishment of the national surveillance system on antimicrobial resistance, island wide infection prevention and control programmes have been conducted.

Table 16-4 : Island-wide Awareness Programmes on AMR, 2018

Target Group	Province	No. of Participants
Medical Consultants, Medical Officers, Special Grade Nursing Officers, Nursing Officers	Central	250
	Eastern	260
	Northern	195
	North Central	125
	North Western	110
	Sabaragamuwa	130
	Southern	175
	Uva	155
	Western	600
Pharmacists/ Pharmacy owners, Community leaders	Central	105
	Eastern	100
	Northern	110
	North Central	50
	North Western	80
	Sabaragamuwa	100
	Southern	100
	Uva	75
	Western	690

Source: Laboratory Services Division

Antimicrobial Resistance Surveillance Programme

Surveillance data on antimicrobial resistance is an essential component in combating antimicrobial resistance. It is essential to the correct understanding of the scale of the issue and to make appropriate diagnostic and treatment guidelines on antibiotic treatment.

Surveillance on antimicrobial resistance has been conducted by the Sri Lanka College of Microbiologists since 2009. In 2018, the system was further upgraded and strengthened under the National Strategic Plan for Combating Antimicrobial Resistance. As a result, covering the entire country, 25 hospital laboratories that are served by Consultant Microbiologist, were identified as sentinel sites of the the surveillance system.

Staff of each of these data collection centres were provided with capacity building programmes on use of the data collection software and other logistic facilities.

The National Coordinating Centre for Antimicrobial Resistance was established at the Ministry of Health and data collection was initiated in April, 2018.

The data is analysed by the National Coordinating Centre and a panel of experts consisting of Health Administrators, Microbiologists, Epidemiologists and experts in Health Informatics who are identified for national data interpretation and decision making.

Sri Lanka also became a member of the Global Antimicrobial Resistance Surveillance System (GLASS) and submits data to the system.

Future recommendations:

- The surveillance system has already been introduced to the private sector. Data collection from the private sector will be implemented in future.
- Further capacity building on data analysis for sentinel site staff, so that diagnostic and treatment decisions can be updated on a regular basis at hospital level.

Biosafety and Biosecurity

Laboratories are unique environments that require special practices and containment facilities. A laboratory accident or intentional release of biological material/ agent could affect the laboratory workers, other hospital staff and patients in the facility. Also these may result in serious consequences for the public, livestock and the environment.

Biosafety and biosecurity are the essential elements in clinical and research laboratories that ensure safety of the laboratory staff, public, livestock and the environment from infectious and potentially infectious material, microbes and their toxins.

Biosafety is the practice of safe handling and containment of infectious microorganisms, their toxins and hazardous biological materials in the laboratory to protect laboratory worker, public and the environment from accidental exposures. This is achieved by application of containment principles and risk assessment.

Biosecurity is the discipline that addresses the protection of laboratory worker, the public and the environment from intentional release, loss and theft of infectious microorganisms, their toxins and hazardous biological materials in the laboratory.

In line with the 'One Health' concept, Sri Lanka has identified the importance of ensuring the maximum recommended biosafety and biosecurity measures in human, animal, agriculture and environment sectors.

In this regard the National Advisory Committee on Biosafety and Biosecurity was established in 2018 by the Ministry of Health.

National Focal Point for Biosafety and Biosecurity in Sri Lanka: Deputy Director General Laboratory services

The National Advisory committee for Biosafety and Biosecurity

- Chaired by : The Director General of Health Services
- 4 Sectors : Human health, veterinary, agriculture and environment
- 5 Ministries : Ministry of Health, Ministry of Rural Economy, Fisheries and Aquatic Resources Development, Ministry of Agriculture, Ministry of Environment and Mahaweli Development

Main functions:

- To develop a comprehensive national biosafety and biosecurity frame-work and policy for Sri Lanka
- To develop the national inventory of dangerous pathogens and toxins handled and stored in Sri Lanka
- To develop a proper licensing mechanism to both state and private sector laboratories
- To develop and implement national level biosafety training programme in Sri Lanka

Strengthening Laboratory Services in Primary Health Care Institutions

Sri Lanka has a well-established, tiered state-sector hospital system that has extensive island wide coverage. A total of 1,118 health institutions provide primary, secondary and tertiary care services in Sri Lanka. Out of this total number there are around 500 institutions functioning as primary medical care institutions (45%) and are located in distant areas to serve the rural and estate populations of the country. These institutions are not supported with laboratory facilities and the majority of them are maintained by the provincial health authorities. Hence, with assistance from the World Bank, the Ministry of Health is in the process of establishing the highest possible laboratory facilities at the primary health care level.

Key Strategies:

- Establishing minimum investigation facilities at Primary Medical Care Institution (PMCI) level
- Establishing sample collection centres (Laboratory Service Network)
- Provision of point of care equipment
- Utilization of mobile laboratories
- Developing level 2 laboratories (District Hospital Laboratories) for analysis of samples collected from PMCIs
- Strengthening laboratories in Apex hospitals
- Quality assurance

In order to achieve these goals, following activities are being conducted;

1. Developing guidelines required to facilitate strengthening of laboratory services in Primary Healthcare Strengthening Project and publishing them (printed and online)
2. Developing a training program to make awareness of the key concepts of improving laboratory services in primary healthcare as well as for the capacity building of the healthcare workers
3. Facilitating the process of making Point of Care Instruments to Primary Medical Care Institutes (PMCI) according to guidelines
4. Carrying out maintenance of laboratory equipment in the primary healthcare
5. Providing new laboratory equipment
6. Provision of office furniture and required office equipment for the laboratory services in primary health care

Gap Analysis of the Laboratory System

In collaboration with the World Bank, a gap analysis is conducted to identify and address the insufficiencies within the laboratory system. The overseas consultancy service - Integrated Quality Laboratory Service (France) is carrying out its operation to assess the overall laboratory system in Sri Lanka and to provide a strategic master plan to improve the existing laboratory system to the highest level possible.

16.2 National Blood Transfusion Service

National Blood Transfusion Service (NBTS), Sri Lanka is a specialized campaign of the Ministry of Health. It carries the national responsibility of the supply of blood and blood products to all

government hospitals and majority of private sector hospitals. There are 101 hospital based blood banks and 2 standalone blood centers affiliated to 19 cluster centers depending on the geographic distribution.

- National Blood Transfusion Service continues the 100% voluntary blood donor base.
- Annual blood collection reached 20 units per 1,000 population. This is an indicator for self sufficiency of blood.
- Number of HIV confirmed positives donors is rising. Pre-donor education programs need to be strengthened.
- National Blood Transfusion Service designated as a WHO collaborating center for transfusion services.
- HLA Molecular testing established and expanded in 2018. Rapid expansion of this facility has to be strengthened with proper management of resources.

Table 16-5 : Yearly Improvement of the Blood Collection, 2010 - 2018

Year	Blood Collection from Voluntary Donors	Blood Collection from Replacement Collection	Total Collection
2010	268,128	34,755	302,883
2011	318,885	11,315	330,200
2012	349,423	2,182	351,605
2013	380,808	0	380,808
2014	380,367	0	380,367
2015	395,500	0	395,500
2016	414,175	0	414,175
2017	423,668	0	423,668
2018	450,640	0	450,640

Source: National Blood Transfusion Service

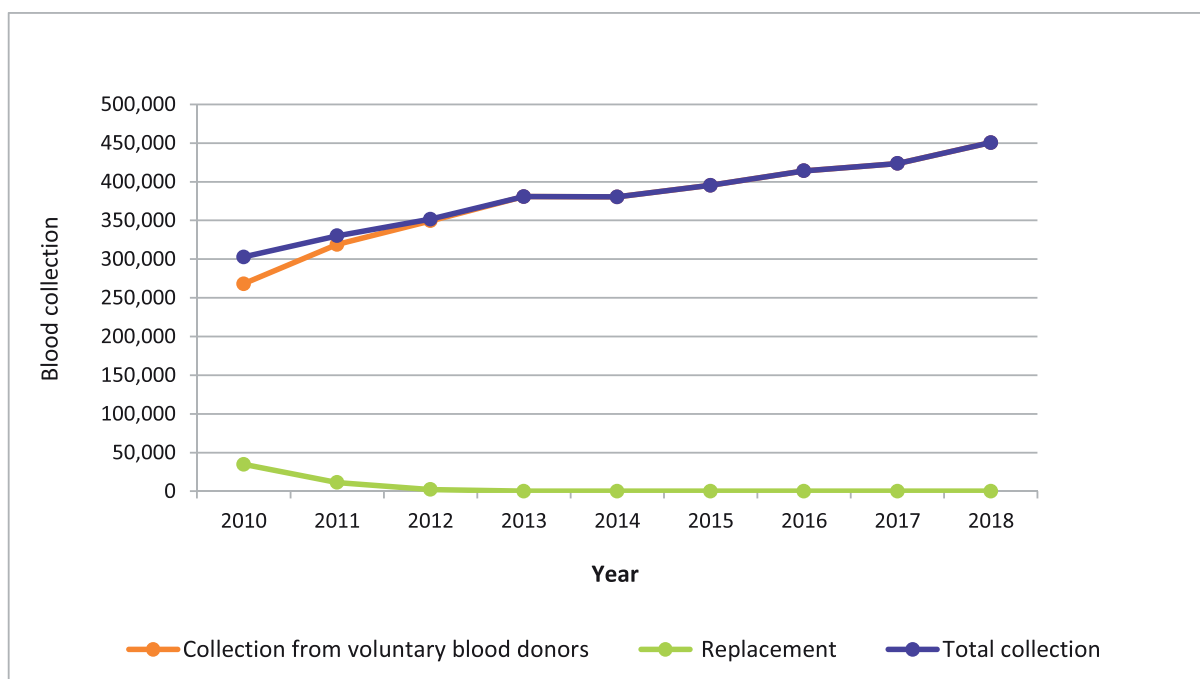


Figure 16.2 : Yearly Improvement of the Blood Collection, 2010 – 2018

Source: National Blood Transfusion Service

Blood collection per 1,000 population per year is an indicator of self sufficiency of blood supply for the country. According to WHO standards, voluntary blood collection of > 20 units per

1,000 population per annum is an indicator to reflect self sufficiency of blood supply in a country.

Table 16-6 : Annual Blood Collection per 1,000 Population, 2010 - 2018

Year	Blood Collection from Voluntary Donors	Blood Collection per 1,000 Population per Year
2010	268,128	13
2011	318,885	16
2012	349,423	17
2013	380,808	19
2014	380,367	19
2015	395,500	19
2016	414,175	20
2017	423,668	20
2018	450,640	22

Source: National Blood Transfusion Service

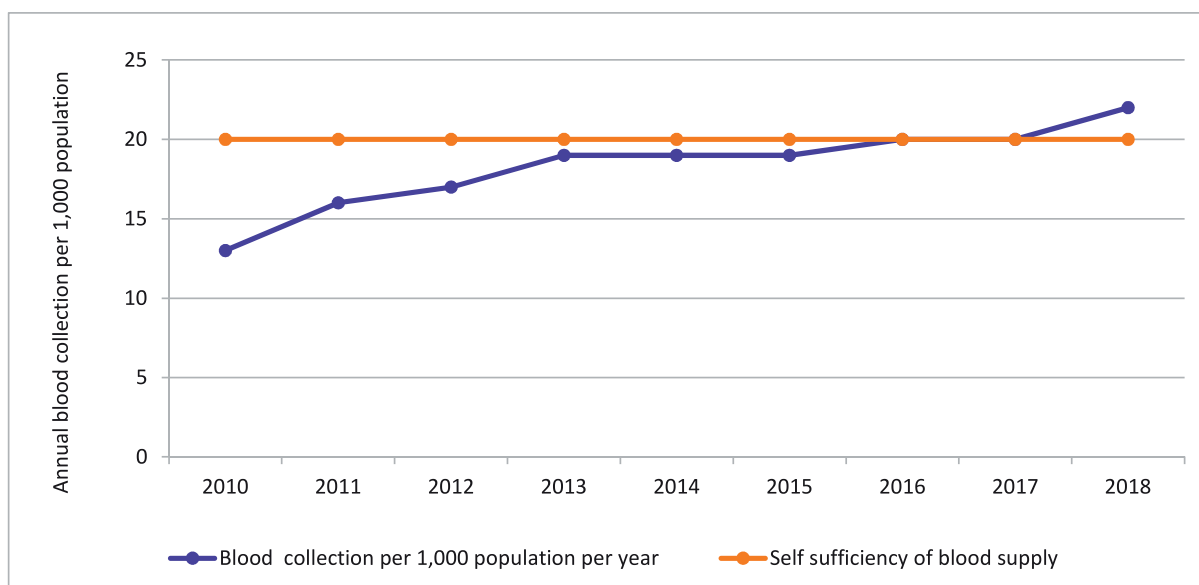


Figure 16.3 : Annual Blood Collection per 1,000 Population, 2010 - 2018

Source: National Blood Transfusion Service

Table 16-7 : Prevalence of Transfusion Transmissible Infections (TTI), 2013 - 2018

Year	2013	2014	2015	2016	2017	2018
Total collection	380,808	380,367	395,500	414,175	423,668	450,640
HIV (scr.+ve)	625	648	646	696	764	797
Prevalence	0.16%	0.17%	0.16%	0.17%	0.18%	0.18%
HIV (Conf. +ve)	16	26	21	25	28	29
Prevalence	0.004%	0.007%	0.005%	0.006%	0.006%	0.006%
Hepatitis B (rpt. +ve)	273	394	409	505	618	513
Prevalence	0.07%	0.10%	0.10%	0.12%	0.15%	0.11%
Hepatitis C (rpt. +ve)	953	657	800	847	905	898
Prevalence	0.25%	0.17%	0.2%	0.20%	0.21%	0.20%
VDRL +ve	1,016	1,265	1,125	1,027	1411	1577
Prevalence	0.27%	0.33%	0.28%	0.25%	0.33%	0.35%
TPPA +ve	180	152	175	152	152	107
Prevalence	0.05%	0.04%	0.04%	0.04%	0.04%	0.02%
MP +ve	0	0	0	0	0	0
Prevalence	0%	0%	0%	0%	0%	0%

(Scr.+ve) - Screening positive; (conf.+ve) – confirmed positive; (rpt.+ve) – repeat positive; MP- Malaria parasites; VDRL – Venereal Disease Research Laboratory ; TPPA- *Treponema pallidum* particle agglutination

Source: National Blood Transfusion Service

The highest number of HIV confirmed positives identified during screening was reported this year. This indicates the requirement of strengthening the pre-donation education programs.

National Blood Transfusion Service designated as a World Health Organization (WHO) collaborating center for transfusion medicine.

The World Health Organization (WHO) often engages in scientific and technical work in cooperation with other institutions which act as expertise centers for the designated specialties. WHO designates institutions as collaborating centers (WHO CCs), when they have been cooperating effectively with WHO for years, in assisting WHO to implement its mandated work. There are about 800 institutions designated as

WHO CCs worldwide. However, in the field of blood transfusion services, there are only about 13 centers. National Blood transfusion Service, Sri Lanka is the second collaborating center for SEARO in the field of blood transfusion service.

This designation recognizes the history of collaboration with WHO and provides a formal framework for future joint activities. Period of designation has commenced on 7th September, 2018 for four years duration.

HLA Molecular testing established and expanded in 2018. Rapid expansion of this facility has to be strengthened with proper management of resources.

Table 16-8 : Comparison of HLA Laboratory Statistics, 2014 - 2018

Typing and Cross Matches	2014	2015	2016	2017	2018
Class 1	2,293	2,288	2,015	1,253	2,415
Class 11	2,297	2,214	1,777	1,099	2,415
Cross match	1,365	1,471	2,490	1,954	828
B27	352	194	319	492	602
PRA (Class I , Class II)	179	295	484	475	2,456
Transplantation					
Kidney (Patients, Donor)	2,455	2,094	1,589	1,027	2,017
Bone Marrow (Patients, Donors)	192	108	167	163	264
AP Donor	11	32	171	7	0
Cadaveric Donor	7	15	11	34	30

Strengthening of the HLA testing with introduction of molecular testing was a major component of the “Project of upgrading the National Blood Transfusion Service with state of art technologies”. Along with this, the workload of HLA laboratory has been significantly

increased in comparative to the previous years. Strengthening this facility with human resource and training them for new technologies is a major challenge and task during the years to come.

17. Oral Health Services

17.1. Oral Health Services

Administration of the entire oral health care delivery system of the Ministry of Health, Sri Lanka was brought under the guidance of the Deputy Director General Dental Services (DDG/DS) from 2002.

Oral health services are provided to the public by both government and private sector. However, nearly 60% - 65% of services are provided by the government sector in both urban and rural settings. Moreover, some of the dental surgeons who work in the government sector are involved in part time private practice. Nearly 2% of the oral health services are provided through the universities, tri-forces, police and non-governmental organizations to their employees and families.

Oral health services in the public sector consist of two components.

1. Curative care services - provided through the clinics located in Divisional Hospitals, Base Hospitals, District General Hospitals and Teaching Hospitals.
2. Preventive care services - provided through School Dental Clinics (SDC), Adolescent Dental Clinics (ADC) and Community Dental Clinics (CDC).

Oral health care services for school children are mainly provided by School Dental Therapists (SDT) working in School Dental Clinics (SDC) and Dental Surgeons working in the Adolescent Dental Clinics (ADC) with a discernible preventive component.

School Dental Clinics (SDC) are in school premises providing oral health care to children between 3-13 years. During the year 2018, there were 488 SDC manned by 457 SDTs. Their target groups are grade 1, 4, 7 and they provide screening and comprehensive oral health care to the target school children. Sixty-two ADCs are in school premises which are manned by Dental Surgeons catering to the children above 13 years of age and special groups. Community Dental Clinics (CDC) are located in highly populated metropolitan areas and dental surgeons working in these clinics focusing on preventive care to specialized groups like pregnant mothers and children below 3 years of age.

In year of 2018, 77 new Dental Surgeons and 66 School Dental Therapists were recruited to deliver oral health care services for different population categories. In 2018 there were 1,598 Dental Surgeons working in public sector.

17.2. Specialized Services

The five main specialties in the oral health care services in Sri Lanka are Oral and Maxillo-Facial Surgery, Orthodontics, Community Dentistry/Dental Public Health, Restorative Dentistry and Oral Pathology. In 2018, there were 86 Dental Consultants belonging to these specialized fields under the Ministry of Health. Oral Maxillo-Facial surgeons were attached to the Teaching Hospitals, District General Hospitals and Base Hospitals. Restorative and Orthodontic consultants were attached to the Teaching Hospitals, Institute of Oral Health, Maharagama and District General Hospitals. Consultants in Community Dentistry were attached to the National Dental Hospital

(Teaching) Sri Lanka, Institute of Oral Health-Maharagama, Family Health Bureau, National Cancer Control Programme, Health Promotion Bureau and Office of Provincial Director of Health Services. Consultants in Oral Pathology were attached to the National Dental Hospital (Teaching) Sri Lanka and the Teaching Hospital Karapitiya. The National Dental Hospital (Teaching) Sri Lanka, Dental Hospital (Teaching), Peradeniya and the Institute of Oral Health, Maharagama are the premier institutions of providing multi-disciplinary tertiary oral health care services in Sri Lanka.

Table 17-1 : Distribution of Dental Consultants by Specialty at the end of 2018

Specialty	Number
Oral & Maxillo-Facial Surgery	33
Orthodontics	28
Community Dentistry	11
Restorative Dentistry	12
Oral Pathology	03
Total	87

Source: Dental Services Division

17.3. Mobile Dental Services

The Mobile Dental Unit at the National Dental Hospital (Teaching) Colombo and the Ministry of Health deploys to various destinations of the country on request. During the year 2018, the mobile dental unit has conducted more than 300 mobile dental clinics and has provided dental care to more than 25,000 individuals of different age groups. Moreover, several other districts are having their own mobile dental units to cater to the public in remote areas. Furthermore, the mobile dental unit which is attached to Ministry of Health is working under the theme of “Access to Health Care” by travelling to deprived areas where the access is limited and providing their services.

Special Community Oral Health Care Programmes

There are four main ongoing special community oral health programmes conducting successfully island wide.

1. Oral health care services to pregnant mothers
2. Early Childhood Caries Prevention Program/Fluoride Varnish Program
3. Oral Potentially Malignant Disorder (OPMD) and Oral Cancer Prevention and Early Detection Programme
4. School Oral Health Program

Oral health care programme for pregnant mothers is geared to provide comprehensive oral health care for them to improve the oral health by reducing the complications of dental decay during pregnancy and prevent worsening of the existing oral diseases. This will result in reducing the risk of transmission of caries causative bacteria to the newborn and thereby reducing the possibilities of adverse pregnancy outcomes.

Identifying oral diseases at early stages enables curing them with simple interventions. Primary health care providers are advised to examine the children's teeth at the age of 12 and 18 month and requested to refer them for dental advice and treatment, if they detect any abnormalities during the screening. The Ministry of Health decided to introduce fluoride varnish in to ADC, CDC and to the dental surgeons attached to MOH offices in Sri Lanka in order to prevent and control the developing of dental caries among young children.

The Ministry of Health with the collaboration of National Cancer Control Programme has commenced early detection and prevention of OPMD and oral cancer to strengthen the primary oral health care in Sri Lanka. Considering the risk factors for OPMD/oral cancer, three criterias have been developed to identify individuals having a higher risk for OPMD/oral cancer and these individuals are referred to a dental surgeon for a clinical oral examination.

Table 17-2 : Criteria to Identify Individuals at Higher Risk for OPMD/Oral Cancer

Criteria	Description
1	Those who chew betel quid three or more times per day
2	Those who chew betel quid less than three times per day and smoke and /or consume alcohol habitually
3	Those who habitually consume smokeless tobacco and arecanut products

According to the cancer incidence data-2010, lip, oral cavity and oropharyngeal cancers accounted for 14.3% of all reported cancers in Sri Lanka and it is the commonest cancer among males. Chewing betel quid with or without tobacco and chewing tobacco and arecanut mixed products are to be major risk factors for oral cancer according to the scientific evidence. A circular has been issued to ban betel quid chewing and selling of betel quid, tobacco and arecanut products in hospital premises and all other healthcare facilities in year 2018.

18. Medical Supplies Division

The Medical Supplies Division (MSD) of Ministry of Health is the central organization responsible for supplying all pharmaceuticals, surgical items, laboratory items, radioactive items and printed forms for the government sector healthcare institutions island-wide. In addition, MSD is the sole supplier of dangerous drugs (narcotics) to all hospitals in the country including the private sector. In this context, the main functions of MSD are estimating, indenting, procuring, storing, monitoring, distributing and accounting of medical supplies. The national requirements of medical items are procured mainly through the State Pharmaceutical Corporation (SPC) which is the procurement agency for MSD. In addition, MSD has its own purchasing unit for emergency local purchase of selected items and procurement of locally manufactured pharmaceutical in the private sector.

Medical supplies are stored until they are being distributed among government healthcare institutions in a network of stores comprising of a central medical store in Colombo (MSD) and 26 regional stores at the district level (RMSD). The central medical stores consist of 18 bulk warehouses at the main building, 3 bulk warehouses at Angoda, 5 bulk warehouses at Wellawaththa, one warehouse at Digana and one warehouse at Welisara.

These Medical items are distributed directly to the line ministry institutions by the MSD and to the institutions under the provincial administration through Regional Medical Supplies Division (RMSD) based on their annual estimates and on their requests. In addition, donations received from donor agencies such as WHO/UNICEF, etc. are cleared by the wharf branch of MSD and stored and distributed.

18.1 Major Achievements

System Development

- a) Tender has been awarded and suppliers selected in the project of “Expansion of MSMIS project to peripheral institutions” by connecting all the provincial institutions in to one network.
- b) Improved server capacity of MSMIS and hardware replacement.
- c) Conducting Drug and Therapeutic Committee (DTC) meetings via video conference facility was functioned properly.

Monitoring and Coordination

Quality Improvement (Product and Process)

- a) Initiation of Quality Assurance Unit with a focus of assuring quality, safety and efficiency of products and quality assurance of process of supply chain.
- b) Weekly supply position review meetings have been held regularly with the participation of the representatives of all stakeholders including NMRA, State Pharmaceutical Corporation and Ministry of Health, to minimize out of stock situation in the year 2016 and actively functioned during the year 2018.
- c) Disposing the quality failed medical supplies accumulated in 3 districts has been completed.

- d) Drug and Therapeutic Committees have been strengthened in 14 districts.
- e) Effective, direct communication and coordination system has been fully functioned with the appointed coordinators for every district and provinces, the out of stock control officers and assistant directors through a mobile communication network.

Capacity Building

- a) Capacity building programme (foreign) on “Advance Stores and Distribution Management” has been completed in AIT (Asian Institute of Technology) – Thailand.
- b) Sponsorship training programme on “Leadership Management” was completed in MIM (Malaysian Institute of Management) – Malaysia.
- c) In-service training for Public Management Assistants/Health Management Assistants and Development Officers has been conducted.

Infrastructure Development

- a) A/C installation work has been partially completed in main store at MSD.
- b) The construction of conference hall at central MSD is completed.
- c) Refurbishment of finance section at central MSD has been completed.
- d) Work is ongoing in the project of construction of Angoda surgical stores.
- e) Work has initiated in the project of “Construction of a prefabricated 40,000 sq feet store facility for MSD at the Welisara hospital premises”.
- f) Tender awarded and construction of office rooms for Assistant Directors and renovation of record room at MSD was initiated.
- g) Work is ongoing in the refurbishment of VIP room.

Table 18-1 : The Value of Medical Supplies Issued, 2012 - 2018

Medical Supplies Issued	2012 (Rs. Mn.)	2013 (Rs. Mn.)	2014 (Rs. Mn.)	2015 (Rs. Mn.)	2016 (Rs. Mn.)	2017 (Rs. Mn.)	2018 (Rs. Mn.)
Drug	13,619.00	14,499.00	16,123.00	15,796.00	26,477.50	24,693.00	29,211.80
Surgical	4,142.00	4,874.00	5,673.00	6,780.00	9,167.00	10,731.30	12,651.40
Lab	731.00	969.00	761.00	1,736.00	2,080.40	2,202.20	2,684.70
Total	18,492.00	20,342.00	22,557.00	24,312.00	37,724.90	35,424.00	44,547.90

Source: Medical Supplies Division

19. Biomedical Engineering, Logistics and Administrative Services

19.1. Biomedical Engineering Services

The Division of Biomedical Engineering Services (BES) of the Ministry of Health is entrusted with procuring, installing, commissioning and maintaining medical equipment in line ministry hospitals. This division also provides technical assistance to the Provincial Health Authorities based on their requirements.

The main functions and responsibilities of the Biomedical Engineering Services (BES) can be listed as follows.

1. Procurement of medical equipment
2. Repair and maintenance of medical equipment
3. Training of end users and technical staff
4. Provision of local/foreign technical expertise in medical equipment

The head office of the Biomedical Engineering Services Division which is in Colombo and has workshop facilities, warehouse facilities for equipment and spare parts storage facility and administrative functions.

At present following staff attends on management of medical equipment.

Biomedical Engineer	- 14 nos
Foreman	- 42 nos
Technician	- 43 nos

Biomedical Engineering Service also provides facilities for industrial training of Engineering undergraduates at Peradeniya University and Sir John Kothalawala Defence University.

BES was able to extend Regional Biomedical Engineering Units in Anuradhapura, Badulla, Kandy, Jaffna and Batticaloa with the new recruitment of Biomedical Engineers.

Biomedical Engineering Services has started development of web-based software for Medical Equipment Inventory Management System with the following objectives.

Objectives

1. Ensure availability of medical equipment for line ministry hospitals on time through procurement.
2. Ensure availability of spare parts and accessories through procurement.
3. Maintenance of medical, dental and laboratory equipment in line ministry institutions on a regular basis and attend breakdowns within 24 hours.
4. Training personnel, coordination of training of end users.
5. Providing technical guidance to the ministry and PHA S.
6. Assist the provincial authorities for procurement of equipment.

Table 19-1 : Achievements/Special Events in 2018

Index	Equipment Name	Quantity	Awarded Cost (Rs.)
1	Laparoscopy Machine	3	36,672,000.00
2	ICU Ventilator	10	29,655,000.00
3	BP Apparatus	873	11,707,500.00
4	Spot Lamp	73	10,840,500.00
5	Exercise ECG	6	14,981,250.00
6	Eye Microscope	8	85,197,000.00
7	ENT Microscope	4	39,616,000.00
8	Infant Incubator (Transport)	11	10,450,000.00
9	Laparoscopy Machine	3	36,672,000.00
10	Eye Laser	5	44,186,500.00
11	Patient Warmer	75	18,637,500.00
12	Operation Theatre Table	28	73,881,060.00
13	Operation Theatre Table (Orthopaedic)	9	67,150,800.00
14	Ventilator (Trans)	24	25,680,000.00
15	Ventilator (ICU)	45	63,369,270.00
16	Intra-Aortic Balloon Pump	3	37,719,420.00
17	Autoclave Tabletop	145	42,630,000.00
18	Central Monitoring System (Anuradhapura)	1	18,840,000.00
19	Central Monitoring System (Karapitiya)	1	18,392,000.00
20	Continuous Positive Airway Pressure (C-PAP)	33	27,060,000.00
21	Exercise ECG	6	13,961,040.00
22	Eye Operating Microscope	2	16,729,000.00
23	ENT Operating Microscope	2	20,400,000.00
24	Neuro Navigator	1	103,190,000.00
25	Operating Microscope (Neurosurgery)	1	32,915,400.00
26	Operating Microscope (Plastic Surgery)	1	42,492,125.00
27	Ultra-sound Scanner (Radiology)	8	31,019,520.00
28	Ventilator (Transport)	17	16,966,000.00
29	X-ray (Mobile)	20	49,220,000.00
30	X-ray (Fluoroscopy)	3	134,406,150.00
31	Ultra-sound Scanner (Portable)	15	21,921,210.00
32	Multi monitor	150	17,025,000.00
33	Echocardiography	4	38,595,000.00
34	Skull Base Navigator	1	27,714,250.00
35	Echocardiography	1	21,285,000.00
36	Neurosurgical Operating Microscope	1	93,579,137.00
37	Lithotripter	1	61,800,000.00
38	Heart Lung Machine	1	35,461,113.94
Total Amount			1,492,017,745.94

Source: Biomedical Engineering Services Division

Table 19-2 : Ongoing Development Project Details

Project Description	Quantity	Total Estimated Cost (Rs. Mn.)
Central Monitoring System	1	21.20
Computerized Tomography (CT) Scanner (128 Slice)	1	104.60
Ultra-sound Scanner	16	149.60
Mammography Machine	5	159.90
Magnetic Resonance Imaging (MRI) Scanner - NHSL	1	257.00
Multipara Monitor	49	18.40
Multipara Monitor	49	49.30
Multipara Monitor	173	18.40
Cath Lab NHSL	1	86.70
Static X - ray	20	132.90
Cath Lab - Anuradhapura	1	92.50
CT Scanners	3	139.90
Total		1,230.40
Central Monitoring System	1	44.00
Microhematocrit	100	39.60
Infusion Pump	100	32.40
Syringe Pump	100	23.30
X-ray (Digital)	3	31.60
Portable USS	25	68.00
Ultrasound Scanner	20	15.20
Adjustable Bed	300	44.00
Cath Lab - Kurunegala	1	80.10
Endoscopy	7	88.30
Cath Lab LRH	1	95.00
Anaesthetic Machine with Ventilator	137	219.30
Total		780.80
CT Scanner - TH Anuradhapura	1	110.00
Cath Lab (TH Kandy)	1	100.00
CT Simulator for Apeksha Hospital	1	100.00
CT Scanner (128 Slice) for NHSL	1	110.00
Heart Lung Machines for CTU/NHSL	2	72.00

Contd.

