

ANNUAL REPORT 2016



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குழு சுகாதார பணியகம்
FAMILY HEALTH BUREAU



Family Health Bureau
Ministry of Health
Sri Lanka



**Annual Report
on
Family Health Bureau
2016**



Family Health Bureau
Ministry of Health
Sri Lanka



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Preface

Family Health Bureau, Ministry of Health is pleased to present the 26th Annual Report for the year 2016. This report provides the progress made in the Reproductive, Maternal, New born, Child, Adolescent and Youth Health (RMNCAYH) programme, and some of the special activities carried out by the Family Health Bureau to improve the National RMNCAYH programme in 2016.

The report consists of routine data reported through the Reproductive Health Management Information System (RH MIS) from all Medical Officers of Health areas and special surveillance such as Maternal child Mortality and Morbidity Surveillance and Infants death Surveillance.

Information provided in this report would be utilized for programme redirection at National, Provincial and District levels and to identify areas that need special attention in order to provide quality services relevant to National RMNCAYH programme in Sri Lanka.

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Last but not least, I must thank all the MOHs and their staff members, district and provincial MCH teams for their continuous hard work and commitment even with limited resources and providing all data on time without which the national RMNCYH programme would have not been a success

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Summary Statistics

Indicator	Data	Year	Source
Demographic			
Total population ¹	21,203,000	2016	Registrar General's Department
Age distribution ('000) ¹			
0 -14 years	5,348	2016	Registrar General's Department
15 - 64 years	14,187		
65 years over	1668		
Live births ¹			
Total	331,073	2016	Registrar General's Department
Male	169,177		
Female	161,896		
Surface area (Sq. km)	62,705	1988	Survey General's Department
Population density (Persons per sq. km) ¹	338	2016	Registrar General's Department
Growth of mid-year Population (%) ¹	1.1	2016	
Rate of Natural Increase (per 1000) ¹	9.4	2016	Registrar General's
Crude Birth Rate (per 1000 population) ¹	15.6	2016	Registrar General's Department
Crude Death Rate (per 1000 population) ¹	6.2	2016	
Urban population (%)	18.2	2012	Department of Census & Statistics
Sex ratio at birth (No. of male births per 100 female births)	93.8	2012	Department of Census & Statistics 2012
Women in the reproductive age group (15-49 years)%	51.0	2012	Department of Census & Statistics 2012
Health and Nutrition			
Life expectancy at birth (years) Average	75.0	2015	Central Bank Report
Neonatal Mortality Rate ¹ (per 1000 live births)	5.6	2014	Registrar General's Department
Infant Mortality Rate ¹ (per 1000 live births)	8.0	2014	
Under five Mortality Rate ¹ (per 1000 live births)	9.4	2014	
Total Fertility Rate	2.2	2016	Demographic and Health Survey
Maternal Mortality Ratio (per 100000 live births)	33.8	2016	Family Health Bureau
Still Birth Rate (per 1000 births)	6.0	2016	Medical Statistics Unit
Low birth weight per 100 live births in Government Hospitals	15.5	2016	

Indicator	Data	Year	Source
Pregnant women attending ANC more than 4 visits (%)	99.3	2016	Demographic and Health Survey
Average number of Antenatal clinic visits per mother (%)	13.5	2016	Demographic and Health Survey
Average number of antenatal home visits per mother by a PHM(%)	4.1	2016	Family Health Bureau
Pregnant women visited at least once by PHM at home (%)	90.3	2016	Family Health Bureau
Live births in government hospitals (%)	91.7	2016	Medical Statistics Unit
Births attended by skilled health personnel (%)	99.5	2016	Demographic and Health Survey
Mothers receiving at least 1 postpartum visit during 1 st 10 days (out of reported deliveries)(%)	92.8	2016	Family Health Bureau
Average number of postpartum visits by PHM during 1 st 10 days(%)	1.7	2016	Family Health Bureau
Children ever breastfed of all children <5 years (%)	99.4	2016	Demographic and Health Survey
Breastfeeding initiation within 1 hour of birth (%)	90.3	2016	
Exclusive breastfeeding under 6 months (%)	82	2016	
Immunization coverage (%) BCG at birth (live births) Pentavalent 3rd dose Measles containing vaccine (MCV 1)	99.0 99.0 99.0	2016	Epidemiology Unit
Underweight (weight- for- age <-2SD) Wasting (weight for height - <-2SD) Stunting (height for age - <-2SD)	20.5 15.1 17.3	2016	Demographic and Health Survey
Average Daily Calorie Intake (k Cal) (Both poor and non-poor)	2,111	2012/2013	Central Bank Report
Current use of contraceptive methods among 15-49 year age married women (%) Any method Modern Method Traditional Method	64.6 53.6 11.0	2016	Demographic and Health Survey
Water supply and sanitation			
Access to safe drinking water (%)	90	2016	Demographic and Health Survey
Access to improved, not shared sanitation facilities (%)	90	2016	

Indicator			Data	Year	Source
Socio-economic					
GDP per capita at market prices		Rs US \$	533,398 3,924	2015	Central Bank Report
GNI per capita at market prices		Rs US \$	521,412 3,836	2015	
Human development index			0.766	2015	
Unemployment rate (15 year & over population)					Sri Lanka Labour Force Survey (Annual Report)
Total			4.3	2014	
Male			3.1		
Female			6.2		
Labour force (15 years & over population)			8,804,548	2014	Sri Lanka Labour Force Survey
Dependency ratio (%)			49.5	2015	Central Bank Report
Literacy rate %		Total Male Female	93.2 94.1 92.4	2016	Central Bank Report
School going population (%)		Primary Junior secondary Senior secondary Collegiate	42.0 31.0 15.0 12.0	2012	Ministry of Education
Median age at marriage (Female 25-49 years)			23.7	2016	Demographic and Health Survey
Health Resources					
Government expenditure on health (% of GNP)			1.66	2015	Department of Health Services
Government health expenditure as a % of total government expenditure			5.65	2015	
Per capita health expenditure (Rs)			8639	2015	
Medical Officer per 100,000 population			89.5	2016	Medical Statistics Unit
Population per Medical Officer			1,118	2016	Medical Statistics Unit
Dental Surgeons per 100,000 population			6.8	2016	Medical Statistics Unit
Nurses per 10,000 population			200.7	2016	Medical Statistics Unit
Public Health Midwives per 100,000 population			29.5	2016	Medical Statistics Unit
Number of hospitals			629	2016	Medical Statistics Unit
Number of hospital beds			81,661	2016	Medical Statistics Unit
Hospital beds per 1,000 population			3.9	2016	Medical Statistics Unit
Number of Central Dispensaries			480	2016	Medical Statistics Unit
Number of MOH divisions (Established)			343	2016	Family Health Bureau

¹ Provisional

CHAPTER 01

INTRODUCTION

1.1 REPRODUCTIVE, MATERNAL, NEWBORN, CHILD, ADOLESCENT AND YOUTH HEALTH PROGRAMME OF SRI LANKA

Reproductive, Maternal, Newborn, Child Adolescent and Youth Health programme (RMNCAYH) is a collection of several packages of interventions that are aimed to promote the health of families around the country with a life cycle approach. The origin of the programme dated back to 1926 in which the first field based health unit system was established in Kalutara. At present, RMNCAYH programme has reached almost all families throughout the country. It forms a well-organized health care system, implementing services through 340 divisional health units called Medical Officer of Health (MOH) areas.

The official mission of the RMNCAYH programme is “to contribute to the attainment of highest possible levels of health of all women, children and families through provision of comprehensive, sustainable, equitable and quality maternal and child health services in a supportive, culturally acceptable and family friendly setting.” In order to achieve this mission, the programme relies on evidence based public health interventions which are proven to be effective and delivered by multi-disciplinary team of health professionals. Major share of the RMNCAYH programme interventions are preventive in nature while some of them focus on secondary care by including interventions to ensure the standards and quality of care. A series of well-designed packages are available to deliver these interventions to target groups.

The RMNCAYH programme is comprised of several major components that aim at promoting reproductive, maternal, child, school, adolescent and youth health. It also includes women’s health components incorporating perimenopausal care and gender concerns. The maternal component is further sub-divided into areas such as; Antenatal,

Intrapartum, Postpartum and Maternal Morbidity and Mortality Surveillance entities. Newborn care, Child nutrition, Child development and special needs, Child morbidity and mortality prevention and surveillance elements comprise the Child health component. In addition, RMNCAYH programme includes an oral health component which focuses on maternal and child oral health care.

As a whole, RMNCAYH programme focuses on a sizable proportion (around 54%) of the population, which includes children, adolescents, youth and those in the reproductive ages.