Project Description	Quantity	Total Estimated Cost (Rs. Mn.)
Diagnostic X - ray Unit	1	223.00
Digital Fluoroscope Unit	1	
X - ray Machine - Digital	14	
X - Ray - Mobile	11	
X - Ray (Chest)	2	
Holter Monitors	5	7.50
MRI Scanner 1.5 T (GH Badulla)	1	150.00
ENT Laser Machine	1	30.00
Operation Theatre Table	41	110.70
X - ray Machine - Digital	3	90.00
Ventilator ICU (Adult & Paed)	76	82.00
Digital Subtraction Angiography (DSA) Machine (TH Peradeniya)	1	100.00
Digital Fluoroscopy Machine	1	45.00
Digital Fluoroscopy Machine	2	300.00
DSA Machine	1	100.00
MRI Scanner (3T) - TH Jaffna	1	250.00
CT Scanner - TH Jaffna	1	100.00
CT Simulator for TH Batticaloa	1	100.00
Brachytherapy machine for TH Batticaloa	1	49.00
CT Scanner (128 Slice) (TH Kandy)	1	100.00
Total		2,329.20

Source: Biomedical Engineering Services Division

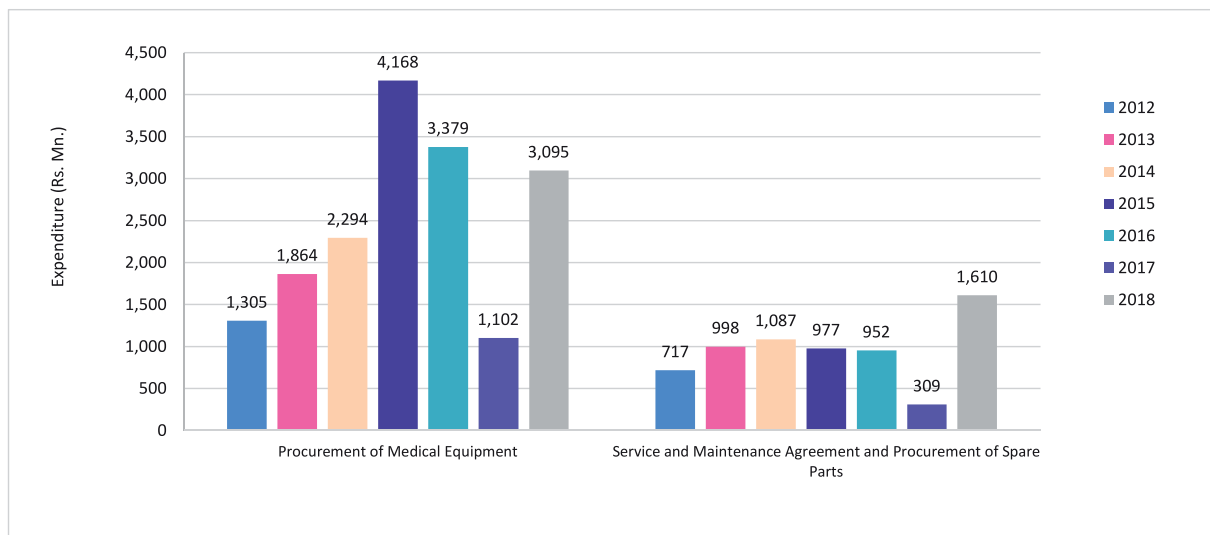


Figure 19.1 : Performance Trend, 2012 - 2018

Source: Biomedical Engineering Services Division

Table 19-3 : Special Development Activities Planned for 2018

Project Description	Quantity	Total Estimated Cost (Rs. Mn.)
Cardiopulmonary Bypass Machine for TH Jaffna	1	35.00
Endobronchial Ultra-sound Scanner	1	17.00
Endoscopy System for Central Endoscopy Unit (TH Kandy)	1	12.50
Colposcopy Systems	11	17.60
X-ray Machine for Sooriyawewa District Hospital	1	10.00
Prevention of Dengue		
1. Portable Ultra-sound Scanner	25	40.00
2. Multipara Monitor	100	12.00
Establishment of HDU's Dengue Epidemic		
1. Multipara Monitors	300	36.00
2. Ultra-sound Scanner	20	32.00
3. Adjustable Bed with Locker	300	90.00
4. Haematocrit Centrifuge	20	1.20
5. Emergency Trolley	10	3.00
6. Weighing Scale	10	2.50
8. Infusion Pumps	300	15.00
ENT Operating Microscope	1	10.20
Central Monitoring System for Deceased Donor Multi-organ Transplant Programme (TH Kandy)	1	35.00
Total Amount		369.00

Source: Biomedical Engineering Services Division

20. Financial Services

Financial services of the ministry are a responsibility of the Chief Accountant under whom two Deputy Director Generals serve.

Funding provided for the line ministry is used to meet the capital and recurrent expenditure of hospitals, vertical programmes and campaigns, training facilities and other health institutions under the purview of the line ministry.

Line ministry funding is also used to procure drugs and consumables used in the service delivery for all health institutions coming under the line ministry as well as the provincial health system.

Provincial administration funds are used to operate health facilities under the provincial administration. These institutions mainly provide primary and secondary level medical care for the community. Service delivery component of the preventive health services is also financed by the provincial system.

Government healthcare expenditure has grown rapidly than the GDP of the country. Government health expenditure was 1.04 percent of the GNP in 2012 as compared to 1.67 percent in 2018. Government is getting bigger as measured by the expenditures of local governments whilst the government continued to strengthen the provision of health services in 2018.

The Ministry of Health continues with providing western and ayurvedic healthcare services spending Rs. 234,899 million in 2018.

The total recurrent expenditure was Rs. 198,334 million assigned for the payment of operational and development activities. Meanwhile, Rs. 43,777 million was allocated to Medical Supply Division for uninterrupted supply of medicine.

The total capital expenditure in 2018 was Rs. 36,565 million, an increase of 8.6 percent from 2017. (Figure 19.1) Several physical infrastructure development projects continued in 2018 with the aim of increasing healthcare facilities at the district and the provincial level hospitals.

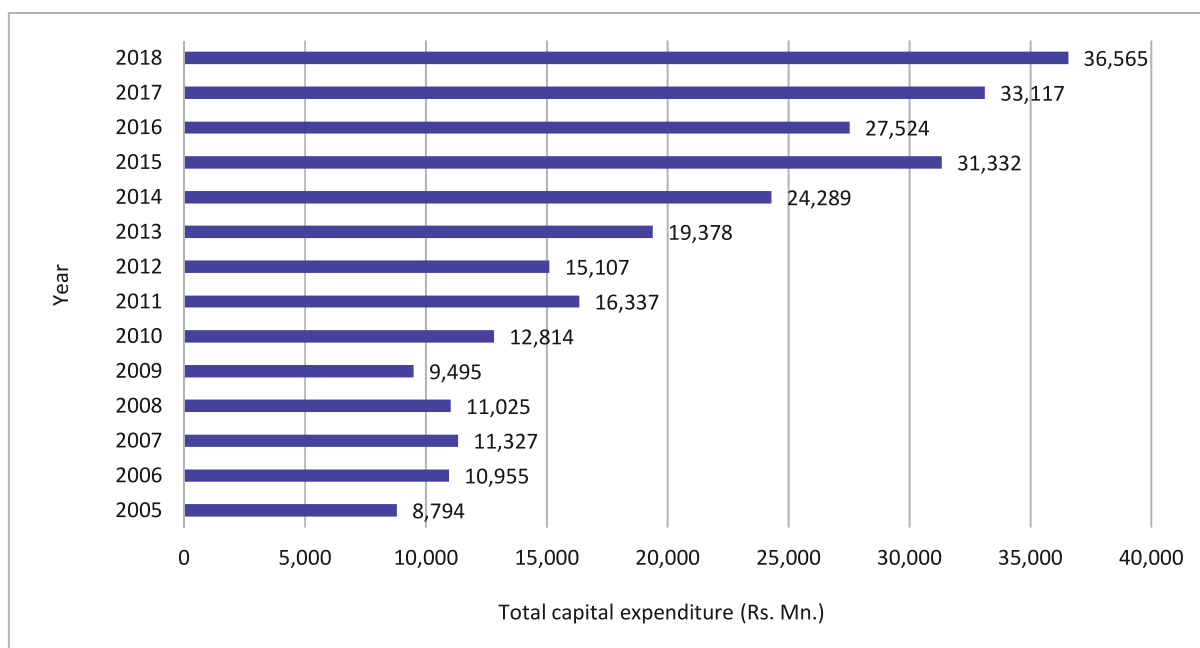


Figure 20.1 : Total Capital Expenditure through Central & Provincial Ministry of Health, 2005 - 2018

During the year, the Ministry of Health continued its initiatives aimed at preventing and controlling acute and chronic non-communicable diseases. The chronic kidney disease continued to be a major health issue in rural areas. Rs. 2,513 million was allocated for the control of communicable and non-communicable diseases in 2018.

Ministry took several measures to address the malnutrition and uplift the nutrition status under the National Nutrition Programme and health promotion and disease prevention through budgetary support by allocating Rs. 2,107 million and Rs. 1,675 million respectively.

Identified priority areas such as Medical Supply Division and Hospital Operation were supported by budgetary allocation of Rs. 43,806 million and Rs. 80,069 million, respectively in 2018. Meanwhile in the long run, it is crucial to

increase the human resources with recruiting medical, para - medical and other supportive staff to provide equitable and efficient service for the public. Accordingly, Rs. 12,058 million allocated for human resource development in 2018.

On the other hand, Ministry has taken many steps to promote ayurvedic medicine among the community. New products are ready to be introduced to the market in addition to ayurvedic medicines traditionally used as a result of consumer needs and patterns of consumption. In order to strengthen the ayurvedic medicine Rs.13 million has been invested in the field of indigenous medicine in 2018.

Expenditure on Medical Supplies

Medical supplies constitute an important component of the recurrent expenditure of a health system. Sri Lankan government incurs significant expenditure to supply medical supplies to the service providers of the public health system.

In the year 2017, a sum of Rs. 38,595 million was spent on medical supplies (Figure 19.2). Generally, the expenditure has shown a trend of

expansion over the last decade, except for the years of 2007 which showed a contraction of 5% and 2015 which had a contraction of 9% compared to the respective preceding year. The other years under consideration has shown an increase of spending with significant variation in magnitude of growth. Highest growth has been observed in the year 2013, a 62% increase from the previous year and the following year recorded another 28% increase in expenditure.

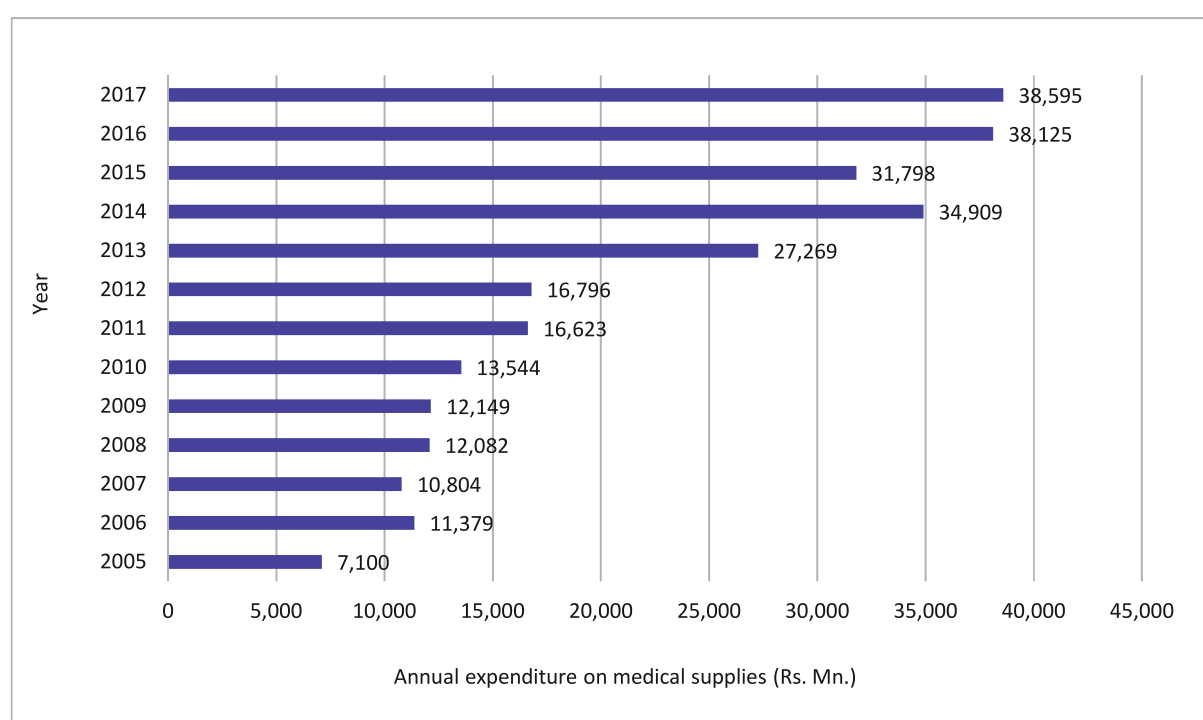


Figure 20.2: Annual Expenditure on Medical Supplies, 2005 - 2017

Government Expenditure on Health

Government of Sri Lanka continues to invest significant resources to maintain policy objectives of free health and free education. In the year 2017 from the government budget, 5.94% was devoted to health through the Ministry of Health and the provincial health ministries. Although the absolute figure has expanded over the years, percentage of

government expenditure on health through the Ministry of Health has not shown a significant increasing trend over the past decade. The lowest during the period was recorded in 2009, which was 3.8% while highest point was reached at 7.6% in 2006. (Figure 20.3)

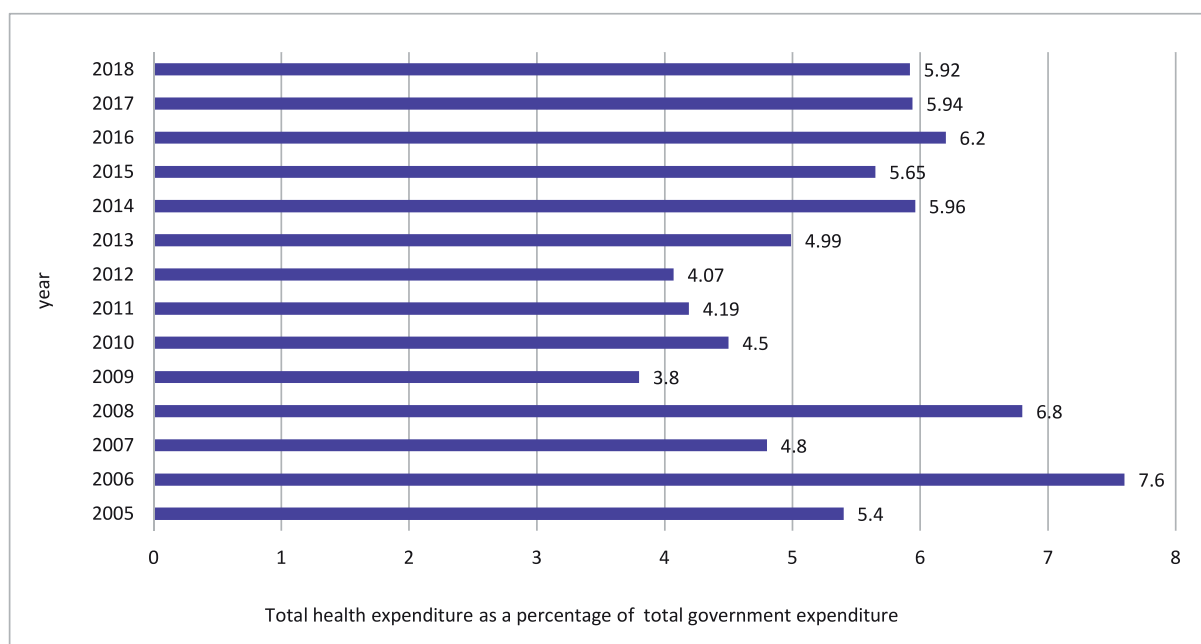


Figure 20.3: Total Health Expenditure through Ministry of Health and Provincial Ministries of Health as a Percentage of Total Government Expenditure, 2005 - 2018

21. Human Resources for Health

21.1 Human Resource Coordination Division

Establishment of the Human Resource Coordination Division

The Ministry of Health has identified several challenges related to Management of Human Resources for Health (HRH) including shortages, misdistribution, retention and adapting the HRH for rapidly changing demographic, epidemiological and technical contexts. In support of this, the cabinet has approved the establishment of the Human Resource Coordination Division (HRCoD) Directly under the purview of the Secretary of Health. Over the years, the unit has been strengthened with the allocation of staff and other resources.

Online Recruitment Process

The HRCoD revolutionised the traditional recruitment process by introducing online recruitment of nurses, professions supplementary to medicine (PSM) and para-medical human resources for the ministry. The system was developed and technically assisted by the Department of Computer Science and Engineering, Faculty of Engineering, University of Moratuwa. The online system has improved operational efficiency with possible cost savings. Moreover, the transparency of the recruitment process has been improved by introducing the above system giving more convenience to the applicants. The number of HRH trainees recruited by the online recruitment system in the year 2018 is listed in Table 21-1.

Table 21-1 : Number of HRH Trainees Recruited by the Online Recruitment System in 2018

Service	Name of HRH/Profession	Number Recruited for Training
Nursing	Nursing Officer	3,000
PSM	Medical Laboratory Technologist	78
	Pharmacist	250
	Occupational Therapist	55
	Radiographer	40
Paramedical	School Dental Therapist	54
	Health Entomology Officer	25
	Ophthalmic Technologist	20
	Prosthetist and Orthotist	10
	Public Health Inspector	360
	Electro Cardiographer (ECG Recordist)	60
	Electro Encephalographer (EEG Recordist)	20
Total		3,972

Source : Human Resource Coordination Division

National Health Workforce Accounts (NHWA)

The National Health Workforce Accounts (NHWA) is a system by which countries progressively update data on the health workforce through which a country can achieve Universal Health Coverage, Sustainable Development Goals and other health objectives. HRCoD has been updating high quality and up-to-date HRH data to the World Health Organizations NHWA data portal which is a resource for health decision-makers to make evidence-based decisions on policy and planning.

National Health Accounts (NHA)

The HRCoD has been collecting data, analysing and producing NHA for Sri Lanka. NHA for the years 2017 and 2018 is on the verge of completion. Availability of NHA will help the healthcare decision-makers to improve the planning process with improved efficiency and accountability.

21.2 Postgraduate Institute of Medicine

The Postgraduate Institute of Medicine (PGIM) was established by the PGIM ordinance No.01 in 1980 and was affiliated to the University of Colombo. This institute is providing training and research in range of specialties and subspecialties in Medicine/ Dentistry. The PGIM trains both medical and dental graduates for the award of the degrees of Doctor of Medicine, Master of Science, PG Diplomas and PG certificates. The PGIM works in close collaboration with the Ministry of Higher Education, Ministry of Health, Faculties of Medicine of Universities and Professional Colleges.

The PGIM contributes immensely during the past thirty years towards the development of specialist doctors needed by the country.

PGIM conducted 134 examinations including selection/Certificates/PG Diploma/MSc/MD examinations in addition to the in-course assessments.

Action was taken to prepare the prospectus for the following new training programme to implement during the year 2018.

- Board Certification in Anaesthesiology with Special Interest in Transplant Anaesthesiology and Critical Care

Curricula/Prospectuses of following existing programmes were revised during this year:

- MD and Board Certification in Medical Education
- Board Certification in Plastic and Reconstructive Surgery
- Board Certification in Neurosurgery
- Board Certification in Nephrology
- Board Certification in Urological Surgery
- MD Forensic Medicine
- Postgraduate Diploma in Elderly Medicine (now renamed as Postgraduate Diploma in Geriatric Medicine)

Following are still under review.

- MD Medical Administration (Approved by the AAAEC. Awaiting BOM approval)
- MD and Board Certification in Clinical Oncology
- MD and Board Certification in Medical Microbiology
- Board Certification in Clinical Genetics
- MSc Medical Administration
- Postgraduate Diploma in Anatomy
- Postgraduate Diploma in Physiology
- Postgraduate Diploma in General Dental Practice

- Postgraduate output during the year 2018
 - ◆ PG Certificates - 37
 - ◆ PG Diplomas - 257
 - ◆ MSc - 55
 - ◆ MD - 364
 - ◆ Board Certifications - 199

- New entrants for year 2018
 - ◆ PG Certificates - 13
 - ◆ PG Diplomas - 283
 - ◆ MSc - 130
 - ◆ MD - 581

- Workshops for Trainers/Examiners - 19

- Workshops for trainees - 19

- Research/Theses/Dissertations done by PG trainees in the year 2018 - 417

22. Private Health Sector

22.1 Directorate of Private Health Sector Development and Private Health Services Regulatory Council

Ministry of Health recognizes the value of safe, efficient and quality health service provision either through state or private health-care services, through monitoring and evaluation, regulating through guidelines and developing through capacity building and technical support.

Objectives

1. To complete the process of amending the Private Medical Institution (PMI) Act
2. To improve registration and regulation of private medical institutions
3. To streamline the mechanism to collect health information from private health sector
4. To strengthen the human resource capacity of the private health sector
5. To educate all authorized officers at provincial levels on PMI Act and executing the power vested to them
6. To create awareness among health professionals, general public and patients' rights groups on PMI Act, patients' rights and obligations of health professionals
7. To request private health sector to limit the prizes for laboratory tests and specific selected procedures
8. To upgrade the resources at Directorate of Private Health Sector Development (D/PHSD) and Secretariat of Private Health Services Regulatory Council (S/PHSRC) including human resources, infrastructure facilities, etc.

Major Achievements in 2017 and 2018

- Continuation of registration and renewal of private medical institutions' licensing.
- Handling of complaints against private medical institutions
- Inspection and observation visits to private medical institutions
- Coordinating with other Directorates of Ministry of Health, Sri Lanka Medical Council, Health Sector Trade Unions and Professional Organizations if and when necessary
- Granting preliminary approval to establish new private hospitals after evaluating the project proposals
- Processing of documents pertaining to kidney transplants by private hospitals
- Processing of documents pertaining to temporary registration of specialists
- Development of quality of services provided by the private medical institutions by advocating to adhere to National Guidelines and Standards in patient care and treatment
- Development of quality of services provided by the private medical institutions by advocating to adhere to National Guidelines and Standards in conducting preventive services
- Improvement of complaints handling procedure by timely investigation and enforcing remedial actions against private medical institutions
- Establishment and maintenance of proper information system in private medical institutions including data on human resource, communicable and non-communicable diseases

- Initiation of the conduct of refresher/gap filling courses for “Private Sector Nurses” who are currently employed at Private Hospitals/Medical Centers in collaboration with PHSD, PHSRC, NAITA and APHNNH
- Initiation of the conduct of refresher/gap filling courses for “Dental Surgery Assistants” who are currently employed at dental surgical practices/clinics in collaboration with PHSD, PHSRC, NAITA and SLDA
- Developed suitable charges/prices for various procedures and medical laboratory tests charged by private health sector
- Initiation of a survey in respect of private health sector with the help of PHI in the MOH areas and develop a data base on all existing private medical institutions
- Conducted a survey on all admissions to private hospitals with dengue fever
- Conducted a survey on all admissions to private hospitals during the past 3 years and details of all human resources
- Improvement of complaints handling procedure by timely investigation and enforcing remedial actions against private medical institutions
- Inspection and observation visits to private medical institutions by the staff of Directorate of Private Health Sector Development
- Establishment and maintenance of proper information system in private medical institutions including data on human resource, communicable and non-communicable diseases
- Conduct of advocacy workshops in coordination with Provincial Directorates of Health Services following observation visits to selected private medical institutions in the respective provinces
- Granting preliminary approval to establish new private hospitals after evaluating the project proposals
- Processing of documents pertaining to kidney transplants by private hospitals
- Processing of documents pertaining to temporary registration of specialists
- Providing technical expertise in human resource development training programmes conducted by provincial health authorities for private health institutions
- Initiation of a survey in respect of private health sector with the help of PHI in the MOH areas

List of Special Events/Innovations in 2017 and 2018

- Capacity building of General Practitioners to cater the demands of population including routine medical problems and emergency medical problems
- Completion of amending the existing 'Private Medical Institutions (Registration) Act'
- Improvement of registration and renewal of registration of private medical institutions by strengthening the capacity of provincial health authorities

- Introducing Anti-Microbial Resistance (AMR) guideline to all private sector hospitals
- Conduct of refresher/gap filling course for private sector nurses
- Initiation of refresher/gap filling course for private dental assistants
- Conduct of island wide survey on price charged by private health institutions for identified 51 medical and surgical procedures

Performance Trend in the Last 5 Years

Table 22-1 : Registration of Private Medical Institutions by Category, 2014 - 2018

Category	Number of Registrations				
	2014	2015	2016	2017	2018
Private Hospitals and Nursing Homes & Maternity Homes	101	107	103	106	117
Medical Laboratories	234	268	366	403	444
Medical Centers/Screening Centers/Day Care Medical Centers/Channel Consultations	133	120	147	185	181
Full Time General Practices/Dispensaries/Medical Clinics	79	93	113	117	170
Part Time General Practices/Dispensaries/Medical Clinics	119	126	189	197	354
Full Time Dental Surgeries	28	26	25	26	33
Part Time Dental Surgeries	12	8	7	11	20
Full Time Medical Specialist Practices	8	7	4	4	6
Part Time Medical Specialist Practices	5	3	9	4	7
Private Ambulance Services	8	10	12	10	10
Other Private Medical Institutions	30	32	34	40	45
Total Private Medical Institutions	757	800	1,009	1,103	1,387

Source: Directorate of Private Health Sector Development and Private Health Services Regulatory Council

Actions to be Taken in 2019

- Initiation of a survey in respect of private health sector with the help of PHI in the MOH areas
- Introducing Anti-Microbial Resistance (AMR) guideline to all private sector hospitals
- Conduct of island wide survey on price charged by private health institutions for identified 51 medical and surgical procedures

23. Indigenous Medicine Sector

23.1 Nutrition Programmes

Allocated Rs. 5,000,000 for nutrition programmes and during the year 2018, Rs. 4,997,794 released to the Divisional Secretariats. Received project proposals from 200 indigenous medicine promotion officers attached to Divisional Secretariats and funds

were allocated after a formal analysing process. In this process, the scope of the project, target population, budget estimation and social benefits expected were strongly considered.

Table 23-1 : Financial Progress of the Nutrition Programmes, 2018

Type of the Programme	No. of Programmes Held	Participation	Amount Spent (Rs.)
Nutrition Programmes in Divisional Secretariats	501	50 - 100 per programme	4,687,894
Ayurveda Community Health Promotion Services Nutrition Programmes	19		309,900
Total	520		4,997,794

Source: Statistics Division, Indigenous Medicine Sector

Poshana Mandira (Nutrition House) Programme

Seven million rupees was allocated by the national budget, 2018 to build up 'Poshana Mandira', and 05 were built-up during the year 2018. Accordingly, the total number of established 'Poshana Mandira' is 26, and they are located in following Divisional Secretariats.

1. Kolonna
2. Ganga Ihala Korale
3. Kalutara
4. Galewela
5. Hanguranketha
6. Nainathivu
7. Ganewatta
8. Panduwasnuwara East
9. Athuraliya
10. Pannala
11. Rasnayakapura
12. Kotawehera
13. Kobeigane
14. Thimbirigasyaya
15. Sevanagala
16. Ingiriya
17. Thihagoda
18. Malimbada
19. Negambo
20. Maharagama
21. Kuchchaweli
22. Ampara
23. Giribawa
24. Kuliyapitiya West
25. Wariyapola
26. Pujapitiya

23.2 Department of Ayurveda

Main Tasks

- ◆ Establishing hospitals and related institutions for research and teaching processes
- ◆ Conducting conferences, training programmes and educational courses
- ◆ Clinical medicine services and literature researches
- ◆ Cultivation, preservation and promoting the use of herbal plants
- ◆ Supervision and administration of all the Registered Ayurveda Practitioners
- ◆ Preparation of the rules and regulations relevant to the private Ayurveda hospitals, dispensaries, drug manufacturing institutions and Ayurveda educational institutions

Herbal Gardens

Started the concept of herbal gardens in 1964 and there were three main objectives.

- ◆ To cultivate the herbal plants to make available bulk of herbal plants in one location
- ◆ To conserve rare and endemic herbal plants
- ◆ To introduce the cultivation technology through the nurseries and research fields

There are seven main herbal gardens.

- ◆ National research herbal garden (Since 1964)
- ◆ National research medicinal plants garden - Haldummulla (Since 1984)
- ◆ National research medicinal plants garden - Pattipola (Since 1985)
- ◆ National research medicinal plants garden - Girandurukotte (Since 1988)
- ◆ National research medicinal plants garden - Pallekele (Since 1990)
- ◆ National research medicinal plants garden - Pinnaduwa (Since 2001)
- ◆ National research medicinal plants garden - Kaneliya (Since 2001)

Cultivation of herbal plants

Seeds were prepared and distributed from Haldummulla, Pattipola, Girandurukotte and Pinnaduwa herbal gardens. New cultivations are started in the fields of Padaviya, Alawwa - Galatharaya, Polpithigama - Rawa Ela, Polpithigama – Bogolla. The nurseries will be started to cultivate in the next year in the fields of Akmeemana and Kahatagasdigiliya .