1.2 HEALTH ADMINISTRATION OF SRI LANKA

Sri Lanka has a partially devolved health care system. Ministry of Health at central level is responsible for maintaining the health services of the country, while the nine Provincial ministries are responsible for effective implementation of the services in their respective provinces. Nine Provinces consist of 26 health districts called Regional Directors of Health Services (RDHS). RDHS areas are similar to administrative districts except in Ampara where the administrative district is subdivided to Ampara and Kalmunai RDHS areas.

1.3 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 RMNCAYH programme. FHB provides technical guidance for provincial health care system on its implementation. In addition, FHB advocates the Ministry of Health on matters related to policy, finance, infrastructure 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 covers different components of the RMNCAYH programme. These include:

- a) Maternal Health
- b) Intrapartum and Newborn Care
- c) Maternal Morbidity and Mortality Surveillance
- d) Child Health, Development and Special Needs
- e) Child Nutrition
- f) School Health
- g) Adolescent and Youth Health
- h) Gender and Women's health
- i) Family Planning
- j) Oral Health
- k) Planning, Monitoring and Evaluation
- l) Research and Development
- m) Reproductive Health Center

Each of these unit is headed by a Consultant Community Physician (public health specialist), who is the national programme manager for areas under the unit's purview. Each unit is possessing a separate staff responsible for advocacy, policy and strategic analysis, programme development, technical guidance, evaluation and supervision related to the respective programme components. Reproductive Health centre services provided by a team lead by a Visiting Obstetrician Gynaecologist.

Figure 1.1 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 system that are involved with the RMNCAYH programme.

The diagram also depicts the referral and back referral pathways available for people confronted by health conditions related to family health (child birth, 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 Ministry of Health, policy making and financial allocation related to RMNCAYH programme become the responsibility of the 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 technical unit technically guiding the RMNCAYH Programme. FHB provides policy and strategic advocacy to the Ministry of Health and Provincial and Regional directorates.

1.4 IMPLEMENTATION OF RMNCAYH PROGRAMME AT PROVINCIAL AND DISTRICT LEVEL

Implementation of the RMNCAYH programme is technically guided and supervised by Provincial Consultant Community Physicians and Medical Officers of Maternal and Child Health (MOMCH) attached to regional (district) directorates. MOMCHs also act as the major link between FHB and the Provincial system. At the district level, MOMCH is supported by Regional Supervising Public Health Nursing Sister (RSPHNO) and Divisional Supervising Public Health Inspector (SPHID) in monitoring of the Family Health Programme in the district.

The implementation of the RMNCAYH programme is carried out by the Medical Officer of Health (MOH) teams under the administrative supervision of the Provincial and Regional Directorates of Health. In Sri

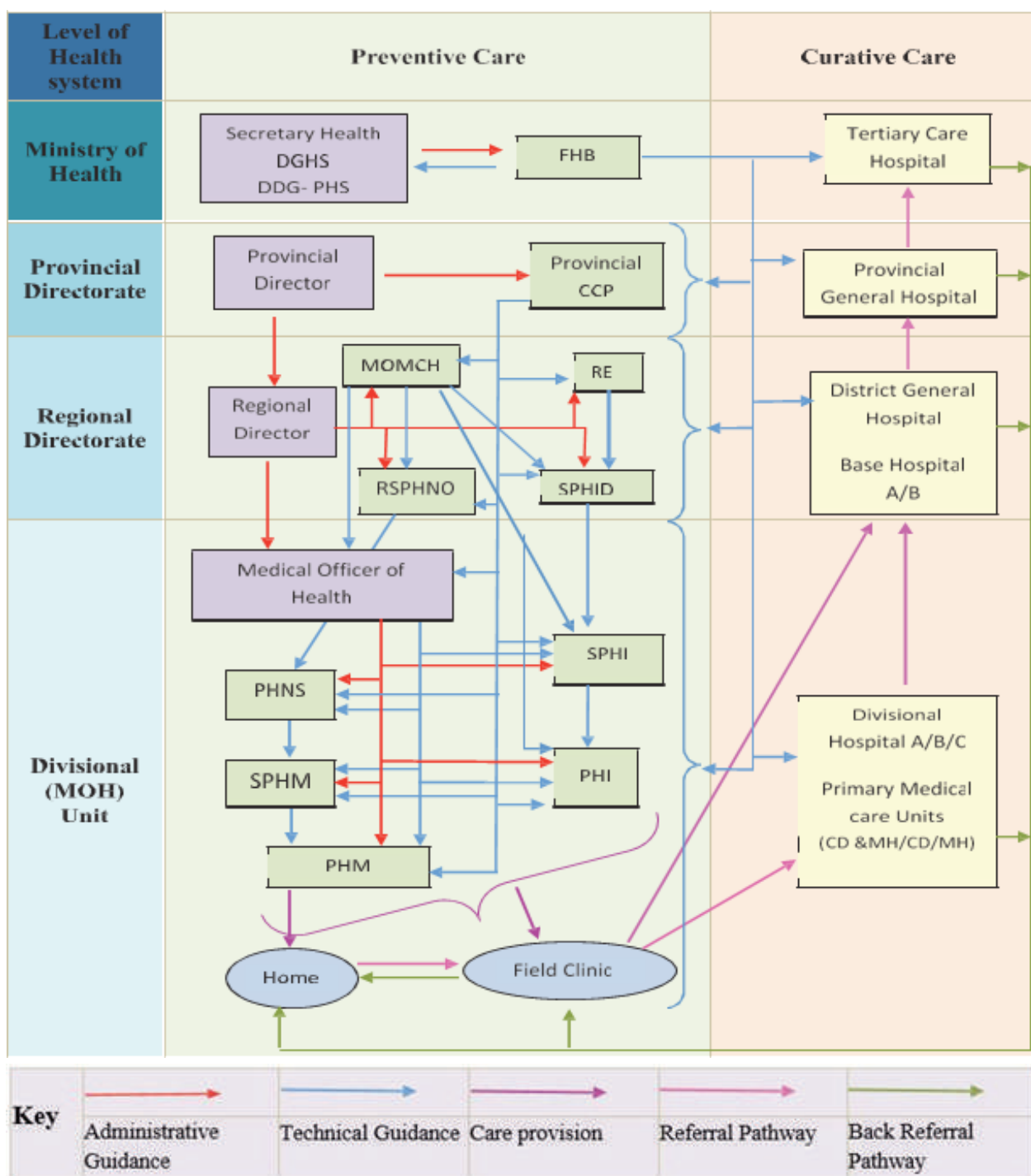


Figure 1.1: Organization of RMNCAYH Programme at Different Levels of Health System

Lanka, 340 MOH areas are distributed within 26 health regions. The MOH areas are the smallest health unit in the public health network and it consists of a team comprising several categories of staff. MOH is the Manager of the MOH team.

He/She is a MBBS qualified doctor who is given special orientation training on public health activities. Both technical and adminis

trative supervision of the MOH team becomes the main responsibility of the MOH. At present, most MOHs are assisted by Additional Medical Officers of Health (AMOHs). The Public Health Midwife (PHM) and Public Health Inspector (PHI) are the ultimate grass root level primary health care workers of the MOH team. On average one PHM is appointed for 3,000 population while a PHI is appointed for 10,000 population. While the principle roles of the PHM lies around maternal and child health

activities, the PHIs are principally held responsible for School and adolescent health programme, Environmental and Occupational Health activities including control of communicable diseases, ensuring water and food safety, and sanitation related interventions. Several other categories of interim level supervisors are available in the MOH team. They are to assist the MOH in supervision of activities of grass root level staff. Public Health Nursing Sisters (PHNS) and Supervising Public Health Midwives (SPHM) are responsible for supervising the PHMs. PHNS and SPHM have a hierarchical administrative relationship where PHNS has to supervise SPHM. Both of them are responsible for the MOH. Supervising Public Health Inspectors (SPHI) are the immediate supervisors of PHIs. They are directly responsible for the MOH. MOH team is further supported by Development Assistants/ Programme Planning Assistants/ Development Officers/Management assistants and other categories of supportive staff such as drivers, saukya karya sahayaka etc. MOH staff includes School Dental Therapists (SDT) who are responsible for providing routine dental care for school children. Table 1.1 presents the overall staff position of the MOH areas around the country.

Even though the ratios in table 1.1 show that there are one MOH for every 65,000 population and one PHM for every 3500 population,

district carder positions are maldistributed. There is an inadequacy in staff categories such as PHNS, SPHM, SPHI and PHI could be noted.

1.5 PURPOSE OF THE REPORT

The main purpose of the 25th Annual Report of the FHB is to provide feedback on effectiveness, strengths and weaknesses of RMNCAYH programme to its partners. The report includes information on background, and selected input, process, outcome and impact indicators relevant to the RMNCAYH programme. It also provides the platform for various outside agencies such as other Ministries, NGOs, INGOs, Professional bodies and researchers to learn the progress of RMNCAYH programme.