Table 23-2 : No. of Patient Visits in Ayurveda Teaching Hospitals, 2018

Service	Borella	Yakkala	Kaithadi	Manchanthoduwai	Trincomalee
OPD	219,961	47,462	36,564	18,013	16,449
Clinic	264,781	37,713	15,800		6,726
Inward	2,352	899	1,235	221	51
Panchakarma clinic		4,111	149		
Total	487,094	90,185	53,748	18,234	23,226

Source: Statistics Division, Indigenous Medicine Sector

Table 23-3 : No. of Patient Visits in Ayurveda Research Hospitals, 2018

Service	Navinna	Hambantota	Ampara	Medawachchiya	Ninthavur
OPD	53,359	29,748	34,224	8,990	14,188
Clinic	34,803		1,681	409	1,176
Inward	541	538	341	126	885
Panchakarma clinic	2,530				
Total	91,233	30,286	36,246	9,525	16,249

Source: Statistics Division, Indigenous Medicine Sector

Table 23-4 : Progress of National Institute of Traditional Medicine of Sri Lanka during 2018

Programme	No. of Programmes	No. of Participants	Estimated Cost (Rs.)	Expenses (Rs.)
Training programme for doctors	18	1,396	23,266,172.00	17,708,775.19
Training programme for traditional medicine practitioners	09	266	811,900.00	590,124.00
Training programme for nurses and other assistant staff	09	112	120,825.25	58,768.25
Training programme on community health, maternal and child nutrition	29	5,922	2,151,230.00	1,865,533.00
Training programme for other staff	04	19	212,000.00	212,000.00

Source: Statistics Division, Indigenous Medicine Sector

Sri Lanka Ayurvedic Medical Council

No. of medical practitioners registered under the council as at the end of 2018 is 25,431 and 356 of them were registered in 2018.

- ◆ General (Sarvanga) graduates - 274
- ◆ General (Sarvanga) diploma - 27
- ◆ Traditional (Sarvanga) - 11
- ◆ Traditional (Special) - 44

Ayurvedic Community Health Promotion Service - Anuradhapura

Ayurvedic Community Health Promotion Service was started in 2001 as a pilot project, and now has been a permanent project over 22 Divisional Secretariats in Anuradhapura district. The objective is the physical, mental, social, spiritual and economic development of the community. Non-communicable disease controlling, communicable disease controlling, nutrition programmes, child health, community based elders health services, mental health, maternal health, school health, household educational programmes, conservation and sustainable use of herbal plants are the main programme areas under this service.

23.3 Homeopathy System

Under this medicine system, 34,134 OPD patients and 106 inward patients have been served in 2018. Total no. of patients that were treated in 7 clinic centres in Dehiwala, Parakaduwa, Matale, Palamunai, Kurunegala, Monaragala and Tholangamuwa is 81,089. Mobile clinics and educational programmes have conducted in the above seven centres for 904 participants/patients.

Annexure I

Table 1. Administrative Divisions and Local Government Bodies, 2018

Administrative Areas (Province/District)	Divisional Secretary Divisions	Grama Niladari Divisions	Local Government Bodies		
			Municipal Councils	Urban Councils	Pradeshiya Sabhas
Western Province					
Colombo	13	557	5	5	3
Gampaha	13	1,177	2	5	12
Kalutara	14	762	-	4	12
Central Province					
Kandy	20	1,187	1	4	17
Matale	11	545	2	-	11
Nuwara Eliya	5	491	1	2	5
Southern Province					
Galle	19	895	1	2	17
Matara	16	650	1	1	15
Hambantota	12	576	1	1	10
Northern Province					
Jaffna	15	435	1	3	13
Kilinochchi	4	95	-	-	3
Mannar	5	153	-	1	4
Vavuniya	4	102	-	1	4
Mullaitivu	6	136	-	-	4
Eastern Province					
Batticaloa	14	346	1	2	9
Ampara	20	503	2	1	17
Trincomalee	11	230	-	2	11
North-Western Province					
Kurunegala	30	1,610	1	1	19
Puttalam	16	548	-	2	10
North Central Province					
Anuradhapura	22	694	1	-	18
Polonnaruwa	7	295	-	-	7
Uva Province					
Badulla	15	567	2	1	15
Monaragala	11	319	-	-	10
Sabaragamuwa Province					
Ratnapura	17	575	1	2	14
Kegalle	11	573	-	1	11
Sri Lanka	331	14,021	23	41	271

Source : Department of Census and Statistics

Table 2. Population, Land Area and Density by Province and District

Administrative Area (Province/District)	Land Area (sq. km) as at 1988 ¹	Percentage Land Area	2018*			Average Annual Growth Rate (%) 1981 - 2012 ³
			Population ('000) ²	Percentage Distribution of Population	Population Density (Persons per sq. km)	
Sri Lanka	62,705	100.00	21,670	100.0	346	1.0
Western Province	3,593	5.73	6,129	28.3	1,706	
Colombo	676	1.08	2,439	11.3	3,608	1.0
Gampaha	1,341	2.14	2,409	11.1	1,796	1.7
Kalutara	1,576	2.51	1,281	5.9	813	1.2
Central Province	5,575	8.89	2,750	12.7	493	
Kandy	1,917	3.06	1,468	6.8	766	0.9
Matale	1,952	3.11	519	2.4	266	1.0
Nuwara Eliya	1,706	2.72	763	3.5	447	0.6
Southern Province	5,383	8.58	2,637	12.2	490	
Galle	1,617	2.58	1,124	5.2	695	0.9
Matara	1,270	2.03	858	4.0	676	0.7
Hambantota	2,496	3.98	655	3.0	262	1.1
Northern Province	8,290	13.22	1,131	5.2	136	
Jaffna	929	1.48	613	2.8	660	-0.7
Kilinochchi	1,205	1.92	126	0.6	105	0.7
Mannar	1,880	3.00	109	0.5	58	-0.2
Vavuniya	1,861	2.97	187	0.9	100	2.0
Mullaitivu	2,415	3.85	96	0.4	40	0.7
Eastern Province	9,361	14.93	1,710	7.9	183	
Batticaloa	2,610	4.16	570	2.6	218	1.5
Ampara	4,222	6.73	719	3.3	170	1.7
Trincomalee	2,529	4.03	421	1.9	166	1.3
North-Western Province	7,506	11.97	2,536	11.7	338	
Kurunegala	4,624	7.37	1,711	7.9	370	0.9
Puttalam	2,882	4.60	825	3.8	286	1.4
North Central Province	9,741	15.53	1,366	6.3	140	
Anuradhapura	6,664	10.63	930	4.3	140	1.3
Polonnaruwa	3,077	4.91	436	2.0	142	1.5
Uva Province	8,335	13.29	1,364	6.3	164	
Badulla	2,827	4.51	873	4.0	309	0.9
Monaragala	5,508	8.78	491	2.3	89	1.6
Sabaragamuwa Province	4,921	7.85	2,047	9.4	416	
Ratnapura	3,236	5.16	1,163	5.4	359	1.3
Kegalle	1,685	2.69	884	4.1	525	0.7

* Provisional

Source : ¹ Survey General's Department

² Registrar General's Department

³ Census of Population & Housing, 2012

Table 3. Population by Five Year Age Groups and Sex, 1981, 2001, 2012 and 2018

Age Group	1981 ¹		2001 ¹		2012 ¹		2018* ²					
	Population	%	Population	%	population ('000)	%	Total		Male		Female	
							Population ('000)	%	Population ('000)	%	Population ('000)	%
All ages	14,846,750	100.0	16,929,689	100.0	20,359	100.0	21,670	100.0	10,492	100.0	11,178	100.0
0 - 4	1,854,738	12.5	1,439,761	8.5	1,744	8.6	1,859	8.6	938	8.9	921	8.2
5 - 9	1,682,527	11.3	1,483,591	8.8	1,748	8.6	1,863	8.6	940	9.0	923	8.3
10 - 14	1,689,333	11.4	1,525,674	9.0	1,640	8.1	1,748	8.1	884	8.4	864	7.7
15 - 19	1,603,187	10.8	1,646,827	9.7	1,644	8.1	1,752	8.1	873	8.3	879	7.9
20 - 24	1,526,463	10.2	1,591,126	9.4	1,533	7.5	1,632	7.5	790	7.5	842	7.5
25 - 29	1,274,857	8.6	1,340,562	7.9	1,553	7.6	1,653	7.6	791	7.5	862	7.7
30 - 34	1,125,426	7.6	1,290,121	7.6	1,639	8.1	1,745	8.1	848	8.1	897	8.0
35 - 39	839,073	5.7	1,258,112	7.4	1,409	6.9	1,499	6.9	730	7.0	769	6.9
40 - 44	698,203	4.7	1,170,941	6.9	1,359	6.7	1,446	6.7	704	6.7	742	6.6
45 - 49	609,289	4.1	1,030,560	6.1	1,286	6.3	1,368	6.3	658	6.3	710	6.4
50 - 54	539,524	3.6	917,139	5.4	1,219	6.0	1,297	6.0	618	5.9	679	6.1
55 - 59	422,322	2.8	671,403	4.0	1,064	5.2	1,132	5.2	533	5.1	599	5.4
60 & above	981,808	6.6	1,563,872	9.2	2,521	12.4	2,676	12.3	1,185	11.3	1,491	13.3

* Provisional

Note : Year 2001 population excludes the districts Jaffna, Mannar, Vavunia, Mullaitivu, Kilinochchi, Batticaloa & Trincomalee.

Source : ¹ Census of Population and Housing
² Registrar General's Department

Table 4. Vital Statistics by District

District	Crude Birth Rate (CBR)		Crude Death Rate (CDR)		Maternal Mortality Ratio, 2014 (Per 100,000 Live Births)*	Infant Mortality Rate, 2015*	Neo-Natal Mortality Rate	
	2017*	2018*	2017*	2018*			2014*	2015*
	Per 1,000 Population						Per 1,000 Live Births	
Colombo	13.7	13.6	7.4	7.4	18.7	13.4	7.7	8.3
Gampaha	12.4	12.0	6.5	6.3	24.0	6.7	4.6	5.0
Kalutara	13.0	12.6	7.1	7.1	6.4	6.3	3.9	4.1
Kandy	15.9	15.7	7.2	7.0	57.1	12.5	9.0	10.5
Matale	14.8	14.9	6.5	6.6	-	7.5	5.9	5.5
Nuwara Eliya	15.2	14.1	6.1	6.2	21.2	7.5	3.6	5.7
Galle	15.2	15.6	7.7	7.6	25.9	7.9	4.3	5.4
Matara	13.3	13.3	6.5	6.6	41.8	5.3	3.3	4.0
Hambantota	17.6	17.0	5.5	5.6	18.0	3.9	2.0	2.5
Jaffna	14.9	15.4	7.4	7.2	45.9	13.6	11.4	10.9
Kilinochchi	21.8	21.0	4.1	4.0	-	4.9	6.0	2.0
Mannar	19.6	17.4	4.0	3.9	-	1.8	0.7	0.6
Vavuniya	17.8	18.8	4.8	5.2	26.6	6.8	4.5	2.2
Mullaitivu	11.4	11.1	3.9	4.6	100.0	1.8	1.0	-
Batticaloa	17.8	18.9	4.9	4.6	21.0	11.7	9.4	9.3
Ampara	20.2	22.0	4.8	4.7	22.5	3.5	1.0	1.1
Trincomalee	20.4	22.4	4.5	4.4	23.5	4.6	0.8	1.0
Kurunegala	14.6	14.8	6.9	6.9	28.9	11.0	10.1	9.3
Puttalam	17.4	17.1	5.9	5.8	28.3	6.7	2.4	3.6
Anuradhapura	16.9	16.7	6.1	5.9	19.8	7.9	4.9	5.4
Polonnaruwa	16.4	16.7	5.9	6.3	27.6	7.8	5.6	6.0
Badulla	16.6	16.2	6.3	6.1	23.6	7.8	4.9	5.4
Monaragala	17.0	16.9	5.1	4.9	13.7	6.7	1.5	4.0
Ratnapura	15.7	14.8	6.5	6.5	30.0	5.2	3.2	4.2
Kegalle	13.8	13.2	7.4	6.9	19.3	3.6	3.4	2.9
Sri Lanka	15.2	15.1	6.5	6.4	25.7	8.5	5.6	6.0

* Provisional

Source : Registrar General's Department

Note : CBR and CDR are based on usual residence data.

All other indicators are based on place of occurrence data.

Table 5. Number of Households in Occupied Housing Units by Main Source of Drinking Water and District, 2012

Province/District	Total households	Main source of drinking water												
		Protected well within premises	protected well outside premises	Unprotected well	* Tap within unit	* Tap within premises but outside unit	* Tap outside premises	Rural water supply project	Tube well	Bowser	River/ tank/ streams/ spring	Rain water	Bottled water	Other
Sri Lanka	5,264,282	1,652,972	772,819	211,556	1,110,050	363,043	181,235	482,937	177,432	18,931	239,952	4,022	9,984	39,349
Western Province														
Colombo	572,475	123,735	11,188	1,951	360,380	29,938	26,539	12,728	2,065	38	1,560	112	828	1,413
Gampaha	604,009	317,581	43,463	13,128	126,947	26,607	17,208	18,388	35,527	481	274	131	605	3,669
Kalutara	305,737	138,335	41,714	13,508	63,237	9,212	5,633	20,378	7,272	90	4,933	90	43	1,292
Central Province														
Kandy	348,019	49,629	38,580	10,117	132,091	28,270	14,564	39,395	6,762	688	24,032	221	61	3,609
Matale	129,710	26,731	22,822	5,253	24,559	8,876	4,168	22,399	7,500	62	6,605	28	63	644
Nuwara Eliya	181,182	9,149	10,157	6,899	19,002	22,837	11,826	38,262	1,169	66	60,177	103	17	1,518
Southern Province														
Galle	273,140	117,064	40,126	19,214	56,542	14,807	7,671	7,028	3,171	135	5,984	10	41	1,347
Matara	206,790	65,292	25,843	12,457	46,985	17,580	3,913	19,013	1,562	14	13,140	48	25	918
Hambantota	156,476	18,709	11,881	3,618	38,450	42,035	7,728	24,791	3,666	501	3,264	57	108	1,668
Northern Province														
Jaffna	140,323	54,642	44,554	1,255	2,407	2,963	14,251	-	15,607	3,142	13	3	53	1,433
Kilinochchi	28,369	9,033	9,652	7,029	32	87	43	-	1,481	835	12	1	3	161
Mannar	23,975	5,700	6,644	661	1,192	3,834	1,302	-	1,666	2,785	32	2	42	115
Vavuniya	41,908	19,540	8,517	1,623	880	1,171	1,522	275	7,256	134	8	38	912	32
Mullaitivu	24,896	8,153	8,242	6,462	60	100	141	-	1,088	210	48	-	4	388
Eastern Province														
Batticaloa	134,966	77,504	29,831	2,965	4,110	4,762	802	796	12,184	210	994	135	78	595
Ampara	165,166	44,011	33,011	7,436	35,590	24,812	5,607	10,148	2,375	168	755	83	39	1,131
Trincomalee	96,951	26,911	22,617	3,175	15,596	15,106	4,170	1,001	1,408	4,425	1,090	12	81	1,359
North Western Province														
Kurunegala	443,349	230,275	111,409	25,653	15,640	6,355	4,656	34,950	9,312	142	2,389	343	444	1,781
Puttalam	202,796	57,030	34,591	3,661	17,626	13,074	5,545	19,864	34,696	3,961	491	715	3,445	8,097
North Central Province														
Anuradhapura	231,356	50,933	64,063	7,811	33,806	17,571	8,164	35,054	5,941	205	3,138	1,259	2,504	907
Polonnaruwa	111,010	29,968	25,434	7,627	12,098	8,554	2,979	18,437	3,273	28	1,620	174	480	338
Uva Province														
Badulla	214,900	29,028	27,523	12,707	28,328	15,963	7,813	45,155	2,198	106	44,812	205	40	1,022
Monaragala	120,137	25,872	20,186	7,076	15,009	13,785	4,251	20,424	5,483	69	6,892	79	21	990
Sabaragamuwa Province														
Ratnapura	285,893	49,680	37,636	14,384	28,830	24,976	12,868	75,632	4,235	399	34,825	111	34	2,283
Kegalle	220,749	68,467	43,135	15,886	30,653	9,768	7,871	18,819	535	37	22,864	62	13	2,639

Source : Census of Population and Housing, 2012

Note : * * * Refers to piped born water distributed through pipe lines by National Water Supply and Drainage Board or the Local Government Institution.

Table 6. Households in Occupied Housing Units by Type of Toilet Facility and District, 2012

Province/District	Total Households	Type of Toilet			
		Exclusive	Shared	Common	Not Using a Toilet
Sri Lanka	5,264,282	4,565,611	574,303	36,088	88,280
Western Province					
Colombo	572,475	509,447	43,101	19,602	325
Gampaha	604,009	529,623	72,180	1,447	759
Kalutara	305,737	279,716	24,776	458	787
Central Province					
Kandy	348,019	312,932	31,740	1,639	1,708
Matale	129,710	112,819	15,969	231	691
Nuwara Eliya	181,182	144,939	27,164	2,019	7,060
Southern Province					
Galle	273,140	246,407	25,192	502	1,039
Matara	206,790	187,602	18,289	462	437
Hambantota	156,476	138,062	17,728	58	628
Northern Province					
Jaffna	140,323	114,174	17,033	1,866	7,250
Mannar	23,975	17,471	3,657	342	2,505
Vavuniya	41,908	31,860	5,133	1,898	3,017
Mullaitivu	24,896	15,764	3,844	148	5,140
Kilinochchi	28,369	17,560	4,539	64	6,206
Eastern Province					
Batticaloa	134,966	99,173	18,523	345	16,925
Ampara	165,166	142,438	18,194	191	4,343
Trincomalee	96,951	75,723	16,516	1,071	3,641
North Western Province					
Kurunegala	443,349	391,708	46,208	869	4,564
Puttalam	202,796	172,310	22,973	988	6,525
North Central Province					
Anuradhapura	231,356	193,611	32,347	189	5,209
Polonnaruwa	111,010	94,835	13,906	135	2,134
Uva Province					
Badulla	214,900	183,329	28,963	402	2,206
Monaragala	120,137	104,608	13,027	186	2,316
Sabaragamuwa Province					
Ratnapura	285,893	248,948	34,647	648	1,650
Kegalle	220,749	200,552	18,654	328	1,215

Source : Census of Population and Housing, 2012

Table 7. Distribution of Government Medical Institutions and Beds by Regional Director of Health Services Division, December 2018

RDHS Division	Teaching Hospitals		Provincial General Hospitals		District General Hospitals		Base Hospitals (Type A)		Base Hospitals (Type B)		Divisional Hospitals (Type A)		Divisional Hospitals (Type B)		Divisional Hospitals (Type C) ¹		Primary Medical Care Unit and Maternity Homes		Other Hospitals ²		Total Hospitals		Beds per 1,000 Population	Primary Medical Care Units	MOH Areas	
	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds	Ins.	Beds				
Colombo	7	8,142					3	1,273	1	294	1	90	6	402	2	67	5	53	11	4,072	36	14,393	5.9	31	19	
Gampaha	1	1,587			2	1,509	1	631	2	277	4	618	1	84	7	216			6	1,161	24	6,083	2.5	45	16	
Kalutara					1	1,068	3	1,004	2	201	2	219	7	509	6	189						21	3,190	2.5	11	15
Kandy	3	4,040			1	473			2	599			14	999	33	1,038			6	209	59	7,358	5.0	28	23	
Matale					1	859	1	323					4	282	14	360					20	1,824	3.5	15	13	
Nuwara Eliya					1	424	1	190	1	181	2	245	8	587	14	424					27	2,051	2.7	21	13	
Galle	2	2,316					2	916	1	125	2	217	7	500	11	369			2	11	27	4,454	4.0	24	20	
Matara					1	1,233			2	443	3	327	5	416	5	155					16	2,574	3.0	21	17	
Hambantota					1	665	1	331	2	364	1	104	8	593	8	293			1	56	22	2,406	3.7	14	12	
Jaffna	1	1,265					2	773	2	262			4	339	19	428			1	40	29	3,107	5.1	16	14	
Kilinochchi					1	328			1	50			1	103	6	138					9	619	4.9	3	4	
Mullaitivu					1	202	1	23	2	157	1	26	2	35	5	39					12	482	5.0	4	6	
Vavuniya					1	597			1	97			1	36	6	108					9	838	4.5	6	4	
Mannar					1	327			1	94			4	264	5	134			1	16	12	835	7.7	9	5	
Batticaloa	1	1,150					2	462	2	383	3	207	3	188	11	365					22	2,755	4.8	14	14	
Ampara					1	790	1	221	1	133			1	70	6	194			1	16	11	1,424	4.8 ^a	16	7	
Kalmunai							3	992	4	516			3	209	7	276	3	50			20	2,043		9	13	
Trincomalee					1	581	3	527	1	40			12	399					1	125	18	1,672	4.0	18	12	
Kurunegala			1	2,051			1	676	3	983	9	1,070	11	776	20	528	1	13	1	13	47	6,110	3.6	54	29	
Puttalam					1	598	1	415	1	377	2	264	4	186	9	233					18	2,073	2.5	30	13	
Anuradhapura	1	2,187							3	391	4	443	10	644	21	645			2	80	41	4,390	4.7	21	20	
Polonnaruwa					1	958			2	226	1	115	4	229	4	124					12	1,652	3.8	17	7	
Badulla			1	1,533			2	840	1	167	2	238	9	568	32	563					47	3,909	4.5	16	16	
Monaragala					1	479			3	492	1	115	5	334	8	232					18	1,652	3.4	10	11	
Rathnapura	1	1,465			1	505			4	835	7	579	7	367	18	375			2	12	40	4,138	3.6	41	19	
Kegalle					1	861			3	1,061	6	538	3	95	10	128			1	13	24	2,696	3.0	21	11	
Sri Lanka	17	22,152	2	3,584	19	12,457	28	9,597	48	8,748	51	5,415	132	8,815	299	8,020	9	116	36	5,824	641	84,728	3.9	515	353	

^a Includes Kalmunai data¹ Divisional Hospitals (DHC's) which have no indoor facilities are also included in some districts (Gampaha - 1, Jaffna - 1, Mullaitivu - 4, Babulla - 10, Kegalle - 4)² Teaching Hospitals: Institute of Cancer, Mental and Dental hospitals are categorized under "Other Hospitals"

Source : Medical Statistics Unit

Table 8. Distribution of Inpatient Beds¹ by Regional Director of Health Services Division , December 2018

RDHS Division	Teaching Hospitals	Provincial General Hospitals	District General Hospitals	Base Hospitals (Type A)	Base Hospitals (Type B)	Divisional Hospitals (Type A)	Divisional Hospitals (Type B)	Divisional Hospitals (Type C)	Primary Medical Care Unit & Maternity Homes	Other Hospitals ²	Total Inpatient Beds	Inpatient Beds per 1,000 population
Colombo	7,646			1,207	283	87	354	53	53	3,785	13,468	5.5
Gampaha	1,506		1,437	616	259	561	66	191		1,123	5,759	2.4
Kalutara			1,027	950	185	202	425	172			2,961	2.3
Kandy	3,770		443		579		882	904		194	6,772	4.6
Matale			825	298			253	314			1,690	3.3
Nuwara Eliya			422	163	151	226	542	360			1,864	2.4
Galle	2,200			844	115	203	426	307		9	4,104	3.7
Matara			1,185		406	278	367	112			2,348	2.7
Hambantota			635	290	337	86	528	264		56	2,196	3.4
Jaffna	1,265			667	244		302	350		40	2,868	4.7
Kilinochchi			292		39		87	117			535	4.2
Mullaitivu			188	22	150	24	31	38			453	4.7
Vavuniya			542		91		27	66			726	3.9
Mannar			270		80		229	100		16	695	6.4
Batticaloa	1,138			431	357	187	178	321			2,612	4.6
Ampara			718	179	104		61	169		16	1,247	4.2 ³
Kalmunai				881	441		184	231	30		1,767	
Trincomalee			532	491	36			356		125	1,540	3.7
Kurunegala		1,889		648	930	958	678	456	6	13	5,578	3.3
Puttalam			558	394	362	235	163	192			1,904	2.3
Anuradhapura	2,113				354	407	552	541		79	4,046	4.4
Polonnaruwa			910		202	105	204	107			1,528	3.5
Badulla		1,479		723	145	198	487	478			3,510	4.0
Monaragala			465		438	110	306	195			1,514	3.1
Rathnapura	1,389		466		793	492	325	296		11	3,772	3.2
Kegalle			790		989	472	78	104		13	2,446	2.8
Sri Lanka	21,027	3,368	11,705	8,804	8,070	4,831	7,735	6,794	89	5,480	77,903	3.6

Source : Medical Statistics Unit

¹ Excludes Examination beds, labour room beds, OPD beds, etc.² Teaching Hospitals: Institute of Cancer, Mental and Dental hospitals are categorized under "Other Hospitals"³ Includes Kalmunai data

Table 9. Beds by Speciality and Regional Director of Health Services Division, December 2018

RDHS Division	Mixed Medical & Surgical ¹	Medical	Surgical	Paediatrics / Children ²	Obstetric/Gynaecology	Communicable Diseases	Tuberculosis	Cancer	Leprosy	Psychiatry	Neurology/Neuro Surgery	Genito Urinary	Cardiology	E.N.T	Eye	Skin	Orthopaedic/Accident	Thoracic Surgery	Plastic Surgery/Burns Unit	Rheumatology/Rehabilitation	Dental	Others ³	Total
Colombo	650	2,469	1,888	1,929	1,805	4	37	822		1,579	343	110	200	116	504	77	674	182	110		67	827	14,393
Gampaha	392	1,349	858	763	941		363	3	46	207	14	44	22	52	157	26	66			266	20	494	6,083
Kalutara	549	655	473	584	531					72				22	48	15	59					182	3,190
Kandy	366	1,943	924	1,062	1,112		86	150		185	230	63	78	77	203	37	198	65			47	417	7,358
Matale	141	624	215	264	344					57				15	61	16	27					60	1,824
Nuwara Eliya	418	351	243	292	500			5		53				12	27		2			28		120	2,051
Galle	323	1,084	574	676	744			188		92	99	20	14	41	97	38	61	85		32	21	265	4,454
Matara	145	726	338	425	548					56	19		18	25	44	28	47			23	25	107	2,574
Hambantota	259	575	423	332	460					71				23	31	15	36				17	164	2,406
Jaffna	63	948	547	371	541		21	99		96	12		19		81	23	4			10		272	3,107
Kilinochchi	120	112	65	116	133																	73	619
Mullaitivu	43	152	95	62	97																	33	482
Vavuniya	10	233	99	93	206		10			14				26	13		79					55	838
Mannar	7	353	66	118	173			1		14			1	1	1	1	1					98	835
Batticaloa	332	584	458	406	413		9	71		50	5		5	34	40	11	61					276	2,755
Ampara	125	395	184	222	263	7				31		18	16		32		26			24	12	69	1,424
Kalmunai	121	494	299	390	435					24					30		10			10	7	223	2,043
Trincomalee	44	614	236	211	322	3				22				42	53		29					138	1,672
Kurunegala	989	1,445	556	727	1,076			113		62	63	28			104	63	126	69		36	44	567	6,110
Puttalam	176	512	314	337	486		17								47	11	42					131	2,073
Anuradhapura	816	945	455	591	759	35		84		132	50	28	42		30	24	69			12		318	4,390
Polonnaruwa	174	323	243	210	288	5				29	39	30	45		48	11	57			26		124	1,652
Badulla	413	887	555	527	672			116		73	66		30	44	73	33	128			12	29	251	3,909
Monaragala	262	386	183	314	353										40							114	1,652
Rathnapura	389	1,145	561	595	770		25	74		35	25	29	31	24	72	13	107				20	223	4,138
Kegalle	286	643	392	419	496					49				34	42	37	47			6		245	2,696
Sri Lanka	7,613	19,947	11,244	12,036	14,468	54	568	1,726	46	3,003	965	370	521	588	1,878	479	1,956	401	110	532	377	5,846	84,728

Includes:

¹ Beds in medical and surgical intensive care units, wards for priests, armed service personnel and medical and surgical paying wards² Beds in premature baby units³ Mixed wards with beds for obstetrics, psychiatry, skin, ENT, eye, dental, neurology, surgery, tuberculosis and haematology

Source : Medical Statistics Unit

Table 10. Key Health Personnel, 1991 - 2018

Year	Medical Officers ¹		Dental Surgeons ²		Registered/ Assistant Medical Officers		Nurses		Public Health Nursing Sisters		Public Health Inspectors		Public Health Midwives		Hospital Midwives	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1991	2,934	17.0	358	2.1	1,201	7.0	9,934	57.6	101	0.6	914	5.3	3,583	20.8	1,776	10.3
1992	3,345	19.2	381	2.2	1,253	7.2	11,214	64.4	113	0.6	846	5.0	4,108	23.6	2,025	11.6
1993	3,713	21.1	390	2.2	1,305	7.4	11,818	67.1	109	0.6	876	5.0	4,361	24.8	2,172	12.3
1994	4,047	22.7	387	2.2	1,357	7.6	13,060	73.1	117	0.7	928	5.2	4,400	24.6	2,214	12.4
1995	4,577	25.3	421	2.3	1,376	7.6	13,403	74.0	174	1.0	932	5.1	4,383	24.2	2,288	12.6
1996	5,117	27.9	462	2.5	1,397	7.6	13,933	79.1	189	1.0	915	5.0	4,352	23.8	2,393	13.1
1997	5,628	30.1	481	2.6	1,384	7.4	13,815	73.8	145	0.8	901	4.8	4,497	24.0	2,284	12.2
1998	6,427	34.2	521	2.8	1,340	7.1	14,448	77.0	183	1.0	888	4.7	4,578	24.4	2,410	12.8
1999	6,994	36.7	529	2.8	1,340	7.0	14,052	73.8	237	1.2	1,142	6.0	4,625	24.3	2,503	13.1
2000	7,963	41.1	637	3.3	1,349	7.0	14,716	76.0	270	1.4	1,486	7.7	4,798	24.8	2,596	13.4
2001	8,384	44.8	751	4.0	1,343	7.2	15,797	84.4	259	1.4	1,401	7.5	4,654	24.9	2,723	14.5
2002	9,290	48.9	867	4.6	1,326	7.0	16,517	86.9	310	1.6	1,470	7.7	4,819	25.4	2,794	14.7
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	8,874	45.6	915	4.7	1,218	6.3	18,654	95.8	315	1.6	1,397	7.2	4,524	23.2	2,668	13.7
2005	10,198	51.9	954	4.9	1,274	6.5	19,934	101.4	313	1.6	1,512	7.7	4,896	24.9	2,371	12.1
2006	10,279	51.7	1,181*	5.9	1,183	5.9	24,988	125.7	299	1.5	1,535	7.7	5,080	25.5	2,555	12.8
2007	11,023	55.1	1,314*	6.6	1,194	6.0	31,466	157.3	290	1.4	1,740	8.7	6,167	30.8	2,828	14.1
2008	12,479	61.7	858	4.2	1,134	5.6	30,063	148.7	270	1.3	1,475 ³	7.3	5,331	26.4	3,016	14.9
2009	13,737	67.8	1,046	5.1	1,084	5.3	31,297	153.0	264	1.3	1,398 ³	6.8	5,389	26.3	2,768	13.5
2010	14,668	71.0	1,139	5.5	1,107	5.4	35,367	171.2	380	1.8	1,436 ³	7.0	5,477	26.5	2,971	14.4
2011	15,273	73.2	1,147	5.5	1,063	5.1	35,870	171.9	349	1.7	1,501	7.2	5,491	26.3	2,884	13.8
2012	15,910	78.6	1,223	6.0	1,130	5.6	36,486	180.3	332	1.6	1,510 ³	7.5	5,821	28.6	2,605	12.8
2013	16,690	81.5	1,279	6.2	1,064	5.2	35,629	173.9	322	1.6	1,763	8.1	5,950	29.0	2,848	13.9
2014	17,615	84.8	1,360	6.5	999	4.8	38,451	185.1	277	1.3	1,526	7.3	5,954	28.7	2,888	13.9
2015	18,243	87.0	1,340	6.4	936	4.5	42,420	202.3	290	1.4	1,604	7.7	6,041	28.8	2,765	13.2
2016	18,968	89.5	1,433	6.8	883	4.2	42,556	200.7	277	1.3	1,692	8.0	6,247	29.5	2,365	11.2
2017	19,800	92.3	1,473	6.9	818	3.8	45,480	212.1	328	1.5	1,720	8.0	5,746	26.8	2,485	11.6
2018	19,720	91.0	1,561	7.2	789	3.6	46,024	212.4	314	1.4	1,697	7.8	5,811	26.8	2,694	12.4

Source : Medical Statistics Unit

* Provisional

Rate per 100,000 population

¹ All medical officers in curative, administrative and preventive services including specialists and interns

² Includes Regional and Consultant Dental Surgeons

³ Excludes Supervising Public Health Inspectors

N/A - Not Available

Note : All PGIM trainees were included in Dental Surgeons category in 2007 based on 2006 estimates which was not corrected.