1.6 DATA SOURCES

1.6.1 Routine RHMIS

Data and information collected through routine RHMIS are summarized and analyzed from the data received to the FHB from several sources. They include:

1. Quarterly MCH Return (H 509)
2. Family Planning Quaterly Return (H 1200 B)
3. Quarterly School Health Return (H 797)
4. Maternal Death Surveillance and Response System

Table 1.1: Distribution of MOH office staff categories according to population

Staff category	Approved cadre	Cadre in position	Ratio
MOH	351	310	1: 68,272
AMOH	399	308	1: 68,716
PHNS	440	212	1: 99,832
SPHI	338	231	1: 91,621
SPHM	412	305	1: 69,392
PHM	6783	5720	1: 3,700
PHI	1586	1405	1: 15,064
SDT	469	344	1: 12,045

Source : FHB, RHMIS 2016

5. National Feto-Infant Mortality Surveillance System
6. Annual Data Sheet of MOHs
6. Annual Nutrition Month Return
7. Monthly Return from Dental Therapists
8. Registrar General's Department and other relevant sources

1.6.1.1 Quarterly MCH Return (H 509)

Quarterly MCH Return (H 509) provides a comprehensive set of data on the performance of RMNCAYH programme at the MOH level. The data elements in this return cover a wide scope. These include: information on target population, performances of maternal care, child care, well woman clinic and family planning services provided both at field and clinic settings. Several registers, records and returns maintained in field and clinic settings are used to compile H 509. Each MOH is compiling the H 509 in 3 copies and send one copy to the FHB and one to the RDHS Office before the 25th of the following month of each quarter. The third copy is to be retained at the MOH Office.

1.6.1.2 Family Planning Quarterly Return (H 1200 B)

H 1200 serves dual purpose of record and return of family planning new acceptors. Each family planning service provision point has to maintain a H 1200 A for new acceptors of all modern methods except for Condoms. Each service delivery point is sending H 1200 A to the respective MOH office. Every MOH should send the H 1200 B, consolidated quarterly return compiled using all H 1200 A data to the FHB at the end of the quarter.

1.6.1.3 Quarterly School Health Return (H 797)

H 797 summarizes the performance of school health activities. It covers the school medical inspections, immunizations and follows up of children identified to have problems. This

quarterly return from each MOH office is expected to reach FHB before the 25th of the month following each quarter.

1.6.2 Special Surveillance System

1.6.2.1 Maternal Death Surveillance and Response System

Each probable maternal death is reported within 24 hours to the RDHS and FHB by the MOH of the field and/or Head of the Institution, where the death occurred. The death should be reviewed at hospital and field level within 14 days. All the information is recorded in a standard format (Hospital- H 677, Field- H 677a). Each year Maternal Mortality Reviews are conducted at district level. An expert team comprised of all related professionals visit every district to conduct National Maternal Mortality Reviews and information is compiled by the FHB (Figure 1.3).



Source : FHB, MCMMS 2016

Figure 1.2: Information flow of National Maternal Mortality Surveillance System

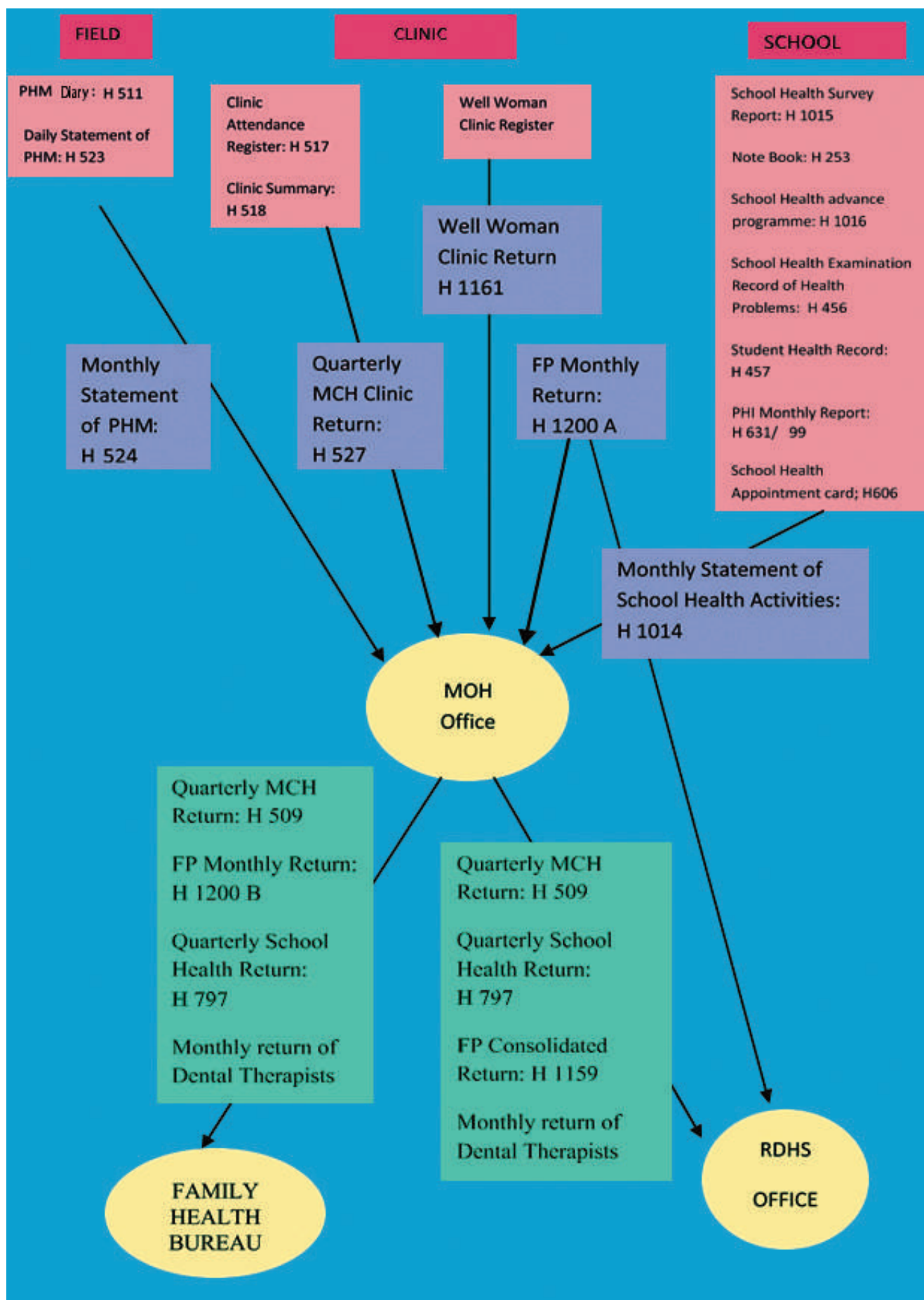


Figure 1.3: Sources and Pathways of Data used in the Annual Report

1.6.2.2 National Feto-Infant Mortality Surveillance System

Perinatal death audit system was established in the year 2006 to report all perinatal deaths from specialized hospitals. A more structured system was worked out in 2015 to include feto-infant deaths from both field and hospital sectors. A pilot implementation was carried out in Western Province in 2015. The mechanism is illustrated in Figure 1.4.

All perinatal deaths (stillbirths >28 weeks of period of gestation and early neonatal deaths) in specialized hospitals are reported to head of the institute within 24 hours. Perinatal deaths of each month are discussed at monthly perinatal mortality review meetings at hospital level and a detailed monthly report is sent to the Family Health Bureau.

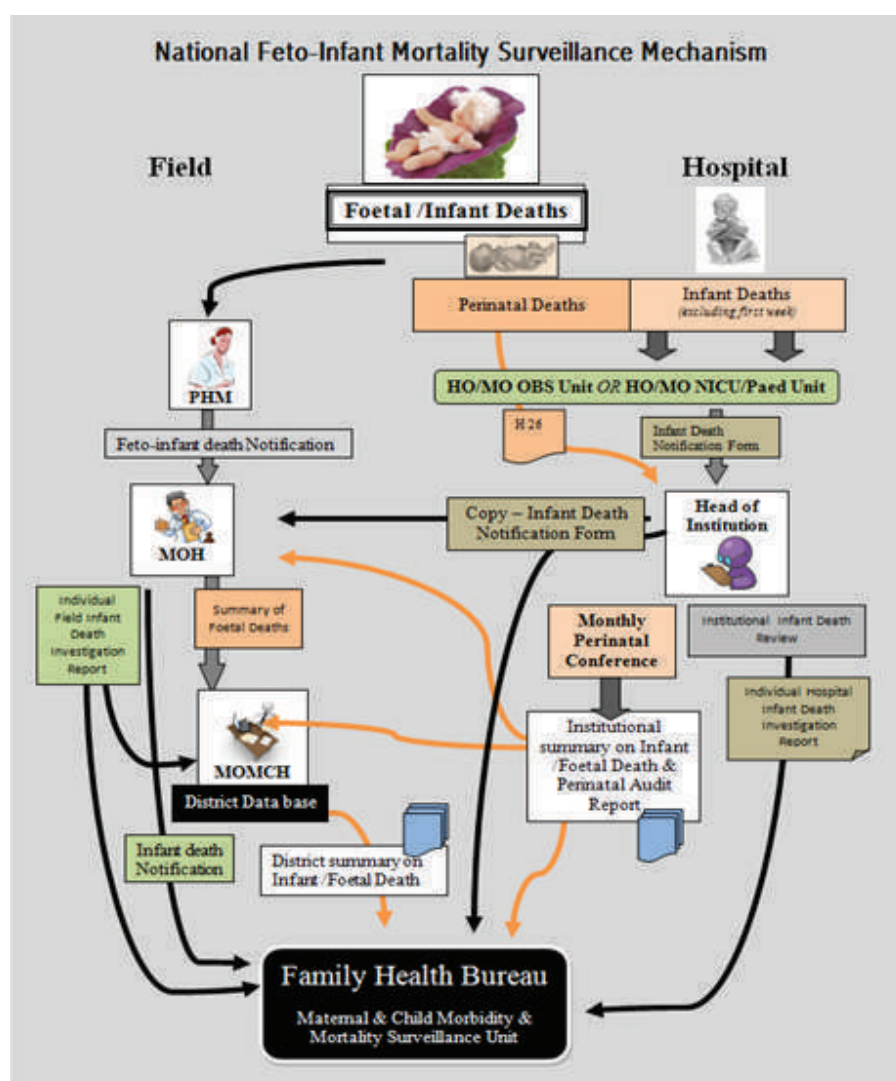
1.6.3 Other Sources of Data

1.6.3.1 Annual Data Sheet of MOHs

Annual Data Sheet as implied by the name is used to collect basic information from MOH including vacancies of staff positions, vehicles and other facilities, number of clinics annually.

1.6.3.2 Annual Nutrition Month Return

Data related to Nutrition Month activities are compiled annually by the FHB when data from each RDHS area is received and reviewed by the FHB. Nutritional status of children under five and school children in Grade 1- 10 are being compiled by MOH areas.



Source : FHB, MCMMS 2016

Figure 1.4: National Feto-Infant Mortality Surveillance System

1.6.3.3 Monthly Return from Dental Therapists

School Dental Therapists (SDTs) are sending returns on their monthly and quarterly performances and summary of this is available at District level. Island wide data is summarized at FHB, based on annual returns of each District.

1.6.3.4 Registrar General's Department and other relevant sources

The national population estimates, fertility and mortality rates published by the Registrar General are used in some of the indicators included in this Annual Report as denominators.

1.7 QUALITY OF DATA

Each return is scrutinized for completeness and accuracy of data at the FHB. Discrepancies are verified by contacting the MOHs over the phone and in some cases the returns were sent back to the respective MOHs to revise and resubmit. At the FHB these returns are entered into Epi data based data entry format. The analysis is carried out using SPSS version 21 software. Data entry validation is done by re-entering 5% of the returns.

CHAPTER 02

TARGET POPULATION OF RMNCAYH PROGRAMME

Target population for RMNCAYH programme is identified by the grass root level health worker PHMs identify “Eligible Families” and register them in Eligible Family Registers (H-526). PHIs identify school children in the schools under their care.

“Eligible Family” is defined as a family with a female aged between 15- 49 years, either married customary legally or living together and/ or having a child under 5 years of age. A family with a pregnant or cohabiting woman irrespective of marital status and age and single women (widowed, divorced, separated) are also considered under eligible family. It is estimated that the number pertaining to 18.5% of the population approximates the number of eligible families.

All children in schools with enrolment less than 200 and those in grades 1,4,7 and 10 in schools having enrolments of over 200 are supposed to be subjected to medical examinations by MOH staff.

Table 2.1 presents the sizes of various types of target groups coming under the RMNCAYH Programme in the year 2016. The total population reported by PHMs was compared with the estimated population.

The total population reported by PHMs exceeded the estimated population given by Registrar General’s Department in 2016 by 3.0%. Figure 4 presents the trends in the percentage registration of eligible families in comparison to eligible families in the country.

Table 2.1: Size of the different target population of RMNCAH programme 2016

Indicator	Actual [#]	Reported
Midyear population	21,164,458	21,793,167
Eligible families	3,915,425	3,708,598
Pregnant mothers	364,140	361,317
Births	331,073 [*]	310,121
Infants under care	334,821 ^{**}	312,455
1-2 years under care	349,715 ^{**}	339,637
2-5 years under care	1,085,107 ^{**}	1,021,078
Number of schools ≤ 200	5139 ^{***}	4787
Number of Schools ≥ 200	5023 ^{***}	4804
Total school children under care at the beginning of year	4,143,330 ^{***}	3,980,486

Source : FHB, RHMIS 2016

^{*} Births registered by Registrar General's Department

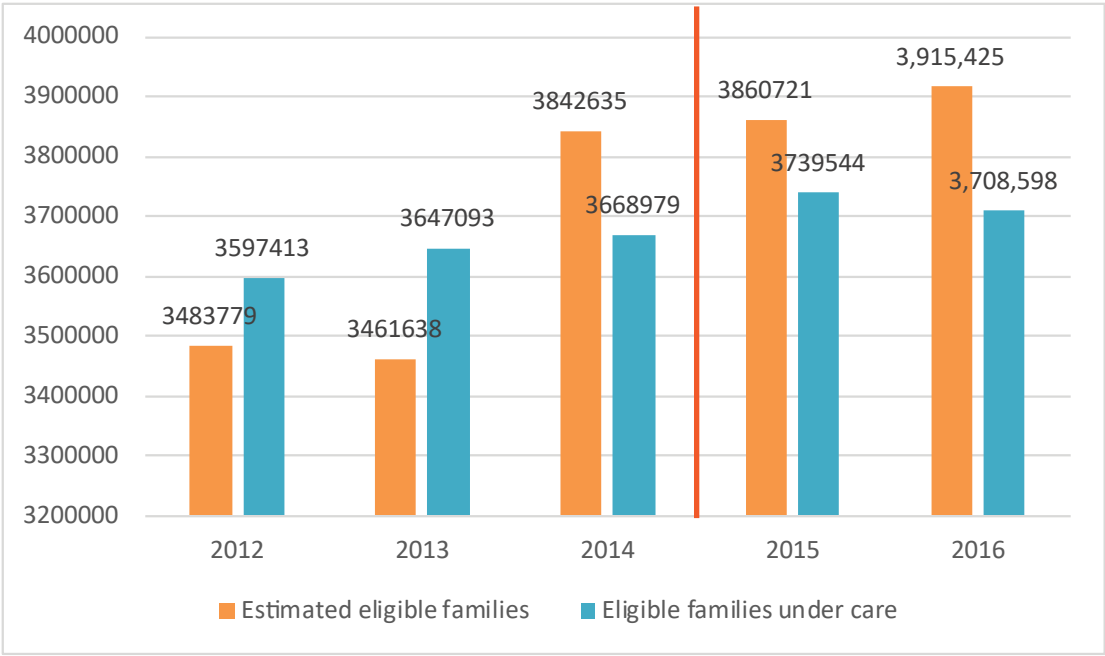
^{**} According to Births reported by Registrar General's Department for relevant years

^{***} As reported by Ministry of Education

[#] Estimated values based on data from Medical Statistics Unit, Registrar General Department, and Ministry of Education

The estimations for the figure 2.1 was based on population reported by Census and Statistics Department (and proportion of eligible families was taken as the 18.5% of the total population for that year. Population given by the department of census for 2016 was 20,771,000 . PHMs have registered a total of 3,708,598 eligible families (17.85%).

It reflects either lack of efficiency in updating the eligible family registers or inaccuracy in the estimate we used for calculations as the proportion of eligible families in the population (18.5%) or both. These need to be re assessed with the availability of detailed information on the demographic characteristics of the population from the census.



Source : FHB, RHMIS 2016

Figure 2.1: Comparison of numbers of estimated and registered eligible families

Till 2014, Eligible family percentage was taken as 16%. From 2015, it was taken as 18.5%.

CHAPTER 03

PRECONCEPTION, MATERNAL AND NEWBORN CARE

3.1 PRECONCEPTION CARE

A package for preconception care was introduced to the RMNCAYH programme in 2012 to promote health of women and their partners to enter pregnancy in optimal health. The main strategy used to fulfill this is by ensuring women of child bearing age and their partners receiving a comprehensive package of pre-conception care. Aim of this package is to create awareness among newly married, promote their health, screening and appropriate interventions to reduce risk factors that might affect future pregnancies.