In 2008, this was revised by including PGIM trainees in Medical Officers category. Therefore the total Dental Surgeons category has reduced in 2008.

Table 11. Distribution of Health Personnel by Regional Director of Health Services Division, December 2018

RDHS Division	Medical Officers														Total Medical Officers ²	Consultant Dental Surgeons	Regional Dental Surgeons	Dental Surgeons	P.G.I.M Trainees**	Dental Surgeons ³					
	Administrative Grade (Senior and Deputy) Medical Officers	Deputy (Senior and Deputy) Non Medical Officers	Specialists/Consultant (other than administrative grade)	Hospital Medical Officers (D.M.O., M.O.I.C., S.H.O., S.M.O. in OPD, etc.)	Medical Officers in MOH/AMOH	School Medical Officers	Medical Officers (Malaria)	Medical Officers (Filaria)	Medical Officers (Leprosy)	Medical Officers (Venereal Diseases)	Medical Officers (Tuberculosis)	Epidemiologists	Medical Officers (Maternal and Child Health)	Judicial Medical Officers							Medical Officers (Blood Bank)	Internee Medical Officers (H.O.)	P.G.I.M. Trainees **	Other Medical Officers	Medical Officers ¹
Colombo	66	64	641	3,144	65	3	5	5	-	16	33	1	11	10	78	123	555	405	4,454	5,161	33	1	225	33	292
Gampaha	10	-	157	1,276	61	1	-	1	12	2	-	1	-	4	48	74	222	55	1,767	1,934	5	1	92	3	101
Kalutara	8	-	83	579	39	-	-	-	-	2	-	1	1	5	25	18	7	12	689	780	4	2	69	4	79
Kandy	13	1	184	1,240	37	-	1	-	-	7	2	1	2	4	4	43	149	104	1,594	1,791	4	1	185	24	214
Matale	4	-	31	232	16	-	1	-	-	-	5	1	12	4	8	8	-	17	304	339	3	1	25	-	29
Nuwara Eliya	4	-	46	207	18	-	-	-	-	2	3	-	-	5	8	9	2	10	264	314	1	1	32	-	34
Galle	9	1	155	709	34	2	-	1	-	-	3	1	1	-	7	-	-	22	780	944	3	1	64	-	68
Matara	6	-	63	445	34	1	-	2	1	1	5	1	1	1	6	61	1	17	577	646	2	1	36	-	39
Hambantota	5	-	57	259	17	-	-	-	-	1	3	-	2	3	5	47	-	49	386	448	1	1	30	-	32
Jaffna	8	-	69	367	13	-	-	-	-	-	2	1	1	3	10	14	57	5	472	549	2	1	50	-	53
Kilinochchi	2	-	14	76	3	-	1	-	-	1	1	1	-	1	3	-	-	3	90	106	-	1	10	-	11
Mannar	1	-	4	71	5	-	1	-	1	-	1	1	1	-	-	-	-	2	83	88	-	-	6	-	6
Vavunia	5	-	31	159	5	-	1	-	-	2	1	-	1	1	4	17	-	7	198	234	2	-	17	-	19
Mullaitivu	2	-	8	54	7	-	1	-	-	-	2	-	1	1	2	-	-	4	72	82	-	-	9	-	9
Batticaloa	8	-	51	268	18	-	1	-	-	1	1	1	1	1	7	42	16	6	363	422	3	1	33	-	37
Ampara	2	-	34	236	13	-	1	-	-	1	2	1	1	3	9	8	-	7	281	317	1	1	22	-	24
Trincomalee	8	-	48	235	11	-	2	-	-	1	1	1	4	2	11	-	-	13	281	337	1	1	30	-	32
Kaimunai	8	-	33	271	15	-	1	-	-	-	1	-	1	4	12	24	15	10	354	395	-	1	26	-	27
Kurunegala	8	2	103	780	56	1	-	1	-	3	8	2	-	10	26	151	6	25	1,069	1,180	4	1	91	5	101
Puttalam	3	-	65	366	25	-	-	-	-	2	-	-	-	8	16	24	3	11	455	523	2	-	41	3	46
Anuradhapura	5	1	78	466	33	1	-	-	-	-	1	1	1	2	12	-	6	24	547	630	3	1	46	3	53
Polonnaruwa	3	-	41	251	20	-	1	-	-	-	1	-	1	4	7	-	-	-	285	329	2	2	31	-	35
Badulla	4	-	76	409	21	-	1	-	-	-	-	-	-	5	14	18	-	12	481	561	3	2	60	-	65
Monaragala	4	-	40	196	14	-	1	-	-	1	1	-	-	3	5	30	7	17	275	319	3	1	25	-	26
Rathnapura	8	-	93	479	28	2	1	-	-	1	7	1	4	6	13	23	12	10	587	688	5	1	70	1	77
Kegalle	2	-	65	370	21	1	1	-	-	1	-	1	10	8	11	58	-	54	536	603	2	1	46	3	52
Sri Lanka	206	69	2,270	13,145	629	12	21	10	14	55	83	18	57	98	351	792	1,058	901	17,244	19,720	86	25	1,371	79	1,561

** Include PGIM trainees drawing their salaries from the institutions concerned

¹Total Medical Officers, exclude: Administrative and Specialists

²Total Medical Officers

³Total Dental Surgeons

Continued...
Source : Medical Statistics Unit

Table 11. Distribution of Health Personnel by Regional Director of Health Services Division, December 2018

RDHS Division	Registered/Assistant Medical Officers	Matrons	Ward Masters/Sisters	Principals/Sister Tutors	Nursing Officers	Supervising Public Health Nursing Sisters/Public Health Nursing Sisters	Pupil Nurses	Total Nurses	MRO	MRA	SSO	PPO	PPA	DO	DA	Pharmacists	Medical Laboratory Technologists	Radiographers	Physiotherapists	Speech Therapists	Occupational Therapists	School Dental Therapists	Dental Technicians	Entomologists	Officers/Assistants
Colombo	118	58	272	44	8,894	37	683	9,988	6	5	-	12	17	474	37	411	606	219	198	31	46	40	24	8	29
Gampaha	76	18	94	22	2,680	39	743	3,596	3	3	1	4	3	98	2	131	119	35	61	10	23	34	2	1	5
Kalutara	49	12	70	22	1,551	25	481	2,161	1	2	-	1	1	72	8	60	88	16	16	2	4	20	1	2	8
Kandy	104	15	119	44	3,618	19	807	4,622	1	22	17	44	5	143	3	161	145	70	62	11	17	25	4	1	9
Matale	30	6	27	-	631	10	-	674	1	7	6	8	-	26	-	32	31	8	5	1	1	7	-	1	5
Nuwara Eliya	12	5	12	-	512	5	-	534	-	2	-	2	-	25	2	29	25	7	10	-	1	11	-	1	1
Galle	56	5	73	18	2,186	20	560	2,862	2	4	-	-	17	123	27	91	81	33	33	6	9	20	3	2	9
Matara	33	6	50	18	1,393	11	794	2,272	1	2	-	-	20	116	6	57	49	14	14	3	6	15	1	1	6
Hambantota	9	6	30	12	1,041	8	288	1,385	-	-	-	-	4	82	2	50	38	14	8	4	4	14	-	-	8
Jaffna	8	11	31	20	767	3	132	964	-	-	-	1	2	113	6	54	46	24	21	1	2	7	1	-	5
Kilinochchi	-	2	5	-	115	2	-	124	-	-	-	-	-	21	-	6	5	2	4	1	1	2	-	-	2
Mannar	5	4	10	-	134	3	-	151	-	-	-	-	-	27	-	6	6	2	4	1	-	2	-	-	4
Vavunia	2	4	12	9	212	3	213	453	-	-	-	1	-	26	-	16	14	6	5	1	-	2	-	-	4
Mullaitivu	-	3	3	-	111	1	-	118	-	-	-	1	-	12	-	7	5	2	2	-	-	2	-	-	2
Batticaloa	8	12	24	11	760	6	272	1,085	-	1	-	11	-	66	3	43	41	16	15	2	5	4	-	1	3
Ampara	4	6	11	21	557	5	757	1,357	-	-	-	-	-	35	4	32	30	10	11	1	2	2	-	-	4
Trincomalee	8	6	16	-	510	7	-	539	-	-	-	2	-	56	-	34	25	9	11	1	1	2	-	-	4
Kalmunai	12	5	17	-	734	11	-	767	1	2	-	8	-	56	3	40	42	14	11	2	-	8	-	1	5
Kurunegala	87	16	88	31	2,268	28	652	3,083	4	18	-	1	1	270	3	100	87	31	27	4	6	34	2	1	11
Puttalam	19	5	32	-	678	7	-	722	-	3	-	2	4	49	6	44	43	8	10	2	1	16	-	1	3
Anuradhapura	26	15	69	15	1,470	14	408	1,991	-	2	-	-	3	39	4	64	65	19	24	2	3	17	2	1	6
Polonnaruwa	7	6	22	-	676	4	-	708	-	3	1	-	7	16	1	45	33	11	14	2	2	6	1	-	3
Badulla	42	8	62	12	1,264	13	519	1,878	4	1	-	2	-	123	1	76	73	18	22	3	5	17	1	1	3
Monaragala	5	5	17	-	590	9	-	621	-	7	-	1	9	73	1	30	35	7	5	1	1	11	-	-	5
Rathnapura	37	11	54	18	1,491	13	529	2,116	1	1	-	-	3	115	1	68	61	22	19	4	4	17	1	1	6
Kegalle	32	7	48	-	1,187	11	-	1,253	-	5	-	1	8	136	10	57	50	15	12	2	1	15	1	1	9
Sri Lanka	789	257	1,268	317	36,030	314	7,838	46,024	25	90	25	102	104	2,392	130	1,744	1,843	632	624	98	145	350	44	25	159

Continued...
Source : Medical Statistics Unit

Table 11. Distribution of Health Personnel by Regional Director of Health Services Division, December 2018

RDHS Division	Ophthalmic Technicians	Food and Drug Inspectors	Supervising Public Health Inspectors	Public Health Inspectors	Supervising Public Health Midwives	Public Health Midwives	Hospital Midwives	EKG Recorders	EKG Recorders	Public Health Laboratory Technicians	Dispensers	Public Health Field Officers	Public Health Field Assistants	Nutritionists	Photograph Technicians	Audiology Technicians	Orthopedic Technicians	Cinema Technicians	Attendants	Accountant	Administrative Officers	Management Assistants	Ward Clerks	Telephone Operators	Drivers	SKS (Ordinary)	SKS (Junior)	SKS (Other)	Any Other	Total	
Colombo	63	15	13	248	16	441	218	117	32	71	134	31	-	11	1	11	5	2	1,553	28	59	1,091	128	74	624	2,522	4,161	599	2,346	32,400	
Gampaha	16	-	7	126	15	468	151	25	10	26	105	13	1	1	1	1	1	1	490	9	10	207	29	30	100	444	1,262	183	363	10,337	
Kalutara	10	3	15	85	15	373	151	2	16	64	64	26	-	1	-	1	-	-	472	4	5	152	13	15	100	235	922	84	290	6,441	
Kandy	22	2	17	93	22	418	204	33	12	11	102	22	3	4	5	5	5	-	795	6	5	283	37	32	183	1,169	1,570	93	496	13,116	
Matale	6	1	3	38	11	159	62	5	-	5	50	15	1	-	-	-	-	-	171	-	2	61	1	3	56	145	219	24	92	2,341	
Nuwara Eliya	6	-	5	39	13	264	101	5	2	4	56	6	3	-	-	-	-	-	223	2	2	78	10	6	81	517	129	58	69	2,689	
Galle	13	2	8	111	19	309	130	22	5	16	85	22	-	1	-	3	1	-	382	6	9	201	32	16	106	558	1,137	292	315	8,192	
Matara	6	2	13	67	18	256	115	12	3	13	62	23	-	1	-	1	-	-	349	2	3	122	18	13	87	306	649	44	180	5,666	
Hambantota	7	2	3	62	15	203	104	10	3	8	62	20	-	1	-	2	-	-	247	3	2	103	9	13	72	166	645	31	190	4,086	
Jaffna	7	2	15	63	10	147	88	5	2	9	73	17	-	2	-	-	-	-	469	5	5	96	5	20	95	224	461	-	475	4,152	
Kilinochchi	1	1	3	20	5	60	24	2	-	4	25	9	-	1	-	-	-	-	98	2	-	34	1	1	27	37	240	52	97	1,031	
Mannar	2	1	4	16	2	57	30	2	2	3	19	6	-	-	-	-	-	-	97	2	1	37	-	6	38	82	274	-	90	1,076	
Vavunia	2	1	4	16	2	58	30	2	2	2	18	6	-	1	-	-	-	-	124	2	3	55	3	4	46	69	300	2	147	1,683	
Mullaitivu	1	-	4	19	3	45	15	-	-	2	20	4	-	-	-	-	-	-	105	2	-	35	1	-	39	53	132	70	114	906	
Batticaloa	4	3	15	51	11	153	127	11	2	3	41	44	-	-	-	3	-	-	164	2	2	60	4	7	52	142	505	27	118	3,193	
Ampara	1	1	7	28	11	109	58	9	1	6	33	13	-	-	-	-	-	-	229	2	2	82	4	5	72	133	435	6	167	2,574	
Trincomalee	5	2	9	41	12	141	80	7	1	7	39	31	-	-	-	-	-	-	204	3	3	102	10	7	74	203	671	25	140	3,303	
Kalmunai	4	2	14	50	11	151	133	9	1	10	41	39	1	1	-	1	-	-	713	4	3	208	14	19	135	719	1,272	49	308	9,552	
Kurunegala	11	1	13	48	13	182	76	9	2	11	62	16	-	-	-	1	-	-	151	2	4	77	3	7	54	101	568	30	53	2,994	
Puttalam	6	2	13	72	18	237	129	14	5	34	98	25	3	-	-	1	-	-	468	3	3	154	18	7	128	409	645	77	216	5,738	
Anuradhapura	5	1	6	35	7	132	56	10	1	11	45	9	1	-	-	1	-	-	178	1	1	73	8	6	63	132	511	23	86	2,626	
Polonnaruwa	3	1	14	61	18	303	106	14	2	11	96	6	-	-	-	2	-	-	394	2	4	150	16	5	135	971	539	85	210	6,051	
Badulla	11	1	10	36	12	188	70	6	-	6	45	6	2	-	-	1	-	-	386	1	1	68	4	5	87	304	313	48	140	2,700	
Monaragala	12	2	19	93	23	330	116	10	4	17	96	18	1	1	-	2	-	-	386	3	5	170	22	17	105	655	1,038	138	211	6,736	
Rathnapura	7	2	12	70	17	232	98	6	-	8	76	14	-	-	-	1	-	-	224	2	4	128	12	15	83	407	810	77	227	4,795	
Kegalle	238	49	274	1,697	347	5,811	2,694	377	97	363	1,698	487	16	27	1	38	11	11	9,028	101	142	3,926	404	338	2,711	10,904	20,104	2,126	7,260	147,975	
Sri Lanka																															

Source : Medical Statistics Unit

Table 12. Distribution of Specialists in Curative Care Services¹ by Regional Director of Health Services Division, December 2018

RDHS Division	General Physicians	General Surgeons	Obstetricians & Gynaecologists	Cardiologists	Chest Physicians	Thoracic Surgeons	Neurologists	Neuro Surgeons	Dermatologists	Rheumatologists	Psychiatrists	Paediatric Surgeons	ENT Surgeons	Eye Surgeons	Orthopaedic Surgeons	Plastic Surgeons	Gento Urinary Surgeons	Anaesthesiologists/Chemical	Histo-Pathologists	Haematologists	Bacteriologists/Microbiologists	Biochemists	Oncologists/Radiotherapists	Oncology Surgeons	Radiologists	Venerologists	Judicial Medical Officers	Public Health/Community Health Physicians	Endocrinologists	Gastroenterologists	Nephrologists	Specialist Dental Surgeons-Orthodontists	Specialist Dental Surgeons-Maxillofacial/Restorative	Specialist Dental Surgeons-Restorative	Others ²	Total
Colombo	59	32	30	21	6	6	10	8	14	7	21	38	5	11	18	14	8	46	26	15	18	3	14	4	39	9	8	53	6	2	7	6	8	5	64	647
Gampaha	19	11	9	4	4	4	3	-	5	4	6	12	-	5	6	4	1	9	7	4	3	-	1	3	6	-	3	1	2	1	2	3	-	7	151	
Kalutara	10	6	6	2	1	-	1	-	3	1	3	6	-	2	3	2	-	5	4	3	2	1	1	-	5	1	1	7	-	-	-	2	2	-	6	87
Kandy	16	9	10	6	4	2	4	2	5	3	5	17	5	5	6	4	1	2	6	5	3	-	3	2	8	1	1	5	1	1	4	2	1	23	188	
Matale	5	4	4	1	1	-	1	-	2	1	2	4	-	1	2	1	-	-	2	1	1	-	-	1	-	1	-	-	-	-	2	1	-	-	40	
Nuwara Eliya	6	4	4	1	1	-	-	-	3	2	2	4	-	1	2	1	-	3	1	1	1	-	1	-	2	1	2	-	-	-	-	-	1	-	1	46
Galle	17	9	7	4	1	2	3	2	4	1	6	12	2	2	6	2	1	11	5	4	4	1	5	2	10	2	2	6	1	1	3	1	1	1	15	158
Matara	7	5	5	1	1	-	1	-	3	1	3	7	1	1	2	2	-	1	3	2	1	2	-	-	4	1	1	2	1	-	1	1	-	2	63	
Hambantota	8	5	5	2	1	-	1	-	2	1	2	6	-	1	2	-	1	4	2	1	1	-	1	5	-	1	-	-	-	-	-	-	1	-	1	56
Jaffna	10	5	3	3	1	1	1	1	2	1	3	3	-	2	3	2	2	1	4	3	1	1	3	2	4	-	1	1	1	1	1	1	2	2	70	
Kilinochchi	3	1	1	-	-	-	-	-	1	-	-	2	-	2	-	1	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	14	
Mannar	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4	
Vavuniya	3	2	2	1	-	-	1	-	1	1	1	2	-	1	2	-	1	3	-	1	1	-	1	-	2	-	1	-	1	1	1	1	1	-	32	
Mullaitivu	2	2	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	7	
Batticaloa	3	3	2	1	-	1	-	1	1	-	2	3	1	1	2	2	1	3	2	1	1	-	2	1	2	1	-	4	1	2	1	1	1	3	51	
Ampara	5	4	4	1	1	-	1	-	-	1	1	4	-	1	1	1	-	1	1	1	1	-	1	-	2	-	1	-	-	-	-	-	-	-	35	
Trincmalee	6	4	4	1	1	-	-	-	2	1	2	5	-	1	2	2	-	3	3	1	1	-	1	-	3	-	-	1	1	1	-	-	-	-	46	
Kalmunai	9	4	3	-	-	-	-	-	-	1	2	5	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	
Kurunegala	12	9	9	2	2	1	1	1	3	1	6	10	1	3	2	3	1	6	4	3	1	-	2	1	6	-	3	-	1	2	1	2	1	3	105	
Puttalam	8	5	6	1	1	-	-	-	3	1	3	6	-	1	4	3	-	4	3	2	1	-	1	-	4	-	2	2	1	-	-	1	1	-	66	
Anuradhapura	7	5	6	2	1	-	2	2	2	1	2	6	1	1	1	2	1	3	3	2	1	-	2	2	5	1	1	2	1	2	2	1	1	1	7	80
Polonnaruwa	7	3	2	2	1	-	1	-	2	1	2	1	-	1	1	2	-	2	2	1	1	-	-	2	-	-	1	-	-	-	-	-	-	-	43	
Badulla	9	6	6	2	1	1	1	2	3	1	4	6	-	1	2	3	-	5	4	1	1	-	2	1	5	-	1	-	1	2	1	1	1	1	77	
Monaragala	5	3	4	1	1	-	-	-	2	-	1	5	-	1	1	-	1	3	1	1	1	-	1	-	3	-	1	-	-	-	-	-	-	-	38	
Rathnapura	12	8	7	3	1	1	1	1	4	2	4	9	1	2	2	3	-	6	3	2	1	-	2	2	5	1	3	-	1	1	1	1	2	1	2	96
Kegalle	9	4	7	1	1	-	1	-	3	-	4	6	1	2	1	2	-	3	4	1	1	-	1	-	5	1	3	-	-	-	-	-	-	-	65	
Sri Lanka	257	154	147	63	33	19	34	21	70	33	87	180	18	50	68	62	15	144	90	55	49	5	45	22	132	19	39	83	20	17	26	27	31	12	145	2,298

Excludes: ¹Specialists working under University Grants Commission Source: Medical Statistics Unit

Includes: ²Virologists, Immunologists, Parasitologists, Nephrologists & Neonatologists

Table 13. National Expenditure, Health Expenditure and GNP, 2013 - 2018

Description	2013	2014	2015	2016	2017*	2018*
National Expenditure (Rs. Million)	2,411,606	2,601,723	3,203,280	3,106,443	3,470,589	3,970,636
Government Health Expenditure (Not Included Private Health Sector) (Rs. Million)	120,346	155,008	181,122	192,535	206,182	234,899
Health Expenditure (Not Included Private Health Sector) as a % of National Expenditure	4.99	5.96	5.65	6.20	5.94	5.92
Mid Year Population ('000 Persons)	20,585	20,771	20,966	21,203	21,444	21,670
Per capita Health Expenditure (Not Included Private Health Sector) (Rs.)	5,846	7,463	8,639	9,081	9,615	10,840
GNP/GNI (Rs. Billion)	9,366	10,125	10,676	11,676	13,065	14,058
Health Expenditure as a % of GNP	1.28	1.53	1.70	1.65	1.58	1.67

*Provisional

Source : Central Bank of Sri Lanka -Annual Report 2018, Department of National Budget - Budget Estimate 2019
 Ministry of Finance and Planning Sri Lanka - Annual Report 2018,
 Department of state Accounts, General Treasury - Financial Statements for the year ended 31st December 2018
 Ministry of Health - Appropriation Account - 2018

Table 14. Summary of Health Expenditure and Source of Fund, 2013 - 2018

Rs. Million

Description	2013	2014	2015	2016	2017*	2018*
Government Health Expenditure (Not Included Private Health Sector)						
Recurrent Expenditure	100,968	130,360	149,790	164,397	172,525	198,334
Capital Expenditure	19,378	24,648	31,332	28,138	33,657	36,565
Total	120,346	155,008	181,122	192,535	206,182	234,899
Source of Fund						
Consolidated Fund	111,988	136,123	168,904	184,754	197,912	226,160
Foreign Aid	8,358	18,885	12,218	7,781	8,270	8,739
Total	120,346	155,008	181,122	192,535	206,182	234,899

*Provisional

Source : Central Bank of Sri Lanka -Annual Report 2018, Department of National Budget - Budget Estimate 2019
 Ministry of Finance and Planning Sri Lanka - Annual Report 2018,
 Department of state Accounts, General Treasury - Financial Statements for the year ended 31st December 2018
 Ministry of Health - Appropriation Account - 2018

Table 15. Summary of Health Expenditure by Programme, 2018

Rs. Million

Programme	Health Expenditure			
	Ministry of Health	Department of Ayurveda	Provincial Health	Total
Recurrent Expenditure				
Operational Activities	120,485			
Minister's Office	83			
Ministry Administration and Establishment Services	4,442			
Medical Supply Division	43,777			
Hospital Operation	72,183			
Development Activities	13,963			
Human Resources Development	10,497			
Health Promotion and Disease Prevention	1,158			
National Nutrition Programme	1,982			
Medical Research	326			
Total Recurrent Expenditure	134,448	1,558	62,328	198,334
Capital Expenditure				
Operational Activities	9,683			
Minister's Office	15			
Ministry Administration and Establishment Services	1,753			
Medical Supply Division	29			
Hospital Operation	7,886			
Development Activities	22,853			
Human Resources Development	1,561			
Hospital Development Project	18,072			
Health Promotion and Disease Prevention	517			
Control of Communicable and Non Communicable Diseases	2,513			
National Nutrition Programme	125			
Medical Research	52			
Promotion of Indigenous Medicine	13			
Total Capital Expenditure	32,536	474	3,555	36,565
Total Health Expenditure (Recurrent + Capital)				
Operational Activities	130,168		-	-
Minister's Office	98			
Ministry Administration and Establishment Services	6,195			
Medical Supply Division	43,806			
Hospital Operation	80,069			
Development Activities	36,816			
Human Resources Development	12,058			
Hospital Development Project	18,072			
Health Promotion and Disease Prevention	1,675			
Control of Communicable and Non Communicable Diseases	2,513			
National Nutrition Programme	2,107			
Medical Research	378			
Promotion of Indigenous Medicine	13			
Grand Total (Recurrent + Capital)	166,984	2,032	65,882	234,899

Source : Central Bank of Sri Lanka - Annual Report 2018, Department of National Budget - Budget Estimate 2019
 Ministry of Finance and Planning Sri Lanka - Annual Report 2018,
 Department of State Accounts, General Treasury - Financial Statements for the year ended 31st December 2018
 Ministry of Health, Nutrition & Indigenous Medicine - Appropriation Account - 2018

Table 16. Indoor Morbidity and Mortality Statistics by Broad Disease Groups, 2018