This package is introduced to extend the maternal health continuum prior to pregnancy to reduce indices such as maternal mortality, infant mortality and low birth weight. The package focuses on the newly married couples and it would:

Improve knowledge and attitudes of men and women especially in relation to pre-conception health which would lead to behavioral changes.

Assure that all newly wedded couples receive preconception care services.

Improve the health of women before pregnancy by giving pre-conception care.

Detect the health problems of the couple to prevent, minimize, treat or correct the health problems before they attain parenthood.

In 2016 there had been 173,990 marriages registered in Sri Lanka of which PHMs have registered 88317 couples with a percentage of 49.7%.

In 2016, there had been 32.7% primi mothers registered by PHMs and out of which 48.7% have undergone preconception screening. more than twenty six percent (26.6%) of all

primi mothers have attended both sessions in preconception care. Remarkable progress have been achieved in pre conception care during last couple of years, however this area need strengthening in many parts of the country.

3.2 ANTENATAL CARE

Antenatal care begins with the registration of a pregnant woman by PHM either in field or in clinic. Standard package of interventions is offered to pregnant mothers following registration through home visits and field clinics. This package includes:

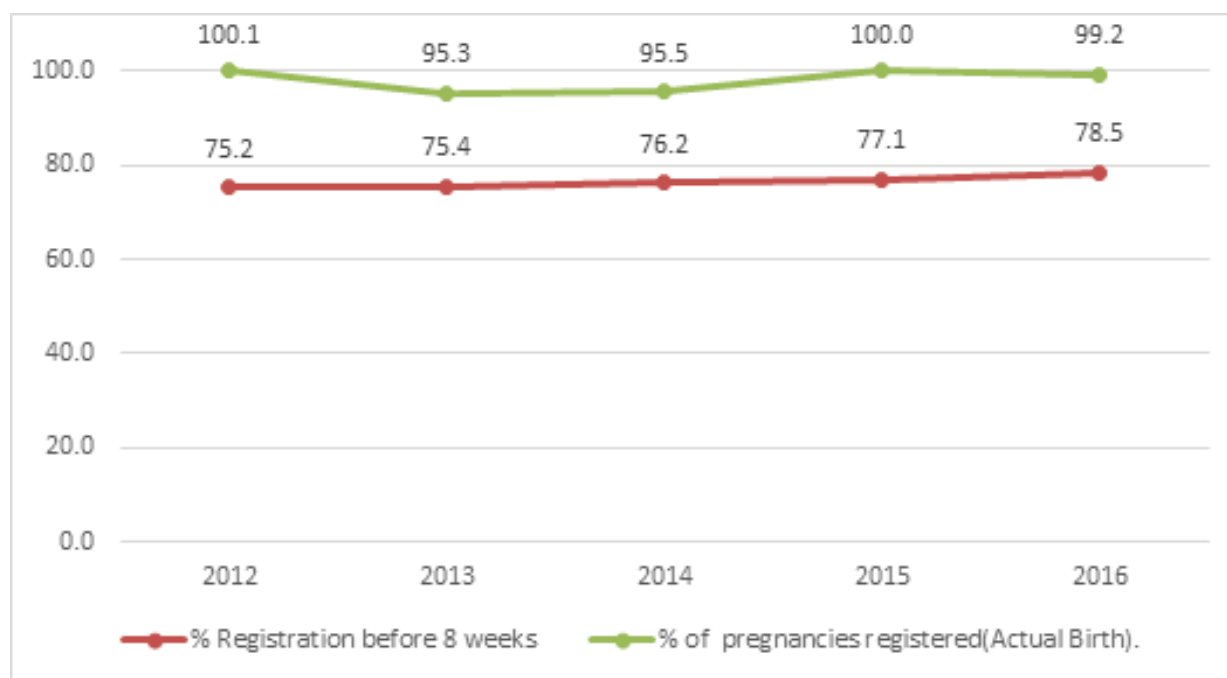
- preliminary clinical assessment and screening for risk factors
- screening for pre-eclampsia/eclampsia
- screening for eclampsia and syphilis
- screening for anaemia and screening for hyperglycemia in pregnancy
- Tetanus Toxoid immunization
- provision of antihelminthic
- prevention and management of STIs and RTIs
- prevention of mother to child transmission of HIV
- monitoring of maternal and foetal wellbeing
- assessment of fundal height and weight gain
- micronutrient supplementation, (iron, folic acid, vitamin C, & calcium), food supplementation ("Triposha")
- referral of high risk pregnancies for specialist care
- providing information and counseling for pregnancy related issues (breast feeding and family planning, birth and emergency preparedness)

3.2.1 Registration of pregnant mothers

PHMs have registered 361,317 pregnant mothers during 2016 either at antenatal clinics or during field visits. (There has been 331,073 birth reported in 2016 (Source : RG). Therefore, estimated pregnancy should be 364,180 using 1.1%. This indicates that a very high percentage of pregnant women in Sri Lanka are in contact with the maternal care services offered by the RMNCAYH Programme.

mothers. It could also be reflection of the sound health care network of the country which facilitates the service provider recipient contacts.

RMNCAYH programme promotes early and regular antenatal care. Registration before 8 weeks is considered as early registration, and 78.5% have been registered before 8 weeks of pregnancy in 2016. Only 6.6% of mothers



Source : FHB, RHMIS 2016

Figure 3.1: Pregnant mother registration and registration before 8 weeks 2012 to 2016

Figures 3.1 and 3.2 show the trends in percentage of pregnant mothers registered out of expected pregnancies who came into contact with the maternal care programme during the last 5 years.

The percentage registration over last 5 years indicates that PHMs have registered high proportions of estimated number of pregnancies. This high coverage seen in the pregnant mothers' registration not only shows the efficiency of the primary health care staff around the country but also the positive health seeking behavior among Sri Lankan

have been registered after 12 weeks of pregnancy.

3.2.2 Domiciliary Care

The clinic care given to antenatal mothers is expected to be complimented by domiciliary care offered by PHMs. During home visits, PHMs assess the antenatal mothers' health status by risk screening and examination, conducting simple investigations, educating pregnant mothers and family members. In 2016, 90.3% of registered mothers have been visited at least once by a PHM (table 3.1).

According to guidelines, a pregnant mother is expected to receive at least 3 home visits by a PHM. In 2016, average 4 visits have been done by PHM for a pregnant mother (Table 3.1).

3.2.3 Field Clinic Care

Following registration, pregnant mothers are referred to field Antenatal clinics. During 2016, 94.3% of registered mothers have attended field antenatal clinics at least once which are conducted by MOH or at non-specialists institutions at least once. On average, a mother has made 6 field clinic visits during her pregnancy (Table 3.3). However, the total number of antenatal clinic visits by a mother may be higher than this as information on specialist unit clinics and private sector are not reported in RHMIS.

3.2.4 Antenatal screening

As reported by PHMs at the first postpartum visit, percentage of mothers who were tested for VDRL at the time of delivery, amounted to 99.9% in 2016. However, out of antenatal mothers attending field clinics, only 79.5% were tested for VDRL at the field clinic where as only 72.5% of HIV test were done of field clinics (Table 3.3). This includes the blood samples taken at the clinic and sending for testing at government institutions / almost all mothers knew their blood group and RH status at the time of delivery. The high coverage of VDRL and blood grouping and Rh testing as reported during first postpartum visit indicate that a considerable percentage of mothers may obtain these services directly from government specialist hospital clinics or from the private sector. Screening for HIV was done in 85.3% of mothers at the time of delivery. Screening for HIV was available in all districts in the last quarter of year 2016. This contributed to low coverage of screening for HIV.

Table 3.1: Percentage of pregnant mothers who were visited at least once and average number of home visits by PHM 2012- 2016

Indicator	2012	2013	2014	2015	2016
% of registered pregnant mothers visited at least once at home by PHM	90.2	91.3	90.2	88.5	90.3
Average number of PHM field visits per mother	5.0	4.5	4.1	4.2	4.1

Source : FHB, RHMIS 2016

Table 3.2: Percentage of pregnant mothers visiting field antenatal clinics (at least once) and average number of clinic visits 2012 - 2016

Indicator	2012	2013	2014	2015	2016
% of pregnant mothers making at least one field clinic visit out of registered pregnancies	95.2	94.8	95.5	94.6	94.3
Average number of field clinic visits per mother	6.8	6.6	6.3	6.4	6.4

Source : FHB, RHMIS 2016

Table 3.3: Percentage of pregnant mothers screened at ANC 2012 - 2016

Indicator	2012	2013	2014	2015	2016
% of pregnant mothers tested for VDRL at the time of delivery out of estimated deliveries	99.3	99.7	98.1	98.7	99.9
% of mothers whose blood is tested for grouping and Rh at the time of delivery out of reported deliveries	100	99.9	97.8	99.0	100
% of mothers whose BMI is assessed before 12 weeks out of total clinic attendance	82.7	83.1	79.9	88.5	89.7
% of mothers screened for Hb at the field clinic out of mothers attending antenatal clinics	52.3	50.6	57.1	45.4	56.0
% of mothers tested for VDRL at field clinic out of mothers attending antenatal clinics	53.8	59.2	57.1	75.1	79.5
% of mothers whose blood Grouping and Rh tested at field antenatal clinic	24.8	27.3	25.5	28.8	29.2

Source : FHB, RHMIS 2016

In 2016, only 56% of the mothers attending field clinic had their Hb level tested in field clinics (Table 3.3).