Disease Group	Total*	Live Discharges (%)										Deaths
		Sex		Age Group							Unknown	
		Male	Female	under 1	1 - 4	5 - 16	17 - 49	50-69	70+			
1 Intestinal infectious diseases (A00-A09)	128,389	47.0	53.0	7.6	21.2	16.9	25.9	17.8	10.6	0.0	82	
2 Tuberculosis (A15-A18)	8,626	68.9	31.1	0.2	0.5	2.1	38.1	45.1	13.9	0.1	269	
3 Other bacterial diseases (A20-A49)	27,484	68.8	31.2	10.8	6.9	7.2	38.2	27.3	9.6	0.0	5,395	
4 Infections with sexual mode of transmission (A50-A64)	610	43.3	56.7	3.6	0.3	5.6	61.7	21.5	4.8	2.5	2	
5 Viral diseases (A80-B34)	285,510	56.1	43.9	4.0	12.6	18.4	43.2	16.6	5.2	0.1	153	
6 Malaria (B50-B54)	60	53.3	46.7	1.7	10.0	10.0	51.7	21.7	5.0	-	-	
7 Helminthiasis (B76, B77, B79, B80)	89	48.3	51.7	-	23.6	56.2	7.9	12.4	-	-	-	
8 Other infectious and parasitic diseases	14,861	50.2	49.8	2.3	8.6	14.7	44.1	23.9	6.4	0.0	14	
9 Neoplasms (C00-D48)	158,058	43.5	56.5	0.4	2.8	5.2	26.0	50.4	15.3	0.0	5,789	
10 Iron deficiency anaemias (D50)	8,819	34.8	65.2	1.0	2.8	3.9	32.9	33.7	25.7	-	12	
11 Haem. con. and other diseases of blood and ... (D51-D89)	45,468	51.8	48.2	1.5	9.2	28.2	26.7	19.9	14.5	0.0	106	
12 Diabetes mellitus (E10-E14)	93,527	45.4	54.6	0.0	0.2	1.1	25.1	55.0	18.5	0.0	709	
13 Malnutrition and vitamin deficiencies (E40-E46, E50-E56)	874	45.6	54.4	3.1	18.4	12.6	24.7	27.4	13.7	0.1	4	
14 Oth eno, nutr and metabo... (E00-E07, E15-E34, E58-E89)	37,884	35.9	64.1	1.5	1.9	4.7	34.8	39.1	18.0	0.1	168	
15 Mental and behavioural disorders (F00-F99)	57,964	59.9	40.1	-	0.5	3.6	61.8	27.1	6.3	0.6	-	
16 Diseases of the nervous system (G00-G98)	76,804	51.2	48.8	2.6	4.8	11.7	40.9	27.9	12.0	0.1	681	
17 Diseases of the eye and adnexa (H00-H59)	170,996	50.9	49.1	0.7	2.4	6.8	24.4	43.6	22.1	0.0	-	
18 Dis of the ear.. (H60-H61, H65-H74, H80-H83, H90-H95)	60,854	46.3	53.7	2.7	10.4	16.7	33.4	26.0	10.7	0.0	-	
19 Rheum. fever and rheum. heart dis. (I00-I02, I05-I09)	4,404	56.1	43.9	-	0.5	13.4	32.5	45.3	8.1	0.2	51	
20 Hypertensive diseases (I10-I15)	101,536	40.0	60.0	0.0	0.0	0.3	20.8	48.1	30.7	0.1	637	
21 Ischaemic heart disease (I20-I25)	136,685	55.5	44.5	0.0	0.0	0.2	18.3	53.1	28.3	0.1	7,409	
22 Other heart diseases (I26-I51)	42,644	51.9	48.1	0.4	0.3	1.7	20.7	44.9	32.0	0.1	3,886	
23 Cerebrovascular disease (I60-I69)	55,672	60.1	39.9	0.0	0.1	0.3	11.5	46.9	41.0	0.2	3,940	
24 Other diseases of the circulatory system (I70-I99)	49,129	59.1	40.9	0.1	0.7	2.3	34.9	46.2	15.8	0.0	186	
25 Influenza (J10-J11)	4,379	45.4	54.6	4.6	17.2	18.4	35.1	18.1	6.6	-	25	
26 Pneumonia (J12-J18)	26,681	52.5	47.5	11.1	17.3	10.2	15.7	27.1	18.6	0.0	3,842	
27 Other dise. of the upper respir. tract (J00-J06, J30-J39)	131,059	50.6	49.4	8.8	21.7	21.1	27.1	14.9	6.3	0.0	26	
28 Diseases of the resp. system exclu... (J20-J22, J40-J98)	474,752	52.3	47.7	7.0	12.7	13.4	20.3	27.8	18.8	0.0	4,900	
29 Diseases of teeth and supporting structure (K00-K014)	19,014	55.7	44.3	0.8	9.1	18.2	41.1	23.5	7.3	0.0	-	
30 Diseases of the gastrointestinal tract (K20-K92)	350,393	53.3	46.7	0.7	2.6	9.9	43.4	31.2	12.2	0.0	2,510	
31 Diseases of skin and subcutaneous tissue (L00-L99)	230,536	56.5	43.5	1.4	4.9	9.1	35.0	34.6	14.9	0.0	87	
32 Disorders of the musculoskeletal system (M00-M99)	197,378	53.0	47.0	0.2	1.1	7.0	45.5	34.0	12.2	0.0	67	
33 Diseases of the urinary system (N00-N39)	327,936	57.4	42.6	1.0	2.4	4.9	40.8	36.3	14.6	0.0	2,841	
34 Diseases of breast (N60-N64)	14,596	8.6	91.4	0.7	0.5	4.4	65.8	22.9	5.7	-	3	
35 Diseases of the male genital organs (N40-N50)	23,120	100.0	-	0.9	6.5	13.8	29.0	30.0	19.8	0.0	5	
36 Disor. of female genito-urinary sys. (N70-N98, N99.2, N99.3)	88,679	-	100.0	0.1	0.2	2.2	70.5	22.6	4.4	0.0	6	
37 Abortions (O00-O08)	51,030	-	100.0	-	-	0.3	99.5	0.1	-	0.1	4	
38 False labour (O47)	14,066	-	100.0	-	-	0.6	99.2	0.1	-	0.1	-	
39 Other obstetric conditions and those admitted...	269,833	-	100.0	-	-	0.3	99.5	0.1	-	0.1	46	
40 Single spontaneous delivery (O80)	180,771	-	100.0	-	-	0.3	99.7	0.0	-	0.1	-	
41 Slow fetal growth, fetal malnutrition and... (P05-P07)	7,752	48.4	51.6	100.0	-	-	-	-	-	-	601	
42 Other conditions originating in the perinatal period (P00-P04, P08-P96)	43,624	49.9	50.1	100.0	-	-	-	-	-	-	630	
43 Congenital malformations deformations... (Q00-Q99)	12,226	59.4	40.6	37.0	29.7	19.1	10.0	3.6	0.6	0.0	561	
44 Signs, symptoms and abnormal clinical findings (R00-R99)	720,577	48.5	51.5	2.3	5.9	11.1	39.3	28.2	13.1	0.0	756	
45 Traumatic injuries (S00-T19, W54)	1,130,084	66.7	33.3	0.5	6.3	16.3	49.7	20.4	6.6	0.1	1,930	
46 Burns and corrosion (T20-T32)	15,605	57.6	42.4	2.4	23.0	17.9	38.9	13.6	4.2	0.0	194	
47 Toxic effects of pesticides (T60.0, T60.1-T60.9)	10,021	63.8	36.2	0.3	4.1	8.9	69.8	14.2	2.6	0.1	354	
48 Snake bites (T63.0)	31,847	60.8	39.2	0.2	2.7	11.4	51.6	28.6	5.5	0.0	61	
49 Tox. eff. of ot. sub. oth tha.. (T36-T59, T61-T62, T63.1-T65)	70,421	49.9	50.1	0.7	8.0	15.6	57.7	14.3	3.7	0.1	248	
50 Effects of unspecified external causes... (T33-T35, T66-T79)	73,719	51.5	48.5	1.4	7.5	20.7	42.1	21.6	6.7	0.0	138	
51 Complications of surgical and medical care... (T80-T88)	15,535	51.2	48.8	4.2	5.9	9.8	39.4	28.0	12.7	0.0	29	
52 Sequelae of injuries, poisoning and of other... (T90-T98)	2,263	61.0	39.0	0.4	2.3	6.6	37.9	35.9	16.8	0.1	13	
53 Persons encountering health services.... (Z00-Z13, Z40-Z54)	703,578	52.6	47.4	2.2	3.6	7.4	37.0	34.5	15.3	0.0	-	
54 Sterilizations (Z30.2)	5,035	1.3	98.7	-	-	-	98.6	0.7	-	0.7	-	
55 Undiagnosed/Uncoded	302,811	48.8	51.2	3.5	5.0	9.5	46.3	25.2	10.4	0.1	3,801	
Total	7,116,268	49.8	50.2	2.7	5.5	10.0	42.7	27.1	11.8	0.1	53,171	

* Total = (Number of Live Discharges + Deaths)

Source : Medical Statistics Unit

Table 17. Trends in Hospital Morbidity and Mortality by Broad Disease Groups, 2010 - 2018

Disease Group by International Classification of Diseases (10th Revision)	Morbidity (Cases per 100,000 population)										Mortality (Cases per 100,000 population)									
	2010 ⁵	2011 ⁵	2012	2013	2014	2015	2016	2017	2018	2010 ⁵	2011 ⁵	2012	2013	2014	2015	2016	2017	2018		
1. Certain infectious and parasitic diseases (A00-B99)	2,693.2	2,202.5	2,364.5	2,208.0	2,102.4	1,984.9	2,061.6	3,309.7	2,148.7	17.2	18.4	16.6	18.4	21.5	22.8	26.0	28.8	27.3		
2. Neoplasms (C00-D48)	403.2	418.8	470.9	477.8	540.0	604.6	640.4	629.6	729.4	21.5	22.2	22.2	22.2	24.0	22.9	24.3	23.0	26.7		
3. Diseases of the blood & blood-forming organs & certain disorders involving the immune mechanism (D50-D89)	124.6	128.9	138.8	144.7	154.9	173.9	195.2	191.2	250.5	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5		
4. Endocrine, nutritional and metabolic diseases (E00-E90)	465.1	455.1	518.3	535.9	524.9	526.9	573.6	555.2	610.5	4.0	4.1	4.0	3.7	3.8	3.9	4.4	4.4	4.1		
5. Mental and behavioural disorders (F00-F99)	213.7	219.0	223.2	227.6	226.9	233.4	244.3	246.1	267.5	-	-	-	-	-	-	-	-	-		
6. Diseases of the nervous system (G00-G99)	313.8	319.3	329.3	323.9	320.1	323.9	324.4	322.8	354.4	3.0	2.6	2.9	2.9	2.9	2.8	2.8	3.0	3.1		
7. Diseases of the eye and adnexa (H00-H59)	646.7	647.0	697.9	699.6	758.8	786.6	832.3	714.6	789.1	-	-	-	-	-	-	-	-	-		
8. Diseases of the ear and mastoid process (H60-H95)	168.9	180.4	184.9	197.8	200.0	219.0	221.6	241.1	280.8	-	-	-	-	-	-	-	-	-		
9. Diseases of the circulatory system (I00-I99)	1,490.1	1,456.1	1,573.1	1,588.4	1,619.5	1,610.4	1,641.6	1,619.5	1,800.0	63.1	61.9	65.4	66.6	69.6	68.6	66.7	70.3	74.3		
10. Diseases of the respiratory system (J00-J99)	2,873.7	2,709.9	2,892.7	2,939.3	2,847.0	3,028.4	2,513.2	2,935.2	2,939.0	24.1	23.1	25.2	28.1	30.1	35.3	30.0	39.6	40.6		
11. Diseases of the digestive system (K00-K93)	1,375.5	1,386.5	1,439.3	1,440.6	1,482.9	1,545.1	1,552.4	1,544.8	1,704.7	12.0	10.1	10.4	11.2	11.6	11.1	11.1	11.1	11.6		
12. Diseases of the skin and subcutaneous tissue (L00-L99)	901.7	903.7	970.0	952.4	1,038.9	991.1	1,121.5	1,045.0	1,063.8	-	0.2	0.1	0.2	0.3	0.4	0.5	0.5	0.4		
13. Diseases of the musculoskeletal system and connective tissue (M00-M99)	708.3	736.8	789.7	768.6	777.1	804.1	838.9	817.2	910.8	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3		
14. Diseases of the genitourinary system (N00-N99)	1,506.8	1,494.3	1,578.3	1,567.0	1,601.3	1,620.8	1,747.4	1,786.3	2,096.6	11.1	11.6	12.1	12.4	13.1	13.0	12.8	12.9	13.2		
15. Pregnancy, childbirth and the puerperium ^{1,4} (O00-O99)	4,613.9	4,668.2	5,299.6	5,389.3	5,266.0	5,226.2	5,167.6	5,211.2	5,619.5	1.0	0.9	0.9	1.0	0.6	0.6	0.6	0.7	0.9		
16. Certain conditions originating in the perinatal period ^{2,3} (P00-P96)	-	-	9,188.4	11,448.5	12,729.4	13,138.4	13,565.6	14,182.4	15,658.1	-	-	222.2	389.2	360.3	372.1	308.1	338.9	375.2		
17. Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	61.9	52.9	55.8	63.0	58.7	54.8	55.0	54.0	56.4	3.1	2.6	2.6	2.7	2.9	3.2	2.4	2.5	2.6		
18. Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified (R00-R99)	2,143.7	2,030.8	2,300.1	2,430.2	2,549.7	2,708.0	2,854.7	3,051.5	3,325.2	9.7	7.7	8.6	9.4	6.6	4.8	3.1	3.3	3.5		
19. Injury, poisoning and certain other consequences of external causes (S00-T98)	4,832.9	4,880.2	5,316.3	5,210.7	5,289.8	5,446.5	5,753.6	5,818.9	6,227.5	15.2	15.2	13.9	12.5	12.4	12.7	12.9	13.1	13.7		

Source : Medical Statistics Unit

¹ Rate Per 100,000 females of the reproductive age group² Per 100,000 live births / infant population³ Not calculated for the year 2010 - 2011 since infant population was not available

Excludes:

⁴ Single spontaneous delivery, false labour and those admitted and discharged before delivery⁵ Mullaitivu district

Table 18. Trends in Hospitalization and Hospital Deaths of Selected Diseases, 2011 - 2018

Disease and ICD Code	Number of Hospitalizations per 100,000 Population										Number of Deaths per 100,000 Population							
	2011 ²	2012	2013	2014	2015	2016	2017	2018	2011 ²	2012	2013	2014	2015	2016	2017	2018		
Intestinal infectious diseases (A00 - A09)	684.3	634.4	607.5	619.8	625.9	619.4	512.9	592.5	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.4		
Tuberculosis (A15 - A19)	45.1	39.0	40.6	41.5	40.8	42.2	37.9	39.8	1.6	1.5	1.6	1.6	1.5	1.3	1.2	1.2		
Diphtheria (A36)	-	-	-	-	0.0	0.0	-	-	-	-	-	-	-	-	-	-		
Whooping cough (A37)	0.3	0.5	0.2	0.3	0.5	0.3	0.1	0.3	-	-	-	-	0.0	-	-	-		
Septicaemia (A40, A41)	17.7	33.6	38.1	44.2	47.0	56.1	60.7	63.3	11.3	12.6	14.4	17.5	18.7	22.6	24.3	23.8		
Rabies (A82)	0.7	0.2	0.2	0.3	0.7	0.7	0.8	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1		
Measles (B05)	0.5	0.4	23.2	16.5	15.5	2.2	0.6	0.4	-	-	-	-	0.0	-	-	-		
Viral hepatitis (B15 - B19)	12.4	15.9	16.1	15.2	12.9	7.6	5.4	4.8	0.1	-	-	-	0.0	0.0	0.0	0.0		
Malaria (B50 - B54)	0.7	0.6	0.5	0.4	0.2	0.3	0.4	0.3	-	-	-	-	-	-	-	-		
Helminthiasis (B76, B77, B79, B80)	1.0	1.2	1.3	0.6	0.5	0.5	0.3	0.4	-	-	-	-	-	-	-	-		
Diabetes mellitus (E10 - E14)	345.9	388.1	411.4	391.8	381.8	414.6	396.3	431.6	3.6	3.3	3.1	3.2	3.3	3.6	3.7	3.3		
Nutritional deficiencies (E40 - E46, E50 - E56)	7.2	7.6	7.9	4.6	6.7	5.2	4.8	4.0	0.1	-	-	-	0.1	0.0	0.0	0.0		
Anaemias (D50 - D64)	98.7	105.6	111.9	121.7	137.3	156.9	151.1	189.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3		
Hypertensive disease (I10 - I15)	470.2	486.4	489.3	477.7	463.6	464.3	429.8	468.6	2.9	2.6	2.8	3.1	3.4	3.1	3.0	2.9		
Ischaemic heart disease (I20 - I25)	455.4	494.9	506.1	524.3	532.1	540.5	546.8	630.8	25.3	27.6	29.1	30.6	29.7	28.5	31.0	34.2		
Asthma (J45 - J46)	893.6	928.0	910.8	916.3	911.0	787.3	803.3	811.9	2.9	3.1	3.0	2.9	3.2	2.5	2.9	2.6		
Diseases of the liver (K70 - K76)	68.4	77.5	82.2	83.2	76.3	77.2	74.9	82.1	7.8	8.3	8.7	9.1	8.7	8.9	8.9	8.9		
Abortions ¹ (O00 - O08)	859.3	959.3	922.4	893.4	870.4	861.3	864.4	895.1	0.1	-	0.1	0.2	0.1	0.0	0.1	0.1		

¹ Rate per 100,000 females of the reproductive age group

Excludes:

² Mullaitivu district

Source : Medical Statistics Unit

Table 19. Leading Causes of Hospitalization, 2018

Rank Order	ICD Code (10 th Revision)	Causes of Hospitalization	Number of Cases	Proportionate Morbidity	Cases per 100,000 Population
1	S00 - T19, W54	Traumatic injuries	1,130,084	19.1	5,215.0
2	R00 - R99	Symptoms, signs and abnormal clinical and laboratory findings	720,577	12.2	3,325.2
3	J20 - J22, J40 - J98	Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza	474,752	8.0	2,190.8
4	K20 - K92	Diseases of the gastrointestinal tract	350,393	5.9	1,616.9
5	N00 - N39	Diseases of the urinary system	327,936	5.5	1,513.3
6	A80 - B34	Viral diseases	285,510	4.8	1,317.5
7	O10 - O46, O48 - O75, O81 - O99, Z35	Direct and indirect obstetric causes	269,340	4.6	1,242.9
8	L00 - L99	Diseases of skin and subcutaneous tissue	230,536	3.9	1,063.8
9	M00 - M99	Diseases of the musculoskeletal system and connective tissue	197,378	3.3	910.8
10	H00 - H59	Diseases of the eye and adnexa	170,996	2.9	789.1
11	C00 - D48	Neoplasms	158,058	2.7	729.4
12	I20 - I25	Ischaemic heart disease	136,685	2.3	630.8
	A00 - T98, Z35, Z00 - Z13, Z30.2, Z40 - Z54, W54	All causes ¹	5,914,549	100.0	27,293.7

¹ Analysed all discharges (Live Discharges+Deaths) excluding ;
Single spontaneous delivery, False labour and those admitted and discharged before delivery,
Persons encountering health services for examination, investigation and for specific procedures of health care,
Undiagnosed/uncoded

Source : Medical Statistics Unit

Table 20. Leading Causes of Hospital Deaths, 2018

Rank Order	ICD Code (10 th Revision)	Causes of Death	Number of Deaths	Proportionate Mortality	Deaths Per 100,000 Population
1	I20 - I25	Ischaemic heart disease	7,409	15.0	34.2
2	C00 - D48	Neoplasms ¹	5,789	11.7	26.7
3	A20 - A49	Zoonotic and other bacterial diseases	5,395	10.9	24.9
4	J20 - J22, J40 - J98	Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza	4,900	9.9	22.6
5	I60 - I69	Cerebrovascular disease	3,940	8.0	18.2
6	I26 - I51	Pulmonary heart disease and diseases of the pulmonary circulation	3,886	7.9	17.9
7	J12 - J18	Pneumonia	3,842	7.8	17.7
8	N00 - N39	Diseases of the urinary system	2,841	5.8	13.1
9	K20 - K92	Diseases of the gastro-intestinal tract	2,510	5.1	11.6
10	S00 - T19, W54	Traumatic injuries	1,930	3.9	8.9
11	R00 - R99	Symptoms, signs and abnormal clinical and laboratory findings	756	1.5	3.5
12	E10 - E14	Diabetes mellitus	709	1.4	3.3
13	G00 - G98	Disease of the nervous system	681	1.4	3.1
14	I10 - I15	Hypertensive disease	637	1.3	2.9
15	P00 - P04, P08 - P96	Conditions originating in the perinatal period excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition	630	1.3	2.9
	A00 - T98, Z00 - Z13, Z35, Z40 - Z54, W54	All causes ²	49,370	100.0	227.8

¹ Includes deaths reported (not classified by type of neoplasm) from Cancer Institute, Maharagama

² Analysed all deaths excluding undiagnosed/uncoded

Source : Medical Statistics Unit

Table 21. Leading Causes of Hospitalization, 2009 - 2018¹

Disease and (ICD (10 th Revision) Code	2018		2017		2016		2015		2014		2013		2012		2011 ²		2010 ²		2009 ³	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Traumatic injuries S00 - T19, W54	1	19.1	1	18.4	1	19.3	1	18.5	1	18.4	1	18.1	1	17.0 ⁴	1	17.0 ⁴	1	16.2 ⁴	1	15.6 ⁴
Symptoms, signs and abnormal clinical and laboratory findings R00 - R99	2	12.2	2	11.5	2	11.5	2	11.2	2	10.7	2	10.4	2	9.8	2	9.4	2	9.5	2	9.8
Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza J20 - J22, J40 - J98	3	8.0	4	8.3	3	7.6	3	9.4	3	9.0	3	9.4	3	9.1	3	9.3	3	9.4	3	9.6
Diseases of the gastro-intestinal tract K20 - K92	4	5.9	5	5.5	4	5.9	4	6.0	4	5.9	5	5.8	5	5.8	5	6.1	5	5.7	5	5.4
Diseases of the urinary system N00 - N39	5	5.5	6	4.7	6	4.8	7	4.4	7	4.4	7	4.3	7	4.3	7	4.3	8	4.0	8	3.8
Viral diseases A80 - B34	6	4.8	3	9.7	5	5.0	5	4.8	5	5.5	4	6.0	4	6.7	4	6.2	4	7.9	4	9.1
Direct and indirect obstetric causes O10 - O46, O48 - O75, O81 - O99, Z35	7	4.5	7	4.3	7	4.6	6	4.7	6	4.8	6	5.0	6	4.9	6	4.9	6	4.7	6	4.6
Diseases of skin and subcutaneous tissue L00 - L99	8	3.9	8	3.9	8	4.5	8	4.1	8	4.4	8	4.1	8	4.1	8	4.2	7	4.0	7	3.9
Diseases of the musculoskeletal system and connective tissue M00 - M99	9	3.3	9	3.1	9	3.4	9	3.3	9	3.3	9	3.3	9	3.4	9	3.4	10	3.2	10	3.1
Diseases of the eye and adnexa H00 - H59	10	2.9	10	2.7	10	3.4	10	3.2	10	3.2	10	3.0	10	3.0	11	3.0	11	2.9	12	2.9
Neoplasms C00 - D48	11	2.7	11	2.4	11	2.6	12	2.5	13	2.3	15	2.0	15	2.0	15	2.0	16	1.8	16	1.7
Ischaemic heart disease I20 - I25	12	2.3	13	2.1	13	2.2	14	2.2	14	2.2	13	2.2	13	2.1	13	2.2	13	2.1	14	2.0

Excludes:

¹ Single spontaneous delivery, False labour and those admitted and discharged before delivery.

Persons encountering health services for examination, investigation and for specific procedures of health care, Undiagnosed/uncoded

² Mullaitivu District³ Kilinochchi and Mullaitivu Districts⁴ Bitten or Struck by dog (W54)

Source : Medical Statistics Unit

Table 22. Leading Causes of Hospital Deaths, 2010 - 2018

Disease and ICD (10 th Revision) Code	2018		2017		2016		2015		2014		2013		2012		2011 ²		2010 ²	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Ischaemic heart disease I20 - I25	1	15.0	1	14.2	1	14.1	1	14.2	1	14.8	1	14.7	1	14.4	1	13.4	1	12.8
Neoplasms ¹ C00 - D48	2	11.7	3	10.5	2	12.0	2	11.0	2	11.7	2	11.2	2	11.6	2	11.8	2	11.1
Zoonotic and other bacterial diseases A20 - A49	3	10.9	2	11.5	3	11.6	3	9.7	3	9.1	6	7.9	6	7.1	6	6.7	6	6.6
Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza J20 - J22, J40 - J98	4	9.9	4	9.8	5	8.3	4	9.2	6	8.0	5	7.9	5	7.2	5	6.9	5	7.0
Cerebrovascular disease I60 - I69	5	8.0	7	7.7	6	8.2	6	8.2	5	8.4	3	8.6	4	8.7	3	8.7	4	8.7
Pulmonary heart disease and diseases of the pulmonary circulation I26 - I51	6	7.9	5	8.5	4	8.7	5	8.3	4	8.6	4	8.4	3	9.0	4	8.7	3	8.7
Pneumonia J12 - J18	7	7.8	6	8.2	7	6.4	7	7.5	7	6.6	8	6.1	8	5.7	9	5.2	9	5.2
Diseases of the urinary system N00 - N39	8	5.8	8	5.9	8	6.3	8	6.2	8	6.3	7	6.2	7	6.3	7	5.7	8	5.7
Diseases of the gastro-intestinal tract K20 - K92	9	5.1	9	5.1	9	5.5	9	5.3	9	5.7	9	5.7	9	5.4	8	5.4	7	6.2
Traumatic injuries S00 - T19, W54	10	3.9	10	3.8	10	3.9	10	3.8	10	3.5	11	3.3	11	3.7	11	3.6	11	3.7
Symptoms, signs and abnormal clinical and laboratory findings R00 - R99	11	1.5	12	1.5	12	1.6	11	2.3	11	3.2	10	4.8	10	4.5	10	4.1	10	5.0
Diabetes mellitus E10 - E14	12	1.4	11	1.7	11	1.8	13	1.6	13	1.6	13	1.6	14	1.7	14	1.9	16	1.7
Disease of the nervous system G00 - G98	13	1.4	14	1.4	14	1.4	17	1.3	16	1.4	15	1.4	16	1.5	19	1.4	18	1.6

¹ Includes deaths reported from the Cancer Hospital (not analysed by site and type of neoplasm)

² Excludes Mullaitivu District

Source : Medical Statistics Unit

Table 23. Leading Causes of Hospitalization by District, 2018¹

Disease and ICD (10 th Revision) Code	Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Vavuniya	Mannar	Killinochchi	Mullaitivu	Batticaloa	Ampara ²	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Ratnapura	Kegalle	
Traumatic injuries S00 - T19, W54	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Symptoms, signs and abnormal clinical and laboratory findings R00 - R99	2	2	2	2	2	2	2	2	2	2	2	1	1	2	3	2	2	2	2	2	2	2	2	2	2	2	2
Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza J20 - J22, J40 - J98	3	6	3	3	3	4	3	3	3	3	3	3	4	4	4	3	3	3	3	4	3	3	3	3	3	3	3
Diseases of the gastro-intestinal tract K20 - K92	4	7	4	4	4	6	4	4	6	4	10	5	8	9	6	6	4	5	4	6	4	4	4	5	6	4	
Diseases of the urinary system N00 - N39	5	4	7	8	4	5	10	5	4	5	8	7	7	3	2	9	5	6	6	7	5	6	5	4	4	6	
Viral diseases A80 - B34	6	5	6	7	8	9	7	9	9	6	5	10	6	7	9	4	6	8	5	5	7	7	7	7	5	5	
Direct and indirect obstetric causes O10 - O46, O48 - O75, O81 - O99, Z35	7	8	8	6	9	7	5	7	5	9	4	6	3	5	5	5	7	4	7	3	6	5	8	6	8	10	
Diseases of skin and subcutaneous tissue L00 - L99	8	9	5	5	11	8	12	8	10	7	7	9	9	8	8	8	8	7	8	8	8	8	9	8	7	7	
Diseases of the musculoskeletal system and connective tissue M00 - M99	9	12	9	9	10	10	6	10	8	8	6	4	5	6	7	7	9	9	9	14	9	9	6	9	10	8	
Diseases of the eye and adnexa H00 - H59	10	10	13	12	7	3	11	11	7	22	9	14	31	18	20	12	11	10	14	9	15	10	12	15	9	16	
Neoplasms C00 - D48	11	3	22	27	6	29	23	6	30	30	11	31	28	21	35	10	35	21	18	34	12	27	10	26	15	25	
Ischaemic heart disease I20 - I25	12	11	10	11	14	11	14	12	13	12	17	16	10	20	14	18	14	17	10	12	10	12	16	14	14	12	

Excludes:

Source : Medical Statistics Unit

¹ Single spontaneous delivery, False labour and those admitted and discharged before delivery.² Persons encountering health services for examination, investigation and for specific procedures of health care, Undiagnosed/uncoded³ Includes Kalumalai RDHS Division

Table 24. Leading Causes of Hospital Deaths by District, 2018

Disease and ICD (10 th Revision) Code	Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Vavunya	Mannar	Kilinochchi	Mullaitivu	Batticaloa	Ampara ²	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Ratnapura	Kegalle
Ischaemic heart disease I20 - I25	1	2	1	1	2	1	3	1	1	3	3	2	7	2	1	1	1	1	1	2	2	1	4	2	1	2
Neoplasms ¹ C00 - D48	2	1	8	9	1	10	7	2	9	8	4	10	3	14	9	2	9	8	2	11	4	3	1	5	7	8
Zoonotic and other bacterial diseases A20 - A49	3	3	2	2	3	2	6	9	5	5	2	5	4	8	12	8	2	2	4	4	1	2	3	1	2	5
Diseases of the respiratory system excluding diseases of upper respiratory tract, pneumonia and influenza J20 - J22, J40 - J98	4	4	6	5	4	5	5	3	2	4	1	3	7	9	9	3	5	6	5	3	6	6	6	4	5	1
Cerebrovascular disease I60 - I69	5	5	7	4	5	4	2	4	4	9	5	5	6	22	12	5	6	5	3	7	7	4	8	3	4	4
Pulmonary heart disease and diseases of the pulmonary circulation I26 - I51	6	6	3	3	6	6	1	10	6	1	7	3	1	3	4	6	4	3	6	1	9	8	5	7	6	3
Pneumonia J12 - J18	7	9	4	6	8	3	4	5	3	2	10	7	4	6	2	10	3	7	8	6	3	7	2	7	3	6
Diseases of the urinary system N00 - N39	8	8	9	8	7	7	10	8	7	6	8	1	2	6	3	7	7	4	9	8	5	5	7	6	8	11
Diseases of the gastro-intestinal tract K20 - K92	9	7	5	7	9	9	8	7	8	9	9	12	11	22	5	14	12	10	7	5	10	10	10	10	9	7
Traumatic injuries S00 - T19, W54	10	10	10	11	10	8	12	6	10	12	6	8	11	3	6	9	9	10	10	13	8	9	9	9	10	9
Signs, symptoms and abnormal clinical and laboratory findings R00 - R99	11	15	11	13	17	14	8	13	11	7	14	15	9	1	17	4	11	18	19	10	16	19	17	21	11	10
Diabetes mellitus E10 - E14	12	11	13	20	13	13	16	11	17	13	17	21	24	14	17	20	31	33	12	14	15	24	12	18	17	14
Diseases of the nervous system G00 - G98	13	13	15	15	12	19	19	14	15	15	13	12	15	12	17	20	16	13	13	18	12	11	11	12	13	12
Hypertensive diseases I10 - I15	14	16	16	17	15	11	15	12	14	11	11	23	13	22	6	16	18	24	11	15	21	33	14	18	15	13
Conditions originating in the perinatal period excluding disorders related to short gestation, low birth weight, slow fetal growth and fetal malnutrition P00 - P04, P08 - P96	15	14	17	12	14	18	12	14	20	21	15	9	9	3	9	11	8	9	17	9	17	16	12	13	18	15

Includes :

¹ Deaths reported from Cancer Hospital (not analysed by site and type of neoplasm)

² Kalmunai RDHS Division

Source : Medical Statistics Unit

Table 25. Cases and Deaths of Poisoning and Case Fatality Rate¹ by Regional Director of Health Services Division, 2018

RDHS Division	Poisoning by Drugs, Medicaments and Biological Substances		Toxic Effects of Pesticides				Toxic Effects of Other Substances Mainly Non Medicinal		Total				Case Fatality Rate
	Cases	Deaths	Organophosphate and Carbamate Insecticides		Other Pesticides		Cases	Deaths	Number		Rate per 100,000 Population		
			Cases	Deaths	Cases	Deaths			Cases	Deaths	Cases	Deaths	
Colombo	2,138	2	90	3	177	6	2,637	17	5,042	28	206.7	1.1	0.56
Gampaha	2,301	4	174	23	145	7	2,062	11	4,682	45	194.4	1.9	0.96
Kalutara	1,484	3	74	3	137	1	1,671	8	3,366	15	262.8	1.2	0.45
Kandy	1,907	3	312	11	115	3	2,857	4	5,191	21	353.6	1.4	0.40
Matale	644	-	385	13	119	4	1,528	2	2,676	19	515.6	3.7	0.71
Nuwara Eliya	536	-	571	12	61	1	2,122	4	3,290	17	431.2	2.2	0.52
Galle	1,105	1	79	12	55	8	1,674	10	2,913	31	259.2	2.8	1.06
Matara	772	4	69	13	78	13	1,249	23	2,168	53	252.7	6.2	2.44
Hambantota	842	3	311	4	208	4	1,411	11	2,772	22	423.2	3.4	0.79
Jaffna	765	2	260	11	72	1	3,448	12	4,545	26	741.4	4.2	0.57
Kilinochchi	258	1	210	3	35	-	1,386	-	1,889	4	1,499.2	3.2	0.21
Mannar	132	-	14	-	5	-	790	1	941	1	863.3	0.9	0.11
Vavuniya	250	2	192	7	10	-	1,210	2	1,662	11	888.8	5.9	0.66
Mullaitivu	162	-	179	1	13	-	695	-	1,049	1	1,092.7	1.0	0.10
Batticaloa	917	4	233	6	29	-	2,713	7	3,892	17	682.8	3.0	0.44
Ampara	346	1	191	9	48	1	580	1	1,165	12	498.1 ²	2.1 ²	1.03
Trincomalee	690	4	163	5	91	-	1,327	1	2,271	10	539.4	2.4	0.44
Kalmunai	414	1	96	-	105	1	1,801	1	2,416	3			0.12
Kurunegala	2,145	3	1,136	48	122	2	2,585	22	5,988	75	350.0	4.4	1.25
Puttalam	918	1	363	16	125	1	1,454	5	2,860	23	346.7	2.8	0.80
Anuradhapura	1,504	1	692	37	479	5	3,301	8	5,976	51	642.6	5.5	0.85
Polonnaruwa	801	2	309	16	147	2	1,440	5	2,697	25	618.6	5.7	0.93
Badulla	787	2	468	17	59	1	2,720	7	4,034	27	462.1	3.1	0.67
Moneragala	542	-	334	5	89	1	1,130	3	2,095	9	426.7	1.8	0.43
Rathnapura	1,180	4	345	9	90	-	1,495	29	3,110	42	267.4	3.6	1.35
Kegalle	564	-	147	8	10	-	1,031	6	1,752	14	198.2	1.6	0.80
Sri Lanka	24,104	48	7,397	292	2,624	62	46,317	200	80,442	602	371.2	2.8	0.75