It was also notable that BMI of 89.7% of mothers attending clinics were measured before 12 weeks of pregnancy (Table 3.3).

3.2.5 Protection from Rubella and Tetanus

In Sri Lanka, comprehensive efforts have been made to ensure all reproductive age women were immunized at field clinics. Out of pregnant mothers in 2016, 96.6% were protected for Rubella. Almost all mothers (100% in 2016) were protected with Tetanus vaccine at the time of delivery (Table 3.4). High coverage of tetanus vaccination among antenatal mothers along with safe delivery and newborn care practices have attributed to elimination of neonatal tetanus from the country.

3.2.6 Maternal Nutritional status

3.2.6.1 Body Mass Index (BMI)

Under nutrition is considered as one of the most resistant public health problems in Sri Lanka. Pre pregnant BMI is considered as an important associate of the birth weight of the newborn which in turn affect the child's nutrition. BMI measured before 12 weeks of gestation is approximated for pre pregnant BMI. In order to assess that, pregnant mothers should be identified before 12 weeks of pregnancy.

The Figure 3.2 indicates the BMI status of pregnant mothers whose BMI was assessed before 12 weeks. Approximately 18.8% of pregnant mothers were found to be underweight and this proportion remained more or less similar over the past 6 years.

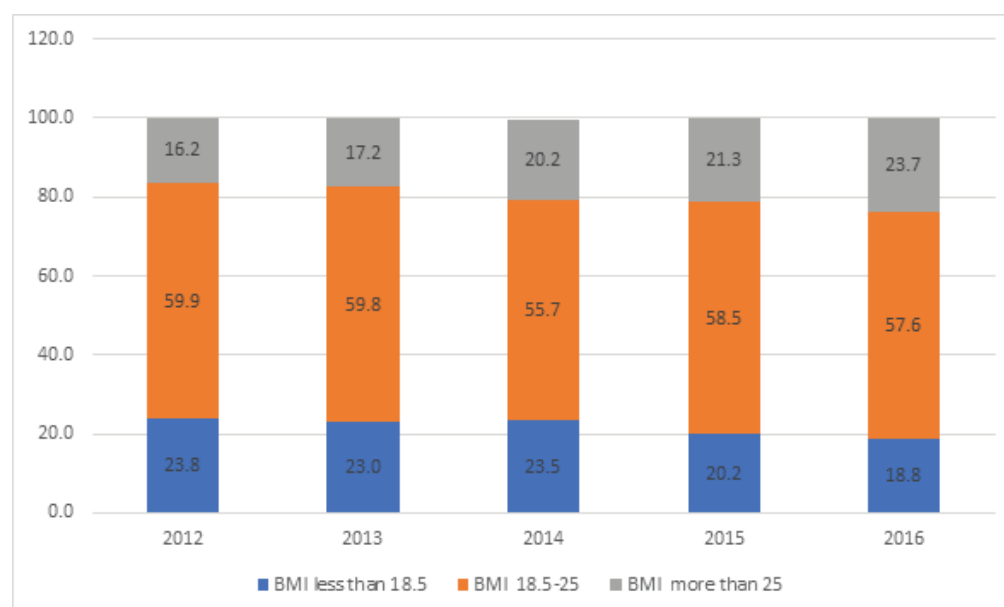
It is important to have targeted interventions to improve the nutrition status of the low BMI women before pregnancy and also ensure the improvement of nutrition status of these mothers during pregnancy. Maternal under nutrition and prematurity is considered as the main reasons behind the high rate of LBW in Sri Lanka.

Trends from 2012 shows that the burden overweight is increasing gradually. BMI > 25 has increased from 16.2% to 23.7% over the last five years. Special attention should be made to address the issue of overweight among pregnant mothers.

are three indicators related to Haemoglobin status. Most of the mothers have been tested for Hb before 12 weeks of pregnancy (93.5%) and among them 19.8% were having Hb % below 11g/dl. This value was 25% during 26-28 weeks.

3.2.7 Antenatal morbidities

Antenatal morbidity reporting was included into RHMIS from 2015 and it was reported that 27% of pregnant mothers had any type of antenatal morbidities. Antenatal morbidity



Source : FHB, RHMIS 2016

Figure 3.2: Percentage distribution of pregnant mothers according to their BMI status at booking visit (before 12 weeks) from 2012 – 2016

3.2.6.2 Maternal Anaemia

Anaemia as indicated by the serum Haemoglobin (Hb) level less than 11g/dl is another important indicator of antenatal health. There

reporting is increasing gradually. However, more emphasis should be paid in further improvement and reporting and also the quality of data reported (Table 3.5).

Table 3.4: Percentages of mothers whose Haemoglobin was tested at field clinic

	HB before 12 weeks			HB after 12 weeks		
	<7g/dl	7g-11g/dl	>11g/dl	<7g/dl	7g-11g/dl	>11g/dl
2015	0.59	20.32	67.93	0.73	20.70	55.03
2016	0.34	19.41	73.77	0.40	24.58	62.81

Source : FHB, RHMIS 2016

3.2.8 Teenage pregnancies

In 2016, 17,509 (4.8%) of total pregnancies registered by PHMs were mothers less than 20 years. The following graph shows the trends in teenage pregnancies over the last 6

highest in Trincomalee district followed by Batticaloa and Mullativue districts. The teenage pregnancies in 2016 have slightly reduced by 0.4% Special attention should be made to identify the villages reporting high teenage pregnancies and implement evidence based

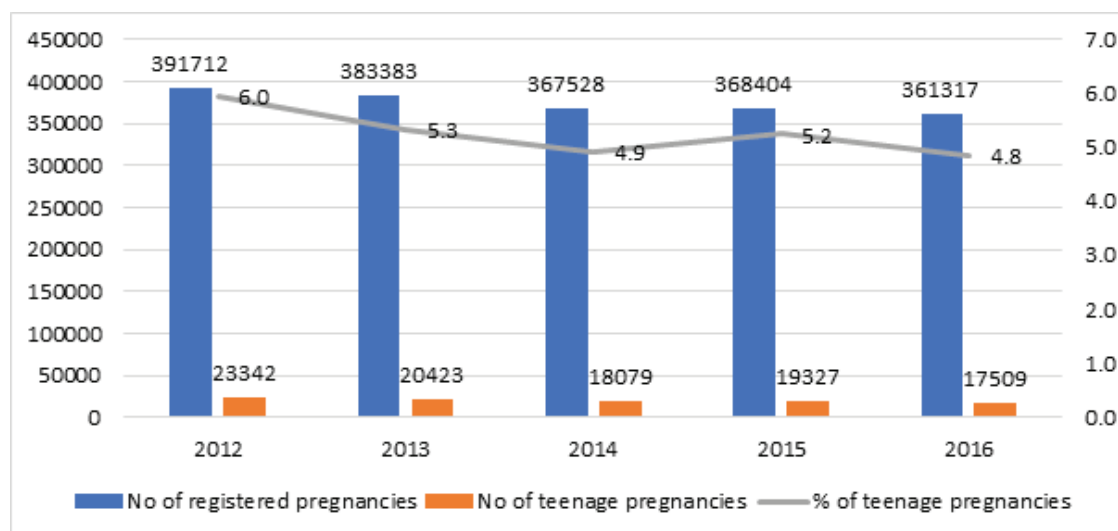
Table 3.5: No. of mothers reported with the Antenatal morbidities and rates

	2013		2014		2015		2016	
	Number of cases	Cases per 10,000 pregnancies	Number of cases	Cases per 10,000 pregnancies	Number of cases	Cases per 10,000 pregnancies	Number of cases	Cases per 10,000 pregnancies
Chronic High blood pressure	1675	52	1693	53	1167	36	1119	37
Chronic Diabetes	2053	64	2371	74	2341	73	2526	83
Heart Diseases	2511	78	2590	81	2002	63	1823	60
Gestational Diabetes	6393	199	7062	221	10718	335	11801	389
Pregnancy Induced	11727	365	11487	359	13212	413	11488	379
Anaemia	33661	1049	36277	1133	50358	1575	65665	2166