¹ Deaths per 100 cases² Includes Kalmunai data

Source : Medical Statistics Unit

Table 26. Distribution of Patients with Mental Disorders by Regional Director of Health Services Division, 2018

RDHS Division	Dementia	Mental and Behavioral Disorders		Schizophrenia, Schizotypal and Delusional Disorders	Mood Disorders	Neurotic, Stress-Related Somatoform Disorders	Mental Retardation Related Disorders	Behavioral and Emotional Disorders Usually in Childhood and Adolescence	Other and Unspecified Mental Disorders	Total
		Due to Use of Alcohol	Due to Other Psychoactive Substance Use							
Colombo	454	1,372	839	4,695	4,170	668	254	148	1,143	13,743
Gampaha	72	1,319	529	1,036	1,732	311	3	46	496	5,544
Kalutara	44	700	121	508	470	81	8	32	543	2,507
Kandy	88	897	114	520	2,251	388	11	67	336	4,672
Matale	25	294	18	247	543	111	10	38	104	1,390
Nuwara Eliya	27	341	14	249	463	86	1	41	179	1,401
Galle	67	534	11	923	707	93	9	35	132	2,511
Matara	22	394	18	223	439	58	2	10	243	1,409
Hambantota	32	83	32	327	253	70	-	10	140	947
Jaffna	29	263	10	748	324	379	15	28	185	1,981
Kilinochchi	19	157	87	290	194	81	13	15	59	915
Mullaitivu	2	35	5	24	98	7	1	4	43	219
Vavuniya	6	45	9	274	240	89	-	3	55	721
Mannar	5	50	4	108	71	12	1	2	20	273
Batticaloa	16	302	47	546	474	152	7	99	210	1,853
Ampara	17	46	12	246	257	32	-	10	66	686
Kalmunai	12	59	10	447	107	522	-	13	42	1,212
Trincomalee	20	44	69	165	306	81	12	14	111	822
Kurunegala	83	703	69	375	1,556	88	8	103	230	3,215
Puttalam	8	269	24	100	139	48	1	7	84	680
Anuradhapura	55	279	199	801	1,238	201	60	41	466	3,340
Polonnaruwa	26	210	62	313	407	156	7	3	171	1,355
Badulla	48	205	153	800	380	54	5	81	997	2,723
Monaragala	17	87	39	172	307	57	1	5	126	811
Ratnapura	63	350	21	835	293	54	-	104	188	1,908
Kegalle	18	346	28	145	467	57	1	5	59	1,126
Sri Lanka	1,275	9,384	2,544	15,117	17,886	3,936	430	964	6,428	57,964

Source : Medical Statistics Unit

Table 27. Case Fatality Rate¹ for Selected Diseases, 2014 - 2018

Disease and ICD Code	2014			2015			2016			2017			2018		
	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate	Cases	Deaths	Case Fatality Rate
Typhoid and para typhoid (A01)	1,753	5	0.3	1,298	-	-	1,109	-	-	942	1	0.1	782	1	0.1
Tetanus (A34, A35)	99	3	3.0	87	5	5.7	74	3	4.1	138	-	-	73	4	5.5
Shigellosis (A03)	2,097	1	0.0	1,737	-	-	1,236	4	0.3	917	1	0.1	1,005	2	0.2
Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight (P05 - P07)	7,434	571	7.7	7,455	586	7.9	6,463	520	8.0	7,245	557	7.7	7,752	601	7.8
Measles (B05)	3,436	1	0.0	3,240	1	0.0	457	-	-	138	-	-	78	-	-
Whooping cough (A37)	68	-	-	105	1	1.0	70	-	-	30	-	-	60	-	-
Viral hepatitis (B15 - B19)	3,164	7	0.2	2,706	6	0.2	1,617	6	0.4	1,151	3	0.3	1,035	4	0.4
Malaria (B50 - B54)	75	-	-	48	-	-	56	-	-	88	-	-	60	-	-
Tetanus neonatorum (A33)	-	-	-	-	-	-	2	-	-	4	-	-	4	-	-
Diseases of the liver (K70 - K76)	17,283	1,882	10.9	16,005	1,819	11.4	16,361	1,882	11.5	16,061	1,898	11.8	17,798	1,929	10.8
Septicaemia (A40, A41)	9,171	3,634	39.6	9,845	3,930	39.9	11,889	4,782	40.2	13,022	5,208	40.0	13,725	5,155	37.6
Snake bites (T63.0)	37,309	94	0.3	36,631	78	0.2	34,494	55	0.2	31,361	66	0.2	31,847	61	0.2
Hypertensive diseases (I10 - I15)	99,224	649	0.7	97,207	713	0.7	98,437	649	0.7	92,163	643	0.7	101,536	637	0.6
Ischaemic heart disease (I20 - I25)	108,905	6,346	5.8	111,564	6,221	5.6	114,609	6,041	5.3	117,250	6,649	5.7	136,685	7,409	5.4
Pneumonia (J12 - J18)	23,062	2,802	12.1	26,451	3,288	12.4	22,116	2,738	12.4	25,777	3,856	15.0	26,681	3,842	14.4
Asthma (J45 - J46)	190,333	612	0.3	191,004	667	0.3	166,935	529	0.3	172,262	630	0.4	175,937	572	0.3
Bacterial meningitis (G00, G03)	3,813	95	2.5	3,167	104	3.3	3,791	106	2.8	4,231	108	2.6	3,895	100	2.6

¹ Deaths per 100 cases

Source : Medical Statistics Unit

Table 28. Inpatients Treated and Hospital Deaths by Type of Institution and RDHS Division, 2018

District	Teaching Hospitals		Provincial General Hospitals		District General Hospitals		Base Hospitals Type A		Base Hospitals Type B		Divisional Hospitals Type A		Divisional Hospitals Type B		Divisional Hospitals Type C		Other Hospitals with Indoor Patients		Total		Inpatients per 1,000 Population	Hospital Deaths per 100 Cases
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths		
Colombo	572,050	7,293			178,802	1,227	23,959	187	9,745	17	47,586	76	13,423	31	127,901	2,267	973,466	11,098	399	1.1		
Gampaha	143,591	2,147	186,607	1,644	80,330	596	41,029	237	50,806	152	9,768	19	35,539	34	25,934	265	573,604	5,094	238	0.9		
Kalutara			102,571	1,051	148,408	1,227	17,769	30	14,613	26	42,500	79	15,728	13			341,589	2,426	267	0.7		
Kandy	319,494	3,371	40,730	243			63,247	488			58,794	127	60,332	62	4,753	6	547,350	4,297	373	0.8		
Matale			80,564	680	69,553	453					18,913	32	23,070	34			192,100	1,199	370	0.6		
Nuwara Eliya			53,909	540	24,289	223	21,746	87	8,728	7	26,144	48	29,386	40			164,202	945	215	0.6		
Galle	197,928	2,833			95,869	636	11,198	70	14,425	2	32,364	30	27,640	16	1,420		380,844	3,587	339	0.9		
Matara			127,128	1,412			43,360	198	21,377	32	27,443	49	10,117	2			229,425	1,693	267	0.7		
Hambantota			70,796	422	41,620	412	38,639	113	7,251	10	45,960	34	24,736	8			229,002	999	350	0.4		
Jaffna	128,105	1,415	60,303	312	18,985	26			17,009	15	14,427	2	1,154	2	1,154		239,983	1,770	391	0.7		
Kilinochchi			43,566	109			3,686	1			4,171		10,056	3			61,479	113	488	0.2		
Mullaitivu			19,712	93	2,661		12,276	4	1,298		1,286		1,747	1			38,980	98	406	0.3		
Vavuniya			61,159	438			5,564	17			1,672	5	5,503	1			73,898	461	395	0.6		
Mannar			26,070	153			3,173	5			6,877		2,453		284		38,857	158	356	0.4		
Batticaloa	100,619	547			40,202	104	37,339	13	17,188	6	17,211	8	23,053	3			235,612	681	413	0.3		
Ampara ¹			57,143	473	137,182	596	48,529	93			16,461	12	33,382	8	293		292,990	1,182	407	0.4		
Trincomalee			54,826	281	62,594	209	4,659	4					28,257	38	3,284		153,620	532	365	0.3		
Kurunegala					63,010	531	90,766	489	83,640	146	46,603	76	31,137	17			515,285	4,310	301	0.8		
Puttalam			58,619	630	47,744	290	42,039	430	15,074	37	11,175	14	13,427	3			188,078	1,404	228	0.7		
Anuradhapura	162,854	2,515					49,930	105	38,606	57	46,812	68	45,562	47	3,341		347,105	2,792	373	0.8		
Polonnaruwa			118,851	1,217			28,811	120	10,938	33	21,072	15	12,824	9			192,496	1,394	442	0.7		
Badulla			88,066	763			21,868	192	18,978	42	34,031	32	35,044	33			311,506	2,123	357	0.7		
Monaragala			69,527	481			48,579	167	6,880	8	22,074	28	26,376	18			173,436	702	353	0.4		
Ratnapura	129,440	1,320	71,882	530			107,780	594	37,974	46	17,550	10	23,150	50			387,776	2,550	333	0.7		
Kegalle			78,158	753			98,061	735	45,052	63	7,288	10	4,535	2	491		233,585	1,563	264	0.7		
Sri Lanka	1,754,081	21,441	1,321,818	11,150	1,140,633	7,579	882,992	4,405	402,573	684	580,764	787	550,904	475	168,855	2,538	7,116,268	53,171	328	0.7		

Source : Medical Statistics Unit

¹ Includes Kalmunai RDHS Division

Table 29. Hospitalizations, Hospital Deaths and Case Fatality Rates of Selected Non-Communicable Diseases, 2017 - 2018

Disease and ICD Code	2017						2018					
	Live Discharges		Deaths		Case Fatality Rate *	Case Fatality Rate *	Live Discharges		Deaths		Case Fatality Rate *	
	Male	Female	Male	Female			Male	Female	Male	Female		
Diabetes mellitus (E10 - E14)	38,745	45,436	401	402	0.94	0.94	42,162	50,656	365	344	0.76	
Essential hypertension (I10)	34,705	50,088	225	315	0.63	0.63	36,804	55,790	265	296	0.60	
Other hypertensive diseases (I11 - I15)	2,891	3,836	49	54	1.51	1.51	3,598	4,707	41	35	0.91	
Ischaemic heart diseases (I20 - I25)	61,887	48,714	3,792	2,857	5.67	5.67	71,709	57,567	4,233	3,176	5.42	
Cerebrovascular diseases (I60 - I69)	27,922	18,800	2,086	1,499	7.13	7.13	31,084	20,648	2,289	1,651	7.08	
Chronic obstructive pulmonary diseases (J40 - J44)	32,288	8,578	1,140	191	3.15	3.15	34,856	8,431	1,147	180	2.97	
Asthma (J45 - J46)	82,896	88,736	289	341	0.37	0.37	84,179	91,186	261	311	0.33	
Alcoholic liver diseases (K70)	2,365	285	277	23	10.17	10.17	2,329	277	234	19	8.85	
Other diseases of liver (K71 - K76)	8,205	3,308	1,121	477	12.19	12.19	9,362	3,901	1,154	522	11.22	
Neoplasms (C00 - D48)	58,248	71,823	2,720	2,218	3.66	3.66	66,235	86,034	3,223	2,566	3.66	
Renal failure (N17 - N19)	31,286	16,605	1,254	628	3.78	3.78	58,803	31,862	1,282	695	2.13	

* Deaths per 100 cases

Source : Medical Statistics Unit

Table 30. Hospitalizations, Hospital Deaths and Case Fatality Rates of Selected Non-Communicable Diseases by RDHS Division, 2018

RDHS Area	Neoplasms (C00 - D48)			Diabetes mellitus (E10 - E14)			Essential hypertension (I10)			Ischaemic heart disease (I20 - I25)			Cerebrovascular disease (I60 - I69)		
	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *
Colombo	67,408	2,399	3.44	11,227	216	1.89	8,992	79	0.87	23,527	1,479	5.91	7,417	634	7.87
Gampaha	4,189	243	5.48	7,435	67	0.89	7,286	33	0.45	10,804	710	6.17	5,959	346	5.49
Kalutara	2,257	62	2.67	3,120	9	0.29	3,413	7	0.20	7,370	529	6.70	3,212	190	5.58
Kandy	19,604	597	2.96	9,058	71	0.78	8,948	54	0.60	9,442	468	4.72	4,614	352	7.09
Matale	956	45	4.50	2,846	15	0.52	3,155	25	0.79	3,466	193	5.27	1,318	123	8.54
Nuwara Eliya	1,122	55	4.67	2,902	9	0.31	4,084	10	0.24	2,997	103	3.32	1,577	110	6.52
Galle	14,356	458	3.09	2,856	84	2.86	3,649	76	2.04	6,831	501	6.83	3,409	333	8.90
Matara	935	66	6.59	2,286	9	0.39	2,321	22	0.94	3,857	312	7.48	1,622	155	8.72
Hambantota	638	43	6.31	3,023	24	0.79	3,487	34	0.97	4,154	99	2.33	983	37	3.63
Jaffna	5,161	155	2.92	3,270	16	0.49	1,910	44	2.25	2,632	172	6.13	1,749	127	6.77
Kilinochchi	455	1	0.22	602	1	0.17	421	-	-	474	14	2.87	172	-	-
Mullaitivu	62	2	3.13	588	-	-	259	-	-	506	18	3.44	87	1	1.14
Vavuniya	295	15	4.84	689	3	0.43	1,016	1	0.10	917	47	4.88	377	36	8.72
Mannar	162	9	5.26	766	-	-	534	-	-	1,015	6	0.59	263	7	2.59
Batticaloa	6,176	78	1.25	3,081	2	0.06	2,417	3	0.12	2,366	83	3.39	770	42	5.17
Ampara	197	22	10.05	1,305	-	-	1,295	4	0.31	1,915	92	4.58	449	41	8.37
Kalmunai	374	12	3.11	4,298	-	-	1,016	1	0.10	2,768	165	5.63	656	30	4.37
Trincomalee	1,228	23	1.84	2,940	-	-	1,728	1	0.06	1,645	72	4.19	613	32	4.96
Kurunegala	5,498	491	8.20	6,660	73	1.08	9,221	101	1.08	11,344	670	5.58	4,339	417	8.77
Puttalam	486	34	6.54	1,650	25	1.49	1,624	11	0.67	3,198	172	5.10	897	57	5.97
Anuradhapura	6,102	287	4.49	4,741	27	0.57	5,897	8	0.14	7,032	392	5.28	2,237	161	6.71
Polonnaruwa	838	151	15.27	1,509	2	0.13	2,200	-	-	3,717	208	5.30	1,298	137	9.55
Badulla	6,126	256	4.01	5,294	27	0.51	5,538	23	0.41	4,056	223	5.21	1,539	115	6.95
Monaragala	968	50	4.91	2,868	3	0.10	3,266	3	0.09	2,315	78	3.26	886	69	7.23
Ratnapura	5,510	174	3.06	4,978	13	0.26	4,683	5	0.11	6,608	370	5.30	3,469	207	5.63
Kegalle	1,166	61	4.97	2,826	13	0.46	4,234	16	0.38	4,320	233	5.12	1,820	181	9.05
Sri Lanka	152,269	5,789	3.66	92,818	709	0.76	92,594	561	0.60	129,276	7,409	5.42	51,732	3,940	7.08

* Deaths per 100 cases

Contd...

Source : Medical Statistics Unit

Table 30. Hospitalizations, Hospital Deaths and Case Fatality Rates of Selected Non-Communicable Diseases by RDHS Division, 2018

RDHS Area	Bronchitis, emphysema and other chronic obstructive pulmonary disease (J40 - J44)			Asthma (J45 - J46)			Alcoholic liver disease (K70)			Other diseases of liver (K71 - K76)			Renal failure (N17 - N19)		
	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *	Live Discharges	Deaths	Case Fatality Rate *
Colombo	3,547	178	4.78	14,058	88	0.62	269	89	24.86	2,648	348	11.62	12,816	368	2.79
Gampaha	2,460	108	4.21	17,596	28	0.16	440	48	9.84	2,201	331	13.07	6,006	62	1.02
Kalutara	1,971	41	2.04	8,592	14	0.16	237	13	5.20	603	60	9.05	1,102	55	4.75
Kandy	6,486	178	2.67	9,800	37	0.38	42	1	2.33	1,648	137	7.68	6,861	165	2.35
Matale	2,622	74	2.74	3,407	18	0.53	131	5	3.68	180	30	14.29	6,705	65	0.96
Nuwara Eliya	2,899	46	1.56	3,994	9	0.22	21	-	-	192	19	9.00	147	9	5.77
Galle	1,969	84	4.09	8,974	40	0.44	53	5	8.62	842	112	11.74	855	82	8.75
Matara	755	20	2.58	6,626	30	0.45	13	5	27.78	214	51	19.25	3,466	37	1.06
Hambantota	1,493	29	1.91	11,781	34	0.29	22	2	8.33	250	30	10.71	543	21	3.72
Jaffna	720	33	4.38	9,243	15	0.16	49	1	2.00	826	63	7.09	2,345	46	1.92
Kilinochchi	362	2	0.55	1,360	1	0.07	8	-	-	104	-	-	2,832	7	0.25
Mullaitivu	206	-	-	1,248	1	0.08	10	1	9.09	54	5	8.47	3,280	11	0.33
Vavuniya	298	12	3.87	1,303	5	0.38	1	-	-	87	8	8.42	330	58	14.95
Mannar	227	-	-	637	1	0.16	1	2	66.67	66	1	1.49	992	12	1.20
Batticaloa	1,130	16	1.40	6,268	3	0.05	7	-	-	130	8	5.80	1,263	37	2.85
Ampara	842	9	1.06	1,725	5	0.29	10	-	-	50	12	19.35	3,826	29	0.75
Kalmunai	1,108	19	1.69	7,160	2	0.03	6	2	25.00	85	7	7.61	6,904	23	0.33
Trincomalee	1,249	11	0.87	3,702	4	0.11	18	4	18.18	115	3	2.54	2,867	34	1.17
Kurunegala	1,520	81	5.06	14,178	69	0.48	587	29	4.71	595	151	20.24	1,779	174	8.91
Puttalam	463	7	1.49	3,581	13	0.36	187	14	6.97	324	51	13.60	1,392	19	1.35
Anuradhapura	1,888	80	4.07	6,680	19	0.28	42	9	17.65	533	65	10.87	5,161	257	4.74
Polonnaruwa	900	37	3.95	3,157	6	0.19	19	2	9.52	133	34	20.36	740	113	13.25
Badulla	3,117	113	3.50	8,209	24	0.29	234	12	4.88	182	16	8.08	3,297	162	4.68
Monaragala	1,411	32	2.22	5,423	10	0.18	19	-	-	191	17	8.17	6,545	41	0.62
Ratnapura	982	39	3.82	11,209	36	0.32	90	2	2.17	743	67	8.27	8,389	63	0.75
Kegalle	2,662	78	2.85	5,454	60	1.09	90	7	7.22	267	50	15.77	222	27	10.84
Sri Lanka	43,287	1,327	2.97	175,365	572	0.33	2,606	253	8.85	13,263	1,676	11.22	90,665	1,977	2.13

* Deaths per 100 cases

Source : Medical Statistics Unit

Table 31. Out Patient Attendance by District and Type of Institution, 2018

District	Teaching Hospitals	Provincial General Hospitals	District General Hospitals	Base Hospitals Type A	Base Hospitals Type B	Divisional Hospitals Type A	Divisional Hospitals Type B	Divisional Hospitals Type C	Primary Medical Units with Maternity Homes	Other Institutions with Indoor Facility	Other Institutions without Indoor Facility	Primary Medical Care Units	Total Attendance	Attendance per 1,000 Population
Colombo	2,222,630	-	-	708,282	191,611	140,750	731,871	191,850	-	767,477	-	723,653	5,678,124	2,328.1
Gampaha	510,448	-	561,725	253,022	309,931	582,740	106,970	486,381	-	227,999	3,848	763,966	3,807,030	1,580.3
Kalutara	-	-	340,646	531,367	202,878	168,941	524,168	360,901	-	-	25,702	257,812	2,412,415	1,883.2
Kandy	968,762	-	315,934	-	458,354	-	954,469	1,156,759	-	237,579	111,389	395,203	4,598,449	3,132.5
Matale	-	-	334,177	203,078	-	-	255,403	405,294	-	-	539	269,430	1,467,921	2,828.4
Nuwara Eliya	-	-	215,565	121,822	156,313	89,994	308,573	421,135	-	-	-	305,280	1,618,682	2,121.5
Galle	578,318	-	-	322,853	85,141	181,439	439,998	503,758	-	10,347	65,525	576,810	2,764,189	2,459.2
Matara	-	-	349,561	-	233,805	238,970	289,503	250,590	-	-	15,999	626,505	2,004,933	2,336.8
Hambantota	-	-	289,108	139,163	257,466	100,097	650,746	391,155	-	-	-	228,056	2,055,791	3,138.6
Jaffna	333,726	-	-	269,159	165,923	-	256,919	588,196	-	-	-	265,219	1,879,142	3,065.5
Kilinochchi	-	-	204,882	-	50,149	-	31,408	191,442	-	-	-	13,850	491,731	3,902.6
Mullaitivu	-	-	82,577	32,392	121,345	32,104	34,021	79,349	-	-	-	34,521	416,309	4,336.6
Vavuniya	-	-	341,142	-	78,737	-	23,996	127,061	-	-	14,824	73,591	659,351	3,525.9
Mannar	-	-	162,223	-	49,234	-	99,079	111,985	-	-	2,744	66,236	491,501	4,509.2
Batticaloa	205,274	-	-	291,002	301,118	102,908	138,079	368,816	-	-	3,862	297,042	1,708,101	2,996.7
Ampara	-	-	191,926	755,075	568,959	-	231,082	457,046	82,613	-	4,083	385,884	2,676,668	3,722.8
Trincomalee	-	-	128,479	393,547	38,622	-	-	336,059	-	-	-	335,536	1,232,243	2,926.9
Kurunegala	-	576,437	-	240,360	531,456	821,350	779,897	775,607	13,039	-	-	700,442	4,438,588	2,594.1
Puttalam	-	-	233,487	168,105	157,691	222,676	238,273	360,415	-	-	-	456,177	1,836,824	2,226.5
Anuradhapura	303,400	-	-	-	385,204	533,410	668,129	893,312	-	14,286	41,515	451,360	3,290,616	3,538.3
Polonnaruwa	-	-	381,773	-	243,712	131,593	326,458	263,501	-	-	-	210,942	1,557,979	3,573.3
Badulla	-	297,080	-	383,777	210,897	269,296	576,238	777,808	-	-	41,849	303,437	2,860,382	3,276.5
Monaragala	-	-	186,135	-	462,483	107,617	388,758	470,021	-	-	10,478	116,436	1,741,928	3,547.7
Ratnapura	343,274	-	228,440	-	734,485	502,346	333,593	587,808	-	11,832	50,478	697,232	3,489,488	3,000.4
Kegalle	-	-	345,457	-	605,326	477,515	121,116	213,634	-	13,299	23,128	385,613	2,185,088	2,471.8
Sri Lanka	5,465,832	873,517	4,893,237	4,813,004	6,600,840	4,703,746	8,508,747	10,769,883	95,652	1,282,819	415,963	8,940,233	57,363,473	2,647.1

Source : Medical Statistics Unit

Table 32. Out Patient Attendance by RDHS Division, 2018

RDHS Division	Quarter				Total Visits
	First	Second	Third	Fourth	
Colombo	1,406,340	1,417,068	1,404,211	1,450,505	5,678,124
Gampaha	981,318	928,754	940,848	956,110	3,807,030
Kalutara	613,139	605,267	582,052	611,957	2,412,415
Kandy	1,079,195	1,183,962	1,145,456	1,189,836	4,598,449
Matale	365,652	367,746	353,620	380,903	1,467,921
Nuwara Eliya	404,524	416,579	389,569	408,010	1,618,682
Galle	697,527	700,026	656,733	709,903	2,764,189
Matara	504,434	513,794	474,311	512,394	2,004,933
Hambantota	530,914	520,015	468,920	535,942	2,055,791
Jaffna	478,458	439,360	448,345	512,979	1,879,142
Kilinochchi	133,893	115,983	107,364	134,491	491,731
Mannar	125,584	110,306	119,003	136,608	491,501
Vavuniya	165,470	157,565	154,924	181,392	659,351
Mullaitivu	101,641	99,221	98,768	116,679	416,309
Batticaloa	437,527	411,940	394,814	463,820	1,708,101
Ampara	225,639	236,333	224,046	240,776	926,794
Kalmunai	429,779	434,691	409,679	475,725	1,749,874
Trincomalee	305,861	293,433	303,467	329,482	1,232,243
Kurunegala	1,043,518	1,139,517	1,087,947	1,167,606	4,438,588
Puttalam	449,379	459,118	442,049	486,278	1,836,824
Anuradhapura	820,364	811,836	773,876	884,540	3,290,616
Polonnaruwa	402,398	379,097	368,500	407,984	1,557,979
Badulla	696,578	739,457	693,702	730,645	2,860,382
Monaragala	428,108	461,386	407,883	444,551	1,741,928
Ratnapura	861,460	877,349	850,131	900,548	3,489,488
Kegalle	530,983	566,422	538,613	549,070	2,185,088
Sri Lanka	14,219,683	14,386,225	13,838,831	14,918,734	57,363,473

Source : Medical Statistics Unit

Table 33. Out Patient Department (OPD) Visits by Type of Hospital, 2018

Hospital Type	Quarter				Total Visits
	First	Second	Third	Fourth	
Teaching Hospitals	1,349,496	1,357,387	1,359,176	1,399,773	5,465,832
Provincial General Hospitals	214,699	222,493	220,213	216,112	873,517
District General Hospitals	1,270,085	1,210,949	1,172,737	1,239,466	4,893,237
Base Hospitals - Type A	1,191,323	1,196,745	1,153,769	1,271,167	4,813,004
Base Hospitals - Type B	1,640,716	1,635,214	1,620,389	1,704,521	6,600,840
Divisional Hospitals - Type A	1,160,384	1,221,109	1,117,081	1,205,172	4,703,746
Divisional Hospitals - Type B	2,079,368	2,165,339	2,011,947	2,252,093	8,508,747
Divisional Hospitals - Type C	2,648,940	2,713,949	2,564,517	2,842,477	10,769,883
Primary Medical Care Units with Maternity Homes	23,894	23,978	22,754	25,026	95,652
Other Institutions with Indoor Facility ¹	309,482	319,787	322,897	330,653	1,282,819
Other Institutions without Indoor Facility	100,798	101,814	104,245	109,106	415,963
Primary Medical Care Units	2,230,498	2,217,461	2,169,106	2,323,168	8,940,233
Total Visits	14,219,683	14,386,225	13,838,831	14,918,734	57,363,473

¹ Includes: Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation hospitals

Source : Medical Statistics Unit

Table 34. Clinic Visits by Quarter, by RDHS Division, 2018

RDHS Division	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits
Colombo	237,971	1,163,845	230,715	1,172,356	250,649	1,251,199	258,937	1,266,945	978,272	4,854,345
Gampaha	153,835	646,328	146,913	619,407	158,432	672,713	150,405	665,170	609,585	2,603,618
Kalutara	75,558	312,645	74,083	299,834	80,944	317,085	96,957	328,688	327,542	1,258,252
Kandy	151,176	741,219	158,702	757,718	159,684	749,956	159,673	802,127	629,235	3,051,020
Matale	34,256	175,062	32,269	174,060	41,374	193,103	38,727	189,344	146,626	731,569
Nuwara Eliya	35,971	174,504	38,351	169,858	33,136	169,669	34,901	172,062	142,359	686,093
Galle	85,997	321,315	79,297	314,009	92,377	345,540	89,592	345,045	347,263	1,325,909
Matara	65,973	227,290	57,574	216,144	65,610	238,739	66,273	240,148	255,430	922,321
Hambantota	39,342	163,285	35,659	154,441	37,393	171,979	42,126	173,963	154,520	663,668
Jaffna	58,415	330,470	56,795	334,415	57,927	344,017	57,957	358,154	231,094	1,367,056
Kilinochchi	12,166	46,376	13,625	47,183	13,411	47,896	12,228	45,870	51,430	187,325
Mullaitivu	10,791	32,913	8,285	34,302	14,264	35,056	13,603	37,878	46,943	140,149
Vavuniya	21,752	105,335	22,928	109,746	26,143	113,930	23,255	104,460	94,078	433,471
Mannar	14,740	53,847	15,467	56,681	13,971	53,586	15,915	56,291	60,093	220,405
Batticaloa	32,541	165,624	40,689	166,318	32,439	169,102	43,680	178,279	149,349	679,323
Ampara	25,780	114,283	24,300	109,279	24,005	117,665	19,963	108,462	94,048	449,689
Kalmunai	35,070	153,124	30,951	149,508	35,358	157,082	37,630	163,917	139,009	623,631
Trincomalee	27,611	127,722	26,777	127,945	27,487	133,858	33,292	137,549	115,167	527,074
Kurunegala	76,770	407,699	70,181	407,205	80,081	429,362	76,119	430,146	303,151	1,674,412
Puttalam	56,629	205,313	56,104	201,812	61,982	220,806	58,044	215,699	232,759	843,630
Anuradhapura	53,662	305,783	56,355	305,166	61,603	324,637	67,002	336,716	238,622	1,272,302
Polonnaruwa	40,286	181,325	42,594	177,593	53,610	213,164	46,741	193,324	183,231	765,406
Badulla	75,097	342,325	72,568	348,159	75,545	372,382	76,777	370,044	299,987	1,432,910
Monaragala	36,579	123,827	34,872	122,641	36,554	138,215	34,258	135,783	142,263	520,466
Rathnapura	87,243	354,056	82,018	346,712	86,161	368,441	91,027	385,512	346,449	1,454,721
Kegalle	56,793	284,047	48,532	274,391	57,220	299,806	57,403	297,916	219,948	1,156,160
Sri Lanka	1,602,004	7,259,562	1,556,604	7,196,883	1,677,360	7,648,988	1,702,485	7,739,492	6,538,453	29,844,925