Source : FHB, RHMIS 2016

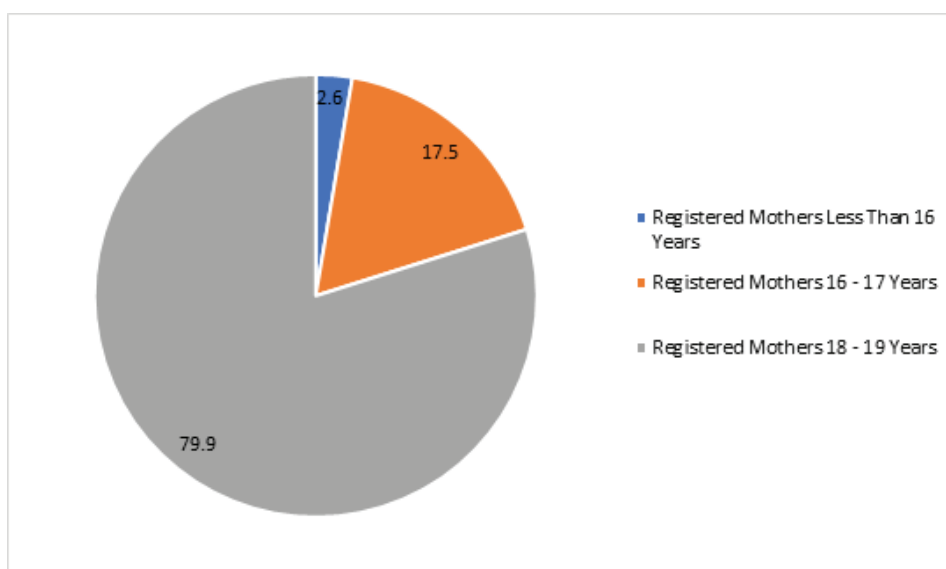
years. Out of total teenage mothers, 509 (2.6%) were less than 16 years of age. The percentages of teenage pregnancies were

interventions using the life cycle approach to address the underlying and root causes for teenage pregnancies in these areas.



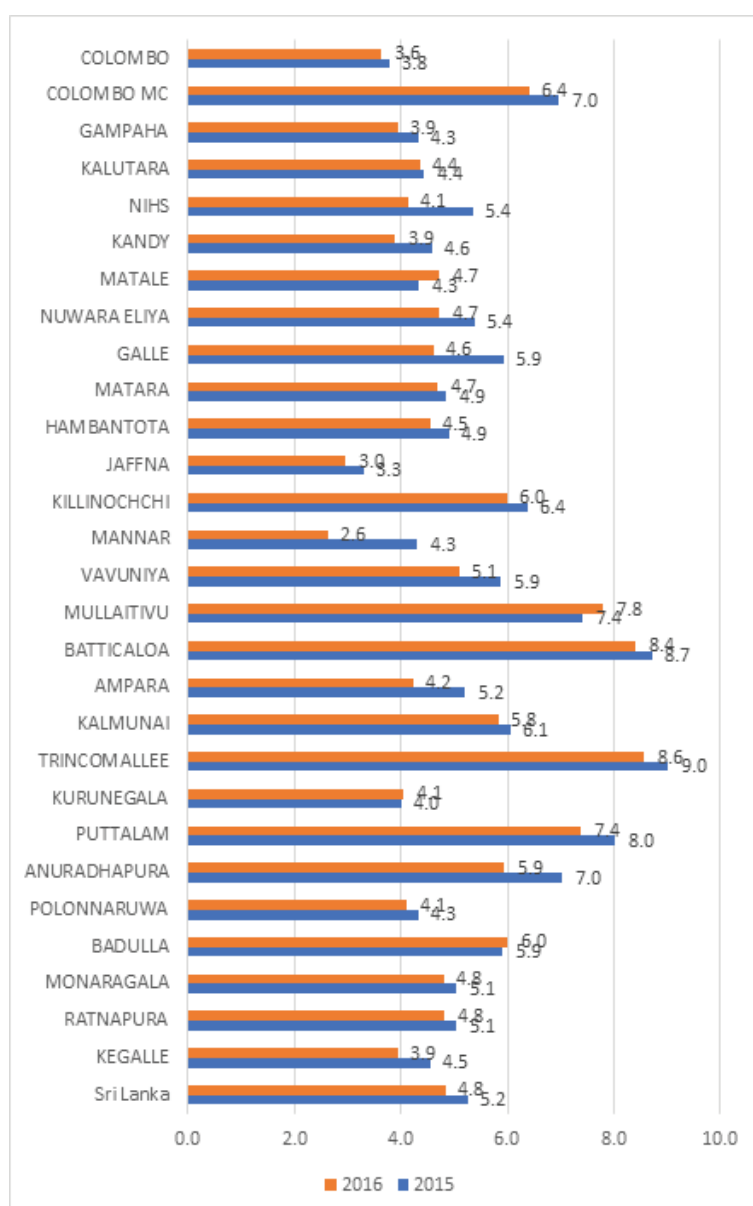
Source : FHB, RHMIS 2016

Figure 3.3: No. of teenage pregnant mothers reported



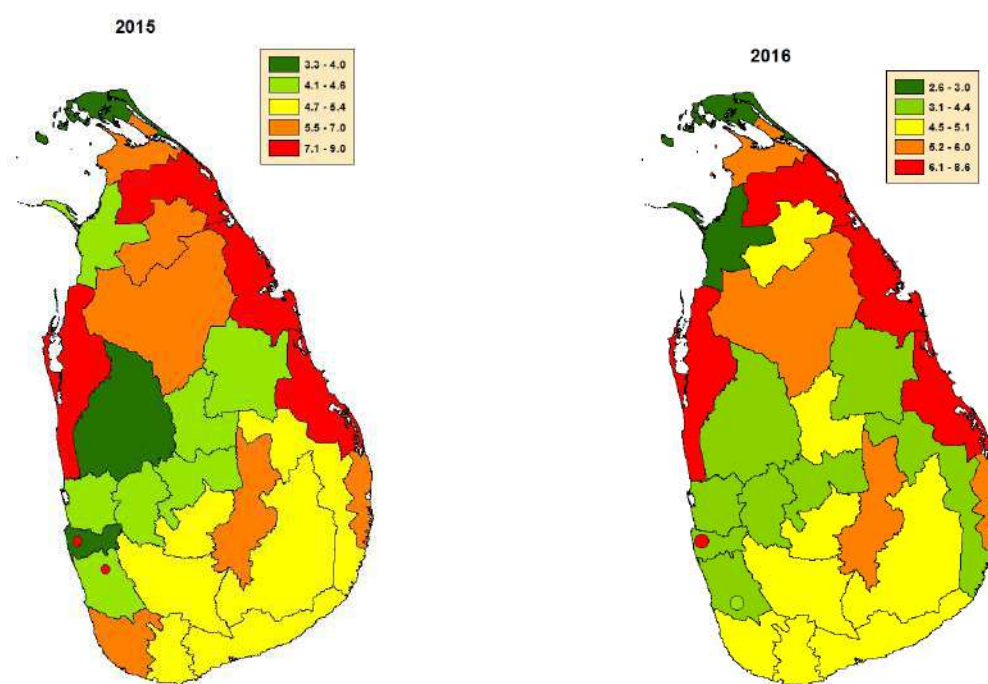
Source : FHB, RHMIS 2016

Figure 3.4: Age group wise percentages of teenage pregnancies among Pregnant Mothers in 2016



Source : FHB, RHMIS 2016

Figure 3.5: Percentage of Teenage pregnancies by district 2015 - 2016



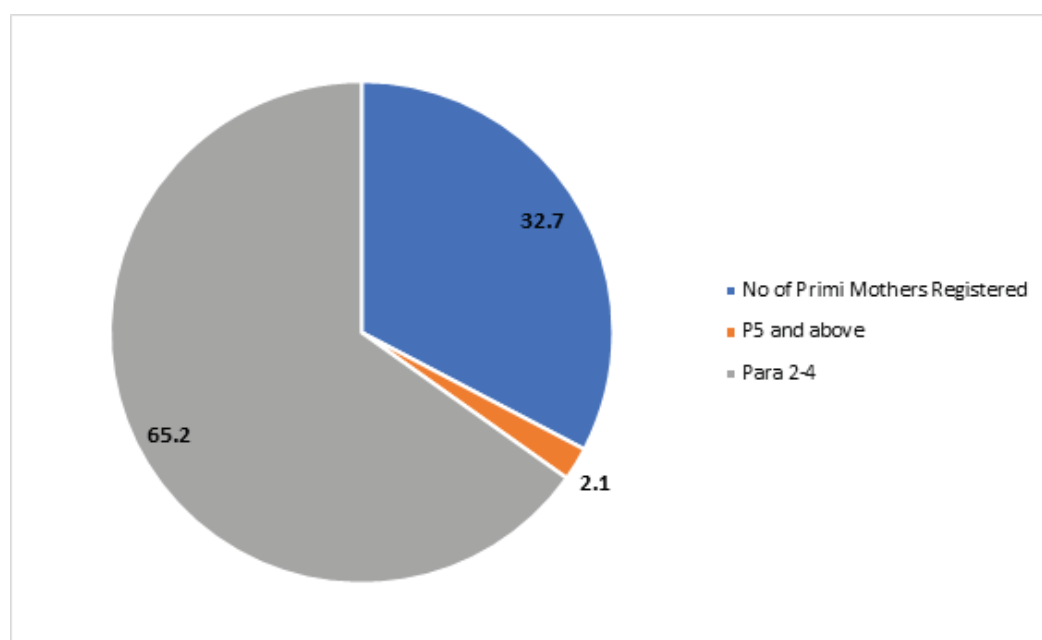
Source : FHB, RHMIS 2016

Figure 3.6: Percentage of teenage pregnancies by district in 2014 and 2015

3.2.9 Primies and Multipara

Primies and multipara (P5 and above) are considered to have relatively higher risk pregnancies than others. In 2016, about 32.7 % of total pregnancies registered in the year were primies and 2.1% of the pregnancies

were mothers with gravida 5 or more. In addition to its importance as an accumulation of high risk group of pregnancies, presence of multi-para pregnancies indicates necessity of family planning service strengthening.