Source : Medical Statistics Unit

Table 35. Clinic Visits by Quarter, by Type of Hospital, 2018

Type of Hospital	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Total	
	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits	First Visits	Total Visits
Teaching Hospitals	399,192	1,920,522	392,240	1,927,692	421,862	2,010,390	422,015	2,087,686	1,635,309	7,946,290
Provincial General Hospitals	22,673	139,564	22,179	143,403	22,748	151,022	22,420	149,059	90,020	583,048
District General Hospitals	313,388	1,143,825	296,119	1,107,201	322,126	1,188,808	315,094	1,179,817	1,246,727	4,619,651
Base Hospitals (Type A)	197,977	834,660	198,282	833,087	209,419	895,037	236,368	908,114	842,046	3,470,898
Base Hospitals (Type B)	156,507	712,887	150,758	691,126	159,541	758,826	168,283	758,913	635,089	2,921,752
Divisional Hospitals (Type A)	69,975	401,296	66,009	396,161	77,840	424,543	83,914	432,881	297,738	1,654,881
Divisional Hospitals (Type B)	138,257	628,885	127,105	622,625	132,886	672,520	134,832	664,861	533,080	2,588,891
Divisional Hospitals (Type C)	139,356	665,078	134,586	660,887	160,946	699,285	147,332	701,397	582,220	2,726,647
Primary Medical Care Units and Maternity Homes	357	3,243	300	3,400	305	3,704	276	3,541	1,238	13,888
Other Hospitals and Clinics ¹	69,701	315,625	73,591	319,100	70,210	327,322	72,682	340,327	286,184	1,302,374
Primary Medical Care Units	94,621	493,977	95,435	492,201	99,477	517,531	99,269	512,896	388,802	2,016,605
Grand Total	1,602,004	7,259,562	1,556,604	7,196,883	1,677,360	7,648,988	1,702,485	7,739,492	6,538,453	29,844,925

¹ Includes : Mental, Chest, Leprosy, Police, Prison, Fever, Cancer, Dental and Rehabilitation hospitals

Source : Medical Statistics Unit

Table 36. Rank Order of Clinic Visits by RDHS Division, 2018

Type of Clinic	Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Kilinochchi	Mullaitivu	Vavuniya	Mannar	Batticaloa	Ampara	Kalmunai	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Rathnapura	Kegalle	
Medical	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dental	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2	2	3	2	2	2	2	2	2	2	2	2	2
Gynaecology and Obstetrics	3	6	4	5	3	3	3	3	4	4	4	4	4	4	5	5	3	4	3	3	3	3	3	4	4	3	3	
Eye	4	3	3	3	5	7	6	4	3	3	5	7	5	5	4	6	6	5	4	13	4	9	8	6	9	5	7	
Diabetic	5	7	10	13	4	4	7	10	13	15	2	3	3	2	2	3	4	2	6	4	5	16	9	3	3	11	6	
Surgical	6	5	6	6	7	6	5	5	6	8	6	8	9	12	11	4	5	7	7	9	9	6	11	7	7	7	8	
Psychiatric	7	8	5	4	8	5	8	8	5	6	7	10	8	7	7	9	9	6	13	7	6	11	7	8	6	4	5	
Skin	8	10	8	7	9	8	9	9	7	7	9	5		6	8	7	8	9	5	11	7	4	6	5	5	6	4	
Cardiology	9	4	12	12	6	11	13	11	8	11	8	12		17		8	12	14	11	6		7	4	14	14	10	11	
Paediatric	10	13	9	10	12	9	4	6	11	5	11	9	6	9	13	10	10	10	10	8	10	5	12	10	8	8	9	
Baby	11	15	7	8	10	10	10	14	10	10	12	14	12	14	6	19	7	12	9	5	8	8	13	9	10	12	10	
E.N.T.	12	11	11	9	11	13	11	15	14	9	14	6		10	10	14	11	8	8	15	11	10	14	12	11	9	13	
Orthopedic	13	12	14	14	13	12	12	12	12	12	10	11	11	11	12	12	14	13	12	14	12	13	5	13	13	15	12	
Cancer	14	9	18	17	14		16	7	17	13	15	13		18	14	11	17		15	10	15	12	16	11	16	14	15	
Nerve	15	14	16	11	15	15		16	15		13			15		13	15	16				15	10	15		13		
Other	16	16	13	15	18	14	15	13	9	16	17	7	7	19		15	19	11	14	16	16	17	15	18	12	18	16	
Genito Urinary	17	20	17	18	16			18	16	14	16			16		17	16			12	14	18	17	17	15	16		
V.D.	18	19	15	16	19	17	14	20	18			10	8	8	9	16	13	15		17	13	14	18	19		17	14	
Neuro Surgical	19	18			17	16		19			18		13			18	18					19		16	17			
Thoracic	20	17			20			17			19																	
Rectum	21				21																	20						

Source : Medical Statistics Unit

Table 37. Clinic Visits by Type of Clinic and RDHS Division, 2018

Type of Clinic	Sri Lanka	Colombo	Gampaha	Kalutara	Kandy	Matale	Nuwara Eliya	Galle	Matara	Hambantota	Jaffna	Kilinochchi	Mullaitivu
Medical	13,609,792	1,747,018	1,281,786	610,415	1,315,626	405,141	402,679	507,960	444,415	359,438	496,293	59,975	70,104
Dental	3,441,489	436,141	249,342	184,876	307,507	86,721	68,424	209,637	144,269	87,231	133,545	31,919	17,826
Gynaecology and Obstetrics	1,775,922	269,734	134,730	65,574	173,230	35,905	45,382	89,034	42,261	36,868	103,594	16,711	12,519
Eye	1,589,141	377,486	208,084	95,193	160,173	24,853	24,881	84,769	43,244	38,013	68,651	10,280	7,072
Diabetic	1,460,036	242,368	72,200	12,704	166,696	35,350	24,601	36,276	13,808	792	173,680	19,262	12,579
Surgical	1,193,304	280,904	99,405	40,763	129,275	25,342	25,628	72,804	35,155	20,680	62,790	8,025	3,824
Psychiatric	1,128,036	208,118	105,736	70,235	93,871	28,235	17,888	43,920	38,327	28,238	58,244	6,008	3,828
Skin	999,218	170,508	84,468	35,441	78,565	23,273	16,982	38,480	31,163	25,587	51,486	11,564	
Cardiology	879,116	313,717	41,383	15,852	133,287	9,042	2,799	31,658	27,342	7,316	55,858	1,000	
Paediatric	749,338	78,661	83,039	22,884	69,698	17,931	27,574	54,472	18,829	28,380	33,546	6,509	4,669
Baby	640,686	53,613	85,294	32,532	74,305	14,290	10,322	17,162	19,392	9,445	23,327	609	545
E.N.T.	561,326	141,447	49,578	27,815	71,624	7,469	7,490	12,660	11,885	13,721	17,608	11,251	
Orthopedic	481,336	122,745	22,739	11,406	68,091	7,699	5,676	19,930	16,998	4,692	42,696	3,405	657
Cancer	457,679	196,530	2,533	1,626	67,612		1,348	44,800	257	1,725	10,243	807	
Nerve	279,865	58,573	21,565	19,287	50,736	2,755		12,354	10,472		18,985		
Other	204,012	43,409	29,734	8,351	15,577	5,075	1,703	19,883	22,842		3,830		4,004
Genito Urinary	134,741	25,279	10,994	87	31,754			9,604	1,411	1,542	9,725		
V.D.	120,072	26,685	21,008	3,211	7,136	1,203	2,716	3,146	251				2,522
Neuro Surgical	85,924	29,167			26,938	1,285		6,291			2,202		
Thoracic	51,019	32,242			6,955			11,069			753		
Rectum	2,873				2,364								

Continued.....

Source : Medical Statistics Unit

Table 37. Clinic Visits by Type of Clinic and RDHS Division, 2018

Type of Clinic	Vavuniya	Mannar	Batticaloa	Ampara	Kalmunai	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Rathnapura	Kegalle
Medical	198,508	100,407	329,516	230,642	280,057	241,465	869,825	360,050	682,850	373,724	653,579	234,288	715,095	638,936
Dental	36,027	17,627	66,022	44,234	72,966	61,399	208,059	117,842	132,909	112,663	194,632	77,033	198,323	144,315
Gynaecology and Obstetrics	28,120	12,103	25,297	31,250	41,701	38,768	129,654	72,985	74,093	35,984	87,294	29,765	80,703	62,663
Eye	26,583	14,551	25,151	20,154	24,359	36,521	10,946	55,092	32,903	20,770	62,860	17,143	67,310	32,099
Diabetic	36,607	25,538	54,366	21,388	95,495	25,922	102,302	44,697	10,667	20,648	88,315	50,378	26,213	47,184
Surgical	9,431	5,146	38,250	20,835	21,875	24,037	29,562	28,895	38,053	18,511	58,675	18,564	47,644	29,231
Psychiatric	15,875	7,472	19,647	12,308	23,056	6,380	54,446	41,025	29,673	22,296	51,749	19,295	69,569	52,597
Skin	21,784	7,300	24,138	12,626	13,012	34,791	27,820	32,386	42,942	22,451	64,132	21,024	53,059	54,236
Cardiology	823		22,463	6,731	3,002	9,944	64,348		37,679	32,260	14,981	2,418	27,223	17,990
Paediatric	11,144	2,591	15,904	10,978	11,800	11,785	33,592	25,167	39,930	16,884	32,321	17,686	46,642	26,722
Baby	3,449	10,604	450	13,677	7,049	12,274	85,169	31,549	33,004	14,512	32,522	9,567	24,827	21,197
E.N.T.	10,891	5,720	10,794	7,114	15,453	12,636	5,830	15,212	30,615	8,866	16,493	8,275	30,856	10,023
Orthopedic	9,614	3,788	11,171	4,547	3,134	6,408	7,655	12,700	19,994	30,248	15,302	4,524	13,776	11,741
Cancer	508	457	12,974	941		2,332	29,403	1,292	27,461	4,857	23,735	1,351	22,121	2,766
Nerve	2,676		10,800	3,666	156				11,197	19,300	14,412		22,931	
Other	183		3,902	212	9,843	2,412	4,248	574	6,740	6,594	5,123	7,285	808	1,680
Genito Urinary	2,465		3,124	2,910			11,334	1,825	4,861	4,208	6,852	1,746	5,020	
V.D.	11,448	7,101	3,533	5,084	673		219	2,339	12,929	630	2,857		2,601	2,780
Neuro Surgical	7,335		1,821	392					3,293		7,076	124		
Thoracic														
Rectum						509								

Source : Medical Statistics Unit

Table 38. Utilization of Medical Institutions by Regional Director of Health Services Division, 2018

RDHS Division	Teaching Hospitals			Provincial General Hospitals			District General Hospitals			Base Hospitals Type A			Base Hospitals Type B		
	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate
Colombo	3.22	74.56	83.84							1.62	71.38	160.36	2.48	60.72	88.71
Gampaha	2.96	83.76	102.65				1.83	62.03	123.38	1.97	74.35	136.90	1.79	73.50	149.71
Kalutara							2.20	65.39	107.75	1.87	81.75	159.18	1.46	43.04	106.85
Kandy	2.91	74.26	92.34				2.14	55.21	93.83				1.92	60.05	113.40
Matale							2.33	64.48	100.24	1.68	110.24	238.54			
Nuwara Eliya							2.54	91.81	131.12	2.54	92.24	131.76	1.55	69.25	161.79
Galle	3.19	82.69	93.77							1.92	62.59	118.34	2.79	74.90	97.61
Matara							2.09	63.68	110.88				2.65	76.47	104.71
Hambantota							2.35	72.25	111.46	2.24	98.04	159.28	2.07	65.19	114.32
Jaffna	2.91	83.06	103.46							2.11	52.26	89.98	1.91	39.03	74.33
Kilinochchi							1.87	81.50	158.64				1.19	29.79	91.55
Mullaitivu							2.13	51.87	88.47	1.08	26.68	90.23	1.66	38.19	83.88
Mannar							2.99	66.03	80.21				1.55	12.80	30.22
Vavuniya							2.17	57.18	95.76				1.73	29.97	62.98
Batticaloa	2.86	73.94	93.83							1.74	42.79	89.25	1.25	32.00	93.36
Ampara							2.63	58.68	81.02	1.50	60.65	147.07	1.42	32.26	82.30
Trincomalee							2.70	82.05	110.13	1.68	58.39	126.32			
Kalmunai										2.05	64.87	114.83	1.65	38.53	84.80
Kurunegala				2.69	75.13	101.38				2.04	56.05	99.65	2.34	63.11	98.07
Puttalam							2.19	70.77	117.44	2.33	83.97	130.42	2.16	71.76	120.87
Anuradhapura	2.78	61.10	79.78										1.92	75.63	143.50
Polonnaruwa							2.27	83.28	133.28				1.49	58.92	143.50
Badulla				3.15	67.65	77.95				2.12	72.66	124.72	2.53	105.51	151.43
Monaragala							2.15	90.16	152.39				2.19	66.67	110.54
Rathnapura	2.64	70.03	96.14				2.30	99.53	156.70				2.19	82.19	136.30
Kegalle							2.70	75.23	101.15				1.96	57.39	106.19
Sri Lanka	3.02	74.89	89.86	2.86	71.90	91.26	2.24	70.20	113.67	1.90	68.69	131.36	2.03	60.83	108.93

Continued...

Source : Medical Statistics Unit

Table 38. Utilization of Medical Institutions by Regional Director of Health Services Division, 2018

RDHS Division	Divisional Hospitals Type A			Divisional Hospitals Type B			Divisional Hospitals Type C			Other Hospitals			Hospitals with Indoor Facility		
	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate	Average Duration of Stay	Bed Occupancy Rate	Bed Turn Over Rate
Colombo	1.17	36.26	112.54	1.40	49.31	127.95	1.06	75.03	257.00	7.27	73.10	35.95	3.39	72.66	77.57
Gampaha	2.28	54.97	87.76	1.21	50.54	151.60	1.19	62.01	190.59	8.49	54.16	22.82	2.42	66.81	100.31
Kalutara	1.83	38.20	76.10	1.38	32.95	86.83	1.62	40.10	89.93				1.87	60.67	117.72
Kandy				1.63	29.60	66.11	1.52	30.08	72.10	6.73	45.49	24.19	2.50	59.26	86.05
Matale				1.51	32.54	78.60	1.89	32.86	63.28				1.96	61.71	114.25
Nuwara Eliya	3.39	39.80	42.45	1.83	24.54	48.70	1.67	39.30	85.73				2.19	54.40	90.37
Galle	1.84	34.86	69.10	1.79	35.48	72.28	1.34	33.14	90.46	3.39	45.03	48.05	2.58	67.10	94.46
Matara	1.46	28.83	71.90	1.65	34.44	76.06	1.33	32.91	90.44				2.05	55.50	98.48
Hambantota	1.65	32.85	72.16	1.33	34.27	94.00	1.37	34.34	91.14				1.95	58.87	109.48
Jaffna				1.39	19.48	50.97	1.48	18.83	45.64				2.42	55.91	83.74
Kilinochchi				1.49	20.63	50.24	1.41	33.70	87.06				1.73	56.83	119.68
Mullaitivu	1.30	10.54	29.29	1.58	25.45	58.45	1.11	11.47	37.75				1.82	38.60	77.21
Mannar				2.02	14.99	27.10	1.27	8.00	22.91	3.20	16.35	18.48	2.60	34.60	48.41
Vavuniya				1.11	14.36	47.08	1.19	36.55	112.39				2.04	51.15	91.10
Batticaloa	1.64	39.93	88.57	1.48	39.62	97.34	1.55	28.80	67.51				2.10	51.61	89.41
Ampara				1.19	15.46	47.46	1.53	26.08	62.01	2.44	17.53	26.27	2.07	49.73	87.37
Trincomalee							1.42	33.04	84.48	3.20	30.09	34.21	2.03	57.49	102.73
Kalmunai				1.59	29.44	67.43	1.68	42.93	93.04				1.88	51.38	99.12
Kurunegala	1.49	34.04	82.97	1.53	27.10	64.26	1.36	24.39	65.46				2.17	53.51	89.69
Puttalam	1.73	30.65	64.35	1.31	23.21	64.45	1.60	30.14	68.81				2.09	60.19	104.38
Anuradhapura	1.87	47.27	91.92	1.62	34.59	77.69	1.70	34.51	73.77	3.18	36.99	42.30	2.26	52.60	84.59
Polonnaruwa	1.25	30.58	88.83	1.43	38.07	96.95	1.43	46.30	118.29				1.95	67.12	124.96
Badulla	1.51	38.80	93.07	1.57	28.81	66.61	2.65	68.55	94.06				2.53	64.43	92.40
Monaragala	1.86	33.16	64.68	1.53	30.40	72.43	1.18	41.37	127.75				1.92	60.60	114.74
Rathnapura	1.45	29.62	74.56	1.37	21.27	56.42	1.47	31.28	77.60				2.21	63.52	104.29
Kegalle	1.74	43.23	90.30	1.45	38.36	96.50	3.80	54.86	52.18	6.06	97.15	57.62	2.19	59.67	98.85
Sri Lanka	1.73	38.22	80.34	1.52	30.51	72.83	1.71	38.94	83.07	7.21	66.37	32.94	2.38	61.08	93.06

Source : Medical Statistics Unit

Table 39. Average Duration of Stay (Days) in Selected Types of Hospitals per Quarter, 2005 - 2018

Type of Hospital	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
National Hospital, Colombo	4.4	4.4	4.3	4.3	4.2	4.0	4.3	3.9	3.9	3.7	3.7	3.7	3.5	3.5
Teaching Hospitals		3.6	3.6	3.5	3.4	3.3	3.2	3.1	3.2	3.3	3.2	3.1	2.9	2.9
Provincial Hospitals ^{1,2}	4.2	3.1	3.3	3.2	3.1	2.6								
Base Hospitals ³	3.0	2.4	2.3	2.2	2.1	2.1								
District Hospitals	2.2	1.9	2.0	2.1	2.1	1.8								
Peripheral Units	2.0	1.9	2.0	1.9	1.9	1.6								
Rural Hospitals ⁴	1.9	1.8	1.9	1.9	2.2	1.6								
Provincial General Hospitals							3.5	2.9	2.9	3.2	3.1	3.0	2.9	2.9
District General Hospitals							2.5	2.4	2.3	2.4	2.3	2.2	2.3	2.2
Base Hospitals Type A							2.3	2.0	2.1	2.1	2.1	2.0	2.1	1.9
Base Hospitals Type B							2.2	2.1	2.3	2.1	2.1	2.1	2.1	2.0
Divisional Hospitals Type A							1.8	1.7	1.8	1.9	1.7	1.7	1.7	1.7
Divisional Hospitals Type B							1.9	1.7	1.7	1.6	1.6	1.5	1.6	1.5
Divisional Hospitals Type C							1.8	1.6	1.8	1.7	1.6	1.6	1.5	1.7
Childrens' Hospital	3.1	2.9	3.3	3.2	3.0	2.8	3.0	2.8	2.9	2.8	2.9	2.8	2.7	2.7
Eye Hospital	7.3	3.8	3.3	3.8	4.4	3.6	4.3	4.0	4.2	4.5	3.5	3.3	3.7	3.5
Cancer Hospital	10.0	8.3	8.2	7.0	7.0	7.0	6.7	5.9	5.8	5.1	4.7	4.3	4.3	3.9
Mental Hospitals	62.8	30.2	60.0	65.9	60.2	27.7	33.6	28.7	36.5	38.7	51.2	51.4	49.5	52.0
Chest Hospitals	8.7	14.4	NA	12.5	10.5	14.7	14.3	12.3	15.7	14.7	15.9	15.5	14.9	9.8
Maternity Hospitals	5.5	5.7	3.6	3.3	3.4	3.6	3.1	3.5	2.7	3.7	3.8	3.8	3.5	3.6
Maternity Homes	2.2	3.1	2.6	1.4	1.6	1.6	1.8	1.4	1.1					
Leprosy Hospitals		73.3	77.0	87.9	75.0	88.1	74.5	84.4	77.6	87.7	81.9	81.9	75.5	66.6
Rehabilitation Hospitals		24.5	30.0	26.1	26.9	26.5	33.0	24.0	29.3	30.0	30.0	18.9	17.1	10.3

¹ Includes Teaching Hospitals upto 2005

For the year 2009

² Includes Provincial General Hospitals and General Hospitals

³ Includes District Base Hospitals

⁴ Includes Estate Hospitals

Source : Medical Statistics Unit

Table 40. Registered Births and Hospital Births, 1980 - 2018

Year	Registered Live Births ¹	Live Births in Government Hospitals ²	% of Live Births in Government Hospitals
1980	418,373	316,394	75.6
1985	389,599	292,970	75.2
1990 ^a	294,120	241,390	82.1
1991 ^a	304,347	262,388	86.2
1992	356,842	296,484	83.1
1993	350,707	298,567	85.1
1994	356,071	300,180	84.3
1995	343,224	297,949	86.8
1996 ^b	330,963	287,514	86.9
1997 ^b	325,017	284,955	87.7
1998	322,672	287,514	89.1
1999	328,725	300,866	91.5
2000	347,749	314,352	90.4
2001	358,583	325,813	90.9
2002	367,709	307,272	83.6
2003	370,643	316,465	85.4
2004	364,711	336,642	92.3
2005	370,731	341,539	92.1
2006	373,538	353,361	94.6
2007	386,573	356,852	92.3
2008	373,575	352,523	94.4
2009	368,304	339,437	92.2
2010	363,881	334,137	91.8
2011	363,415*	338,463	93.1
2012	355,900*	340,800	95.8
2013	365,792*	347,033	94.9
2014	349,715*	330,898	94.6
2015	334,821*	315,221	94.1
2016	331,073*	303,593	91.7
2017	326,052*	300,169	92.1
2018	328,112*	302,134	92.1

* Provisional

Source : ¹ Registrar General's Department

Excludes:

² Medical Statistics Unit^a Northern and Eastern Provinces^b Kilinochchi and Mullaitivu Districts

Table 41. Live Births, Maternal Deaths, Still Births and Low Birth Weight Babies in Government Hospitals by District, 2018

District	Live Births	Maternal Deaths		Still Births		Low Weight Births ⁴	
		No.	Rate ¹	No.	Rate ²	No.	Rate ³
Colombo	35,808	10	27.9	244	6.8	5,821	16.3
Gampaha	19,078	4	21.0	111	5.8	3,061	16.0
Kalutara	13,368	3	22.4	86	6.4	1,618	12.1
Kandy	24,074	8	33.2	211	8.7	4,265	17.7
Matale	8,047	-	-	52	6.4	1,209	15.0
Nuwara Eliya	8,323	-	-	81	9.6	2,239	26.9
Galle	17,415	1	5.7	95	5.4	2,343	13.5
Matara	10,156	-	-	74	7.2	1,686	16.6
Hambantota	9,619	-	-	45	4.7	1,189	12.4
Jaffna	8,087	6	74.2	56	6.9	1,145	14.2
Kilinochchi	2,514	-	-	19	7.5	284	11.3
Mullaitivu	871	-	-	-	-	141	16.2
Vavuniya	3,970	-	-	22	5.5	600	15.1
Mannar	1,494	-	-	11	7.3	121	8.1
Batticaloa	9,294	3	32.3	29	3.1	1,593	17.1
Ampara ⁵	14,904	2	13.4	69	4.6	2,004	13.4
Trincomalee	9,031	7	77.5	35	3.9	1,361	15.1
Kurunegala	21,815	2	9.2	98	4.5	3,290	15.1
Puttalam	13,081	6	45.9	71	5.4	2,219	17.0
Anuradhapura	15,556	2	12.9	90	5.8	2,270	14.6
Polonnaruwa	7,344	-	-	26	3.5	1,329	18.1
Badulla	15,052	3	19.9	85	5.6	3,119	20.7
Monaragala	6,982	-	-	36	5.1	1,161	16.6
Ratnapura	17,705	4	22.6	110	6.2	3,080	17.4
Kegalle	8,546	2	23.4	38	4.4	1,434	16.8
Sri Lanka	302,134	63	20.9	1,794	5.9	48,582	16.1

¹ Per 100,000 live births

Source : Medical Statistics Unit

² Per 1,000 total births

³ Per 100 live births

⁴ Birth weight less than 2500 grams

⁵ Includes Kalmunai RDHS division

Table 42. Performance of Dental Surgeons by RDHS Division, 2018

District	Emergency Care												Routine Care												Attendance				
	Extractions	Oro-Facial Pain Relief	Dento Alveolar Trauma	Soft Tissue Injuries	Post Op Infections/Bleeding	TF	Analgam	GIC	Composite	RCT (Dressings)	RCT (Completions)	Pulp Therapy (Deciduous)	Scaling	Fluoride Applications	Fissure Sealants	OPMD	Minor Oral Surgery	HC Sessions	Referrals	Others	Total Attendance	Pregnant Mothers	Under 3 Years	Adolescents (13-19 Years)	Inward Patients				
Colombo	79,470	58,442	1,225	676	1,284	62,809	8,419	101,248	22,203	8,508	4,744	2,651	32,588	1,628	331	487	1,844	8,233	27,112	73,803	402,299	16,129	3,228	28,712	4,386				
Gampaha	68,004	27,640	746	722	732	40,768	15,309	38,990	5,185	2,186	1,562	1,741	12,738	428	342	280	1,536	7,468	6,797	29,010	217,349	17,357	2,325	15,197	2,713				
Kalutara	37,430	20,679	483	547	378	25,187	7,081	31,347	3,602	1,001	426	886	7,450	364	159	397	1,371	13,282	6,876	22,808	144,202	11,210	1,285	14,865	696				
Kandy	57,250	26,956	329	359	427	49,362	5,954	59,256	9,719	2,033	1,275	4,021	14,758	565	386	259	1,505	4,793	5,315	38,103	231,053	12,077	1,782	19,813	917				
Matale	521	277		2	1	524	38	409	30	12	6	16	66		18	13	13	5	24	326	2,072	207	40	208	2				
Nuwara Eliya	25,261	12,820	145	137	103	8,730	594	13,023	1,723	268	120	1,010	4,386	434	573	139	1,057	1,737	1,376	3,526	62,556	6,737	1,461	5,414	465				
Galle	17,552	4,225	192	151	275	10,150	1,181	9,729	2,642	452	693	418	3,269	166	58	47	379	1,929	856	5,527	50,760	5,455	413	3,111	451				
Mataara	31,987	17,828	280	334	580	21,154	5,193	32,785	4,042	2,489	2,099	1,423	7,115	453	1,237	177	1,634	7,117	5,248	16,493	116,693	7,881	2,209	14,704	572				
Hambantota	21,597	19,155	150	110	225	12,306	1,236	14,798	1,083	297	226	141	2,688	751	54	118	525	2,354	920	13,646	86,366	7,638	551	5,518	3,787				
Jaffna	34,078	29,374	210	96	475	12,527	905	12,200	5,461	1,574	1,043	321	6,667	122	45	102	417	9,620	2,121	15,524	116,768	8,846	569	6,483	891				
Kilinochchi	18,650	6,514	717	696	1,024	7,422	83	9,506	7,935	3,656	2,698	998	3,784	9	10	677	402	24	1,028	335	19,088	2,483	334	2,688	677				
Mannar	8,159	7,716	17	50	108	1,553	24	2,072	432	122	43	7	845	1		34	159	279	414	5,902	29,996	1,981	192	3,064	253				
Vavuniya	8,426	8,265	70	17	134	2,247	132	5,229	483	307	171	161	1,273	27	5	44	55	5,186	1,819	6,803	42,833	1,935	355	3,293	34				
Mullaitivu	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR			
Batticaloa	32,579	18,777	260	430	439	6,193	99	10,856	2,536	341	130	68	4,853	17	377	165	484	5,522	2,496	15,090	89,620	11,226	444	12,452	649				
Ampara	43,835	34,420	338	580	610	19,827	1,274	30,435	8,543	1,411	1,003	2,436	10,195	509	939	292	1,188	24,172	2,922	21,290	149,394	11,531	2,300	12,494	939				
Trincomalee	35,820	19,109	184	137	236	6,542	595	6,791	2,907	1,021	506	168	4,021	100	267	31	1,080	8,503	1,002	7,140	91,838	10,190	1,737	10,000	602				
Kurunegala	74,329	47,016	781	593	2,072	44,207	12,601	43,986	9,332	3,082	2,038	2,790	14,919	3,777	738	358	2,894	5,963	9,709	44,737	263,016	24,572	8,932	20,153	1,126				
Puttalam	15,853	9,097	174	95	330	3,791	544	6,801	2,441	465	239	132	2,629	182	2	10	87	1,690	1,122	8,281	49,568	6,495	528	3,471	423				
Anuradhapura	36,004	26,940	273	272	366	11,858	670	19,069	2,623	729	322	2,141	6,102	669	68	89	610	3,638	2,351	13,633	108,911	13,377	1,505	10,545	640				
Polonnaruwa	24,828	14,154	148	158	436	16,621	448	29,913	2,168	1,300	2,253	2,318	9,601	563	119	152	556	3,983	4,222	20,849	115,586	8,993	6,078	9,040	856				
Badulla	54,927	32,985	578	398	643	28,809	14,550	38,239	9,100	2,773	1,438	4,301	17,651	1,087	1,021	334	1,463	4,671	6,129	29,214	226,416	17,391	5,750	20,502	884				
Monaragala	25,494	21,518	662	462	139	19,360	887	28,838	4,830	2,092	1,219	2,510	14,236	920	183	259	1,575	160	1,980	16,417	137,506	9,828	1,082	8,919	1,192				
Ratnapura	37,005	23,134	501	244	630	30,549	5,321	46,954	5,744	3,030	1,423	2,831	9,371	1,015	1,230	554	1,096	5,183	4,100	20,217	151,027	12,392	3,187	11,407	434				
Kegalle	17,936	13,846	102	95	136	14,716	1,004	21,894	2,831	1,836	1,146	1,023	3,442	663	137	43	508	922	2,565	10,779	81,646	8,002	1,398	5,079	369				
Sri Lanka	806,995	500,897	8,565	7,361	11,783	457,212	84,142	614,368	117,595	40,785	26,823	34,512	194,647	14,450	8,281	5,066	22,438	126,434	98,504	439,453	2,986,563	233,933	47,685	247,132	23,958				

NR : Not Received

Source: Medical Statistics Unit

Note : Based on the consolidated statistics submitted by the Regional Dental Surgeons and Monthly Dental Returns

Table 1. Distribution of Dengue HDU Equipment, 2018

Province	District	Beds	USS	Multipara Monitors	Infusion Pumps	Syringe Pumps	Micro - Haematocrit	BP Apparatus
Western	Colombo		9	52	20	5	5	57
	Gampaha		2	40				22
	Kalutara	10	1	10				15
Central	Kandy		3		10		1	21
	Nuwara Eliya		1			2		
	Matale		1	9				15
North Central	Anuradhapura			5				6
	Polonnaruwa							6
Southern	Galle		2	14				15
	Matara			2				6
	Hambanthota		2					16
Northern	Jaffna		2	10	18		2	16
	Kilinochchi			3	5		1	5
	Mullaitivu							5
	Mannar							5
	Vavuniya		1		5			5
Eastern	Ampara		1	5				1
	Batticaloa		1		11			
	Trincomalee	10			5			5
	Kalmunai							15
Sabaragamuwa	Kegalle			5	5			5
	Rathnapura		4	10		4	3	26
North Western	Kurunegala		1	10	12	2	1	15
	Puttalam			15			2	11
Uva	Badulla		2	5		2		11
	Monaragala							5
Total Distributed		20	33	195	91	15	15	309

Source : National Dengue Control Unit

Table 2. Special Mosquito Control Programmes Conducted, 2018

Programme	Areas (Districts)	Dates (2018)	No. of Premises Visited	No. of Potential Premises	%	No. of Premises with Larvae	%
Phase I	Colombo, Gampaha, Kalutara, Jaffna, Batticaloa, Kalmunai	17-18 January	53,371	14,717	27.6	1,045	2.0
Phase II	Colombo, Gampaha, Kalutara, Jaffna, Batticaloa, Kandy, Matale, Kurunegala, Puttalam	22-23 February	94,560	19,424	20.5	1,196	1.3
Phase III	Colombo, Gampaha, Kalutara, Batticaloa	22-23 March	40,200	5,754	14.3	559	1.4
NMCW 1	Island-wide	03-09 April	463,845	99,497	21.5	10,728	2.3
Phase IV	Colombo, Gampaha, Kalutara, Batticaloa, Rathnapura, Kegalle	10-11 May	58,877	11,574	19.7	1,666	2.8
Phase V	Colombo, Gampaha, Kalutara, Kalmunai, Batticaloa, Kandy, Matale, Puttalam, Rathnapura, Kegalle	07-08 June	103,889	23,038	22.2	3,257	3.1
Phase VI	Colombo, Gampaha, Kalutara, Kandy	21-22 June	55,300	11,463	20.7	1,518	2.7
Phase VII	Colombo, Gampaha, Kalutara, Kandy, Jaffna, Vavuniya, Batticaloa, Trincomalee	12-13 July	80,172	15,860	19.8	1,781	2.2
Mannar Special	Mannar	6-8 August	1,463	323	22.1	27	1.8
Phase VIII	Colombo, Gampaha, Kalutara, Jaffna, Mannar	16-17 August	76,036	16,218	21.3	1,471	1.9
NMCW 2	Island-wide	26 September - 2 October	350,037	93,143	26.6	9,781	2.8
Phase IX	Colombo, Gampaha, Kalutara, Jaffna, Puttalam	15-16 November	53,643	13,286	24.8	1,661	3.1
Phase X	Colombo, Gampaha, Kalutara	13-14 December	57,657	12,471	21.6	1,370	2.4
Total			1,489,050	336,768	22.6	36,060	2.4

Source : National Dengue Control Unit

Table 3. Summary of Mosquito Breeding Places by Premise, 2018

(According to the Special Mosquito Control Programmes Conducted in 2018)

Premise Type	No. of Premises Visited	No. of Potential Premises	%	No. of Premises with Larvae	%	Number Corrected	%
Houses	1,390,589	303,495	21.82	31,144	2.24	228,105	75.16
Schools	8,181	4,783	58.46	956	11.69	3,343	69.89
Other educational institutes	3,131	914	29.19	134	4.28	680	74.40
Government institutes	6,145	1,759	28.62	311	5.06	1,231	69.98
Private institutes	41,166	10,672	25.92	1,304	3.17	6,877	64.44
Factories	3,073	1,257	40.90	228	7.42	816	64.92
Construction sites	12,691	6,916	54.50	1,213	9.56	4,072	58.88
Religious places	5,458	2,034	37.27	354	6.49	1,424	70.01
Public places	9,022	2,246	24.89	215	2.38	1,559	69.41
All the other places	9,604	2,692	28.03	201	2.09	1,495	55.53
Total	1,489,060	336,768	22.62	36,060	2.42	249,602	74.12

Source : National Dengue Control Unit

Table 4. Distribution of Notified (Suspected) Cases of Selected Notifiable Diseases by RDHS Division, 2018

RDHS Division	Dengue	Dysentery	Encephalitis	Enteric Fever	Food Poisoning	Human Rabies	Leptospirosis	Typhus Fever	Viral Hepatitis
Colombo	10,258	102	9	48	43	1	241	16	11
Gampaha	5,857	78	13	26	181	1	233	11	15
Kalutara	3,155	98	5	19	65	-	712	7	17
Kandy	3,832	119	7	6	32	1	124	110	24
Matale	906	24	1	8	43	-	119	6	10
Nuwara Eliya	207	63	5	15	159	-	54	149	29
Galle	976	66	14	6	25	1	436	66	4
Matara	1,148	42	8	9	23	-	292	68	27
Hambantota	972	32	4	3	8	1	93	100	3
Jaffna	4,058	221	6	56	224	2	22	415	1
Kilinochchi	342	41	1	21	6	1	13	19	-
Mannar	224	26	1	3	2	-	1	13	1
Vavuniya	603	20	6	54	16	1	52	8	-
Mullaitivu	118	9	-	12	26	1	15	8	-
Batticaloa	4,843	233	5	11	37	3	63	3	7
Ampara	249	87	6	3	11	1	71	-	7
Trincomalee	1,215	42	2	10	15	-	64	24	4
Kalimunai	1,766	70	4	4	35	-	15	1	1
Kurunegala	2,464	149	20	19	14	2	379	33	26
Puttalam	2,010	95	8	7	10	-	59	12	3
Anuradhapura	884	93	9	10	49	2	251	24	24
Polonnaruwa	325	51	5	-	20	1	192	1	4
Badulla	613	147	11	14	19	-	189	98	69
Monaragala	854	89	2	1	4	-	422	146	51
Rathnapura	2,246	208	43	30	6	2	777	29	31
Kegalle	1,534	64	13	11	97	-	368	79	19
Sri Lanka	51,659	2,269	208	406	1,170	21	5,257	1,446	388

Source : Notified suspected cases from e-Surveillance; Epidemiology Unit

Table 5. Age Distribution of Clinically/Lab Confirmed Selected Notifiable Diseases, 2018

Age	Dysentery	Encephalitis	Enteric Fever	Human Rabies	Leptospirosis	Measles	Tetanus	Viral Hepatitis	Whooping Cough	Dengue**	Rubella	Chickenpox	Mumps	Meningitis
Under 1	274	5	3	-	22	24	-	3	19	297	1	139	18	403
1 - 4	497	15	34	1		10	-	7	3	2,315	2	282	26	137
5 - 14	463	31	82	3	85	6	-	28	5	7,704	-	994	38	142
15 - 24	81	24	32	-	501	5	-	62	-	12,602	-	1,885	51	54
25 - 49	123	32	58	7	1,795	17	5	134	-	20,006	-	2,877	104	120
50 - 59	51	10	22	2	726	-	11	17	-	6,124	-	308	14	33
60 and above	76	33	23	4	590	2	9	14	-	2,611	-	161	2	37
Total	1,565	150	254	17	3,719	64	25	265	27	51,659	3	6,646	253	926

Source : Clinically/lab confirmed cases reported from H 411a; Epidemiology Unit

** Note: Reports from H411a are after field investigation confirmation of the notified diseases, and it is widely believed that almost all the cases reported in H399 were factual and correspond to the H411a. Although H399 does not carry an age-profile of the notified cases, DenSys 2018 data age-distribution was extrapolated and utilized for this purpose.

Table 6. Distribution of Notified Cases of Selected Notifiable Diseases by Month, 2018

Month	Dysentery	Encephalitis	Enteric Fever	Human Rabies	Leptospirosis	Tetanus	Viral Hepatitis	Whooping Cough	Dengue	Chickenpox	Mumps	Meningitis
January	177	19	42	2	365	4	19	5	7,278	544	18	77
February	141	23	38	3	206	1	21	2	4,490	728	33	89
March	163	27	36	1	367	2	31	2	3,380	1,071	53	95
April	142	14	30	-	356	2	22	6	2,618	681	27	93
May	165	17	27	3	378	2	27	6	3,560	703	24	95
June	190	8	21	3	444	-	26	8	5,513	581	31	91
July	198	22	33	2	463	4	30	5	6,455	551	22	182
August	173	19	26	3	349	-	31	2	4,293	656	35	117
September	134	8	24	1	337	2	56	4	2,049	638	22	118
October	198	17	34	1	356	1	54	4	1,905	663	24	111
November	385	15	53	1	958	1	33	3	4,537	789	49	155
December	203	19	42	1	678	1	38	7	5,581	492	26	130
Total	2,269	208	406	21	5,257	20	388	54	51,659	8,097	364	1,353

Source : Notified cases from e-Surveillance; Epidemiology Unit

Table 7. Cases, Incidence, Deaths and Case Fatality Rates (CFR) of Dengue Fever (DF)/Dengue Haemorrhagic Fever (DHF), Leptospirosis and Encephalitis, 1996 - 2018

Year	DF/DHF			Leptospirosis			Encephalitis					
	Cases			Cases			Cases					
	No.	Incidence Rate/100,000 Population	Deaths	CFR (%)	No.	Incidence Rate/100,000 Population	Deaths	CFR (%)	No.	Incidence Rate/100,000 Population	Deaths	CFR (%)
1996	1,294	6.70	54	4.20	637	3.50	ND	-	295	1.80	44	14.90
1997	346	1.90	17	4.90	472	2.60	ND	-	109	0.60	19	17.40
1998	421	2.30	8	1.90	1,280	6.90	ND	-	93	0.50	3	3.20
1999	628	3.40	14	2.20	1,106	5.90	ND	-	90	0.50	3	3.30
2000	5,213	28.20	37	0.70	1,144	6.00	ND	-	123	0.60	2	1.60
2001	5,999	31.90	54	0.90	1,402	7.30	ND	-	59	0.30	9	15.30
2002	8,931	47.50	64	0.70	991	5.20	ND	-	68	0.40	15	22.10
2003	4,805	25.60	32	0.70	2,235	11.80	ND	-	165	0.90	20	12.10
2004	15,463	82.30	87	0.60	1,447	7.60	ND	-	112	0.60	9	8.00
2005	5,994	31.90	28	0.50	1,552	7.90	ND	-	60	0.30	6	10.00
2006	11,980	59.10	46	0.40	1,582	8.00	ND	-	130	0.70	1	0.80
2007	7,332	36.20	28	0.40	2,198	10.80	ND	-	203	1.00	6	3.00
2008	6,607	32.60	27	0.40	7,423	36.20	207	2.80	261	1.30	6	2.30
2009	35,095	172.70	346	1.00	4,980	23.80	145	2.90	223	1.10	4	1.80
2010	34,188	168.20	246	0.70	4,554	21.80	123	2.70	217	1.00	3	1.40
2011	28,473	140.40	186	0.70	6,694	31.20	100	1.50	166	0.80	3	1.80
2012	44,461	219.20	181	0.40	2,663	13.10	52	2.00	210	1.00	12	5.70
2013	32,063	162.00	89	0.30	4,308	21.00	80	1.80	357	1.70	31	8.70
2014	41,495	232.00	97	0.20	3,235	15.70	41	1.30	191	0.93	17	8.90
2015	29,777	142.00	56	0.19	4,455	21.00	71	1.60	203	1.00	17	8.30
2016	55,150	263.00	97	0.17	4,018	18.90	62	1.50	238	1.10	14	5.80
2017	186,101	866.00	440	0.24	3,629	16.90	52	1.40	274	1.20	18	6.60
2018	51,569	241.80	58	0.11	5,257	24.60	108	2.00	208	0.95	17	8.10

Source : Notified cases from e-Surveillance; Epidemiology Unit

CFR - Case Fatality Rate, ND - No data, Population for the year 2018 = 21,323,733 (Source : Registrar General's Department, Sri Lanka)

Table 8. Cases and Deaths of Dengue Fever/Dengue Haemorrhagic Fever and Leptospirosis by Age Group, 2018

Age Group	**Dengue				Leptospirosis			
	Cases		Deaths		Cases		Deaths	
	No.	%	No.	%	No.	%	No.	%
Under 1	297	0.57	0	0	22	0.59	-	-
1 - 4	2,315	4.48	1	2.00			-	-
5 - 14	7,704	14.91	10	17.00	85	2.29	1	0.90
15 - 24	12,602	24.39	11	19.00	501	13.47	10	9.30
25 - 49	20,006	38.73	18	31.00	1,795	48.27	37	34.30
50 - 59	6,124	11.85	10	17.00	726	19.52	31	28.70
60 and above	2,610	5.07	8	14.00	590	15.86	29	26.90
Total	51,659	100.00	58	100.00	3,719	100.00	108	100.00

Source : Clinically confirmed cases are from H411a and Dengue Mortality Register of Epidemiology Unit

Population for the year 2018 = 21,323,733 (Source : Registrar General's Department, Sri Lanka)

** Note : A massive Dengue outbreak occurred in 2017 where most of the cases were reported in large clusters from all over the island. Although H411a reports are following field investigation confirmation of the notified diseases, it is widely believed that almost all the cases reported in H399 were factual, and that extensive control activities carried out during the outbreak, stretched the public health system to the maximum, resulting in possible under reporting of H411.

Table 9. Incidence of Expanded Programme of Immunization (EPI) Target Diseases, 1955 - 2018

Year	Diphtheria		Measles		Poliomyelitis		Tetanus		Tetanus Neonatarum		Tuberculosis		Whooping Cough	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
1955	1,179	13.5	3,499	40.1	155	1.8	873	10.0	ND	-	ND	-	1,941	22.2
1960	1,042	10.5	3,060	30.9	303	3.1	1,435	14.5	ND	-	10,519	106.3	1,786	18.0
1965	1,232	11.0	2,037	18.2	494	4.4	1,812	16.2	ND	-	6,927	62.0	2,109	18.9
1970	986	7.9	4,086	32.6	405	3.2	1,441	11.5	847	230.2	5,762	46.0	1,651	13.2
1975	310	1.3	5,000	37.0	396	2.9	1,186	8.8	812	216.0	7,324	54.3	1,341	9.9
1980	37	0.3	5,032	34.1	262	1.8	892	6.0	351	83.9	6,212	42.2	542	3.7
1985	10	0.1	9,398	59.3	40	0.3	405	2.6	76	19.5	5,889	37.2	536	3.4
1986	3	0.01	6,235	38.7	34	0.2	453	2.8	49	13.6	6,596	40.9	161	1.0
1987	0	0	3,508	21.4	149	0.9	258	1.6	37	10.3	6,411	39.2	31	0.2
1988	0	0	2,650	16.0	25	0.2	273	1.6	39	12.8	6,092	36.7	25	0.2
1989	0	0	780	4.6	16	0.1	295	1.8	19	5.3	6,429	38.2	61	0.4
1990	0	0	4,004	27.6	9	0.1	183	1.1	5	4.7	6,666	39.2	271	1.9
1991	1	0.005	1,896	12.8	1	0.005	188	1.3	10	4.7	6,174	35.7	25	0.2
1992	0	0	701	4.0	12	0.1	231	1.3	14	2.6	6,802	39.0	6	0.03
1993	1	0.005	558	3.2	15	0.1	196	1.1	11	3.7	6,885	39.0	18	0.1
1994	0	0	390	2.2	0	0	156	1.1	11	2.0	6,121	34.3	34	0.3
1995	0	0	465	2.6	0	0	167	1.0	2	3.0	5,869	31.5	171	1.0
1996	1	0.005	158	0.9	0	0	97	0.7	6	4.8	5,366	29.3	33	0.2
1997	0	0	66	0.4	0	0	23	0.5	4	3.5	6,547	35.6	205	1.8
1998	0	0	23	0.1	0	0	24	0.1	4	4.5	6,925	36.9	94	0.5
1999	0	0	2,341	12.5	0	0	23	0.1	3	4.0	7,157	37.6	61	0.3
2000	0	0	4,096	21.2	0	0	38	0.2	1	0.3	8,129	42.9	88	0.5
2001	0	0	309	1.7	0	0	75	0.4	3	0.9	8,418	45.0	52	0.3
2002	0	0	139	0.7	0	0	34	0.2	2	0.6	8,884	46.9	16	0.1
2003	0	0	65	0.4	0	0	30	0.2	2	0.6	9,312	48.4	118	0.6
2004	0	0	35	0.4	0	0	32	0.2	1	0.6	8,639	48.4	51	0.2
2005	0	0	24	0.4	0	0	25	0.1	1	0.6	9,448	48.4	80	0.4
2006	0	0	21	0.1	0	0	38	0.2	2	0.01	10,016	48.1	48	0.2
2007	0	0	37	1.2	0	0	16	0.1	0	0	9,817	47.9	21	0.1
2008	0	0	2	0.01	0	0	22	0.1	1	0.005	8,181	39.5	16	0.1
2009	0	0	129	0.1	0	0	26	0.1	0	0	10,306	49.8	48	0.2
2010	0	0	49	0.2	0	0	15	0.1	0	0	10,235	48.9	15	0.1
2011	0	0	129	0.6	0	0	26	0.1	0	0	9,454	44.1	55	0.3
2012	0	0	51	0.3	0	0	8	0.03	0	0	8,720	43.0	61	0.3
2013	0	0	2,107	13.3	0	0	19	0.1	0	0	5,488	26.8	67	0.3
2014	0	0	1,686	15.0	0	0	14	0.1	0	0	6,710	32.5	38	0.4
2015	0	0	1,568	12.0	0	0	16	0.08	0	0	7,402	35.3	107	0.5
2016	0	0	76	1.0	0	0	11	0.05	0	0	7,486	35.3	51	0.3
2017	0	0	1	0.005	0	0	16	0.07	0	0	7,532	35.1	24	0.1
2018	0	0	1	0.004	0	0	17	0.08	0	0	8,629	40.4	12	0.05

Source : e-Surveillance; Epidemiology Unit

Population for the year 2018 = 21,323,733 (Source : Registrar General's Department, Sri Lanka) / ND - No Data, Rate was calculated per 100,000 population

Table 10. Immunization Coverage by RDHS Area, 2018

Province	RDHS Division	BCG	PPV1/OPV1/fIPV1	PV3/OPV3	MMR1	MMR2	LJEV	DT/OPV5	HPV1
Western	Colombo	105	98	97	97	96	97	97	64
	Gampaha	76	95	95	96	97	96	99	100
	Kalutara	84	95	97	97	101	95	100	106
Central	Kandy	118	98	97	99	99	95	95	96
	Matale	94	97	96	99	98	97	90	100
	Nuwara Eliya	66	96	96	96	101	98	100	89
Southern	Galle	115	97	95	97	100	97	92	96
	Hambantota	85	95	95	97	96	95	100	100
	Matara	86	99	96	97	99	100	99	106
Northern	Jaffna	94	95	95	94	92	99	99	95
	Kilinochchi	127	99	97	100	94	100	100	92
	Mannar	90	95	97	103	97	99	100	95
Eastern	Vavuniya	119	98	97	98	98	97	93	69
	Mullaitivu	82	97	96	98	96	96	93	100
	Batticaloa	101	97	99	97	98	99	93	98
North Western	Ampara	92	97	98	99	99	96	97	99
	Kalmunai	100	99	95	97	94	97	99	65
	Trincomalee	108	98	95	96	93	99	90	59
North Central	Kurunegala	98	98	95	96	99	96	99	91
	Puttalam	108	96	94	97	98	99	98	95
	Anuradhapura	93	98	97	98	101	96	100	92
Uva	Polonnaruwa	96	100	97	97	100	98	96	83
	Badulla	114	98	97	97	100	99	92	102
	Monaragala	86	99	98	96	101	95	100	104
Sabaragamuwa	Rathnapura	104	97	97	98	96	94	91	103
	Kegalle	81	96	96	96	99	96	98	105
	Sri Lanka	96	97	96	97	98	97	97	93

Source : Epidemiology Unit

The vaccination coverage is given as a percentage for live births for BCG based on the delivered district, other vaccinations for surviving infants for the compatible age cohort. And HPV-1 coverage is given for female students in Grade 6.

Table 11. Number of Selected Adverse Events by Vaccination, 2018

Adverse Event	BCG	OPV	PVV*	DPT	MMR	LJE	DT	TT	aTd	Total ** Number of AEFI Reported
Total no. of AEFI reported	35	28	5,980	3,332	701	197	240	78	87	10,678
AEFI reporting rate/100,000 doses administered	10.9	1.7	633.5	1,038.5	106.5	60.5	69.6	14.3	26.8	
No. of high fever (>39°C) cases reported	2	28	2,107	1,283	125	76	38	2	9	3,670
Rate of reporting high fever/100,000 doses administered	0.6	1.7	223.2	399.9	18.9	23.3	11.0	0.3	2.7	
No. of allergic reactions reported	4		502	459	355	68	70	30	23	1,511
Rate of reporting allergic reactions/100,000 doses administered	1.2		53.1	143.0	53.9	20.9	20.3	5.5	7.0	
No. of severe local reactions reported	2		93	113	6	2	10	5	1	232
Rate of severe local reactions/100,000 doses administered	0.6		9.8	35.2	0.9	0.6	2.9	0.9	0.3	
No. of seizure (Febrile/Afebrile) reported			104	236	23	20	2		4	389
Rate of seizures/100,000 doses administered			11.0	73.5	3.4	6.1	0.5		1.2	
No. of nodules reported	6		1,781	474	24	2	34	9	2	2,332
Rate of nodules/100,000 doses administered	1.8		188.6	147.7	3.6	0.6	9.8	1.6	0.6	
No. of injection site abscess reported	13		571	79	2	1	6	1	1	674
Rate of injection site abscess/100,000 doses administered	4.0		60.4	24.6	0.3	0.3	1.7	0.1	0.3	
No. of Hypotonic Hypotensive episodes reported			6	3	1	1	1			12
Rate of Hypotonic Hypotensive episodes/100,000 doses administered			0.6	0.9	0.1	0.3	0.2			

Source : Epidemiology Unit

*PVV - Pentavalent vaccine

**Total given only for nine vaccines listed in the table

Table 12. Sentinel Site Surveillance of Influenza Like Illness (ILI) and Severe Acute Respiratory Illness (SARI), 2018

Month/2018	Human Surveillance											
	ILI Surveillance					SARI Surveillance						
	Total OPD Visits (1)	Total ILI Visits Reported (2)	Percentage of ILI Out of Total OPD Visits of Total OPD Visits (3) = (2)/(1)*100	Total ILI Samples Tested (4)	Total Positive (5)	Influenza Yield from ILI Samples (6) = (5)/(4)*100	Total Admissions (7)	Total SARI Reported (8)	Percentage of SARI /Total Admissions (9) = (8)/(7)*100	Total SARI Samples Tested (10)	Total Positive (11)	Influenza Yield from SARI Samples (12) = (11)/(10)*100
January	334,964	5,681	1.70%	55	5	9.09%	8,936	108	1.21%	55	10	18.18%
February	348,328	7,646	2.20%	27	2	7.41%	9,034	196	2.17%	114	27	23.68%
March	455,133	12,109	2.66%				9,833	324	3.30%			
April	321,027	7,749	2.41%				5,535	228	4.12%			
May	298,814	6,733	2.25%				5,493	78	1.42%			
June	383,684	7,504	1.96%				7,224	55	0.76%			
July	371,146	5,376	1.45%				6,593	31	0.47%			
August	327,568	4,627	1.41%	44	7	15.91%	4,884	11	0.23%	44	4	9.09%
September	459,349	8,174	1.78%	66	5	7.58%	8,653	44	0.51%	37	4	10.81%
October	366,992	7,291	1.99%	66	13	19.70%	7,324	33	0.45%	32	6	18.75%
November	365,394	6,546	1.79%	69	20	28.99%	8,890	63	0.71%	54	19	35.19%
December	473,049	8,975	1.90%	54	4	7.41%	10,324	188	1.82%	51	13	25.49%
Total	4,505,448	88,411	1.96%	381	56	14.70%	92,723	1,359	1.47%	387	83	21.45%

Source : Epidemiology Unit

Table 13. Admissions Reporting and Characteristics of Patients Admitted to Adult and Paediatric ICUs, 2018

ICU and ICU ID	No. of Beds	Reported Admissions	Median of LOS in Days (IQR)
Ampara MICU (58)	8	399	3 (2,6)
Ampara SICU (59)	3	196	3 (1,5)
Anuradhapura MICU (47)	6	332	3 (2,6)
Anuradhapura NSICU (49)	4	210	3 (2,8)
Anuradhapura SICU (48)	5	108	3 (1,8)
Avissawella GICU (1)	4	310	2 (1,4)
Badulla MICU (45)	4	269	3 (2,7)
Badulla SICU (46)	8	736	2 (1,4)
Balangoda ICU (61)	5	160	3 (2,6)
Balapitiya (17)	4	205	3 (2,6)
Batticaloa MICU (56)	5	365	3 (1,5)
Batticaloa SICU (57)	5	394	2 (1,5)
Dambulla ICU (30)	3	199	3 (2,4)
Diyathalawa GICU (62)	4	298	3 (2,6)
DMH ICU (13)	3	252	3 (2,4)
Embilipitiya (54)	5	366	3 (2,5)
Gampaha MICU (40)	4	372	2 (1,4)
Gampaha SICU (43)	4	157	2 (1,3)
Gampola ICU (29)	3	166	3 (2,6)
Hambantota ICU (53)	4	284	3 (1,5,5)
Homagama ICU (4)	2	134	3 (1,5)
Horana (9)	4	243	4 (2,6)
IDH ICU (5)	4	76	5 (2,11)
Jaffna GICU (69)	13	874	3 (1,5)
Jayawardanapura CTICU (6)	6	494	4 (2,5)
Jayawardanapura GICU (8)	9	568	3 (1,5)
Kamburupitiya ICU (85)	2	24	3 (1,8)
Kalmunai BASE 2 (75)	3	191	3 (3,6)
Kalmunai ICU (55)	5	290	3 (2,6)
Kalubowila MICU (15)	5	332	4 (2,7)
Kalubowila SICU (2)	8	404	3 (2,7)
Kalutara ICU (7)	5	340	4 (2,7)
Kandy CTICU (28)	6	576	2 (2,4)
Kandy MICU (24)	9	361	4 (1,8)
Kandy NSICU1 (26)	5	290	3 (1,8)
Kandy NSICU2 (27)	5	256	4 (2,7)
Kandy SICU (25)	8	827	2 (1,4)
Kantale ICU (71)	5	28	2 (1,3,5)
Karapitiya ETCICU (21)	6	301	4 (2,10)
Karapitiya GICU (20)	7	324	4 (2,9)
Karapitiya Oncology ICU (19)	5	615	1 (1,2)
Kuliyapitiya GICU (44)	5	115	4 (2,9)
Kurunegala AICU (35)	3	271	3 (1,5)
Kurunegala GICU (34)	10	774	3 (1,5)
Kurunegala MICU (33)	7	384	4 (2,8)

Cont...

ICU and ICU ID	No. of Beds	Reported Admissions	Median of LOS in Days (IQR)
Mahamodara AdultICU (18)	4	489	1 (1,2)
Maharagama MICU (78)	4	289	4 (2,7)
Maharagama SICU (77)	12	501	2 (1,4)
Mahiyanganaya GICU (72)	6	140	3 (2,6,5)
Mannar ICU (68)	4	156	3 (1.5,5)
Maravila ICU (70)	3	119	3 (2,7)
Matara MICU (22)	5	229	4 (2,8)
Matara SICU (23)	5	445	3 (1,5)
Matale ICU (37)	5	366	3 (1,5)
Mawanella ICU (65)	3	243	3 (2,5)
Monaragala GICU (38)	6	460	3 (2,6)
Nawalapitiya (64)	5	285	3 (2,6)
Negombo MICU (16)	5	266	3 (1,5)
NHSL ASICU1 (79)	5	202	4 (2,14)
NHSL ASICU2 (80)	4	420	3 (1,6)
NHSL MICU (3)	10	227	5 (2,11)
NHSL NICU (82)	8	359	3 (1,7)
NHSL NSICU (81)	7	188	7 (3,17)
NHSL NTICU1 (11)	8	292	6 (2,14)
NHSL NTICU2 (12)	8	303	6 (3,11)
NHSL NTICU4 (83)	6	244	4 (2,6,5)
NHSL NTICU5 (84)	5	348	3 (1,5)
NHSL SICU (10)	9	861	2 (1,3)
Nuwara Eliya (63)	5	173	6 (3,11)
Peradeniya ICU (31)	10	515	3 (1,7)
Peradeniya toxic (74)	4	268	3 (1,5)
Polonnaruwa GICU (50)	8	613	3 (1,5)
Puttalam ICU (66)	4	223	2 (1,5)
Ragama MICU (42)	5	255	4 (2,8)
Ragama SICU (41)	6	540	3 (1,5)
Ratnapura (76)	7	535	2 (1,5)
Tangalle ICU (52)	4	184	4 (2,8)
Trincomalee ICU (51)	5	258	4 (2,7)
Vavuniya ICU (80)	4	301	3 (1,5)
Wathupitiwala (60)	5	86	5 (2,9)
Welisara ICU (39)	7	653	2 (1,3)
Paediatric ICUs	No. of Beds	Reported Admissions	Median of LOS in Days (IQR)
Anuradhapura PICU (86)	4	187	2 (1,5)
LRH SICU (87)	8	235	4 (2,10)
LRH MICU (88)	11	469	5 (2,8)
LRH CTICU 1 (89)	6	297	4 (2,7)
LRH CTICU 2 (90)	10	608	2 (1,4)
Kandy PICU (91)	5	224	5 (2,10)
Karapitiya PICU (92)	7	346	3 (1,6)
Maharagama PICU (93)	4	211	4 (2,7)
Sirimavo MICU (73)	5	155	6 (3,14)
Sirimavo SICU (32)	5	243	5 (2,8)

Source : National Intensive Care Surveillance

LOS - Length Of Stay