Source : FHB, RHMIS 2016

Figure 3.7: Distribution of registered pregnancies by parity in 2016

3.3 INTRANATAL AND NEWBORN CARE

3.3.1 Pregnancy outcome and Postpartum

PHMs report the pregnancy outcome of all pregnant mothers registered by them and visit them to provide postpartum care to ensure the health and wellbeing of the post-partum mothers and the newborns. During these field visits mothers and newborns are assessed for general health, establishment of breast feeding, signs of postpartum complications and common illnesses. Mothers are provided with relevant advice and referrals if necessary.

In 2016, 91.4% of all live births registered by the Registrar General's Department have been registered by the PHMs. Pregnancy

outcome was reported for 87.5% of pregnancies registered with PHMs. Almost all reported deliveries (99.9%) had taken place in institutions. Number of home deliveries has gone down drastically over the years and only 222 have taken place in 2016. The highest number of Home deliveries were reported from Nuwaraeliya and Badulla districts. Further rise in the caesarean sections was noted from 33.8% in 2015 to 36.3% in 2016. According to World Health Organization norms, a caesarian section rate of more than 15% need to be studied further to identify the underlying causes. Approximately 76% of mothers were visited at home by PHMs at least once during the first ten days of postpartum and the average number of postpartum home visits was 2 per mother (Table 3.6).

Table 3.6: Pregnancy outcome and postpartum care for mothers registered from 2012 – 2016

Indicator	2012	2013	2014	2015	2016
Pregnancy outcome reported out of registered pregnancies	88.8	91.5	93.7	95.8	85.0
% of deliveries reported out of total live births registered by Registrar General	89.8	87.7	91.6	96.2	93.7
% of deliveries reported out of total estimated pregnancies	76.9	76.7	75.3	78.4	*91.4
Institutional deliveries out of total reported deliveries	99.9	99.9	99.7	99.9	99.9
Number of home deliveries	312	336	525	280	222
% of Home deliveries out of total reported deliveries	0.10	0.10	0.09	0.09	0.07
% of untrained deliveries out of total reported deliveries	0.1	0.1	0.05	0.06	0.07
Caesarean sections out of total institutional deliveries reported	28.7	31.8	32.1	33.8	36.3
Postpartum mothers receiving at least 1 visit by PHM during 1st 10 days out of estimated births	77.3	80.6	79.3	73.6	76.2
% of PP visits by PHM around 42 days (out of estimated births)	62.7	63.5	65.0	63.3	79.0
Average number of home visits during first 10 postpartum days	1.7	2.0	1.7	1.7	1.7

Source : FHB, RHMIS 2016

*Out of birth registered by RGD

3.3.2. Pregnancy Outcome

In 2016, PHMs around the country have reported 310,121 live births (either singleton/ multiple). In addition 1848 (5.9%) still-births and 32,233 abortions were also reported. Table 3.7 reflects the live births reported by PHMs as a proportion of the live births reported through the vital registration

It is observed that 4.4% of the live births occurred in the country is not captured by the field PHMs. This may be due to some proportion of pregnant mothers not receiving health services through public health system. Under reporting of the birth by PHMs due to shortage of 1058 PHMM may also account for this to certain extent.

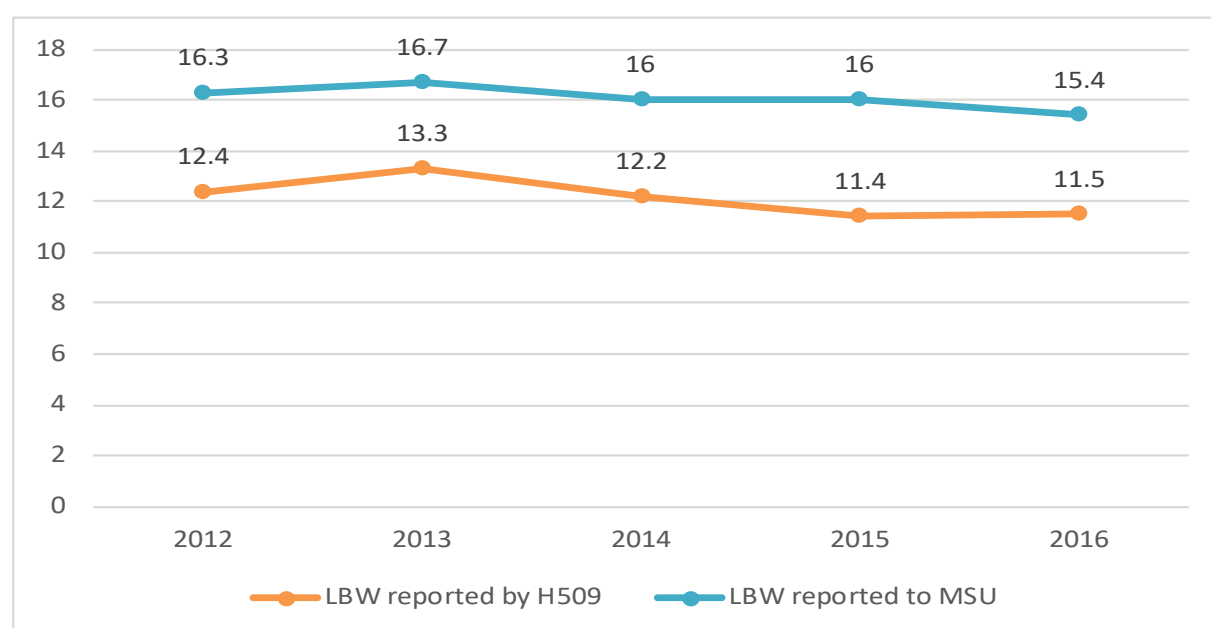
3.3.3. Low Birth Weight

PHMs should report live births categorized according to their birth weight (less than or more than or equal to 2500 gm) and plurality (singleton or multiple). In addition number of abortions and still births are also reported.

Low birth weight (LBW) among newborns is still a problem encountered even though the percentage has gone down slightly during last three years. In 2016, 11.5% of the newborns were reported with low birth weight through the RHMIS (figure 3.9). There is an under reporting of this figure due to inadequate postpartum care and the LBW figure reported through the maternity statistics return collated by the Medical Statistics Unit is 15.4%. DHS report 2016 indicates the LBW rate to be 16%. Since there seems to be under reporting in LBW from the field, MOOH need to pay more attention in reporting proper values.

3.4 Postpartum and Newborn Care

PHMs should pay at least 4 postpartum visits to a mother who had an institutional delivery. Of these visits, one visit each has to be made during first 5 and 6-10 days following delivery and the other 2 during 14 - 28 days and around 42 days respectively following the delivery. During these visits PHMs examine mothers and babies for any postpartum and newborn problems. In addition they should record antenatal and postpartum morbidities, support breast-feeding of the newborn,



Source : FHB, RHMIS 2016

Figure 3.8: Low birth weight percentages among newborns from 2012– 2016

Table 3.7: Pattern of postpartum visits provided for mothers by PHMs 2012-2015

Indicator	2011	2012	2013	2014	2015	2016
At least 1 visit during 1st 10 days out of actual birth reported	80.5	82.3	80.9	83.1	86.4	78.5
At least 1 visit during 1st 10 days out of reported deliveries	91.4	91.6	92.2	90.7	92.8	92.8
Average number of visits during 1st 10 days	1.8	1.7	1.7	1.7	1.7	1.7
Postpartum visits by PHM at or around 42 days out of reported deliveries	73.3	74.3	76.7	74.3	75.6	79.0

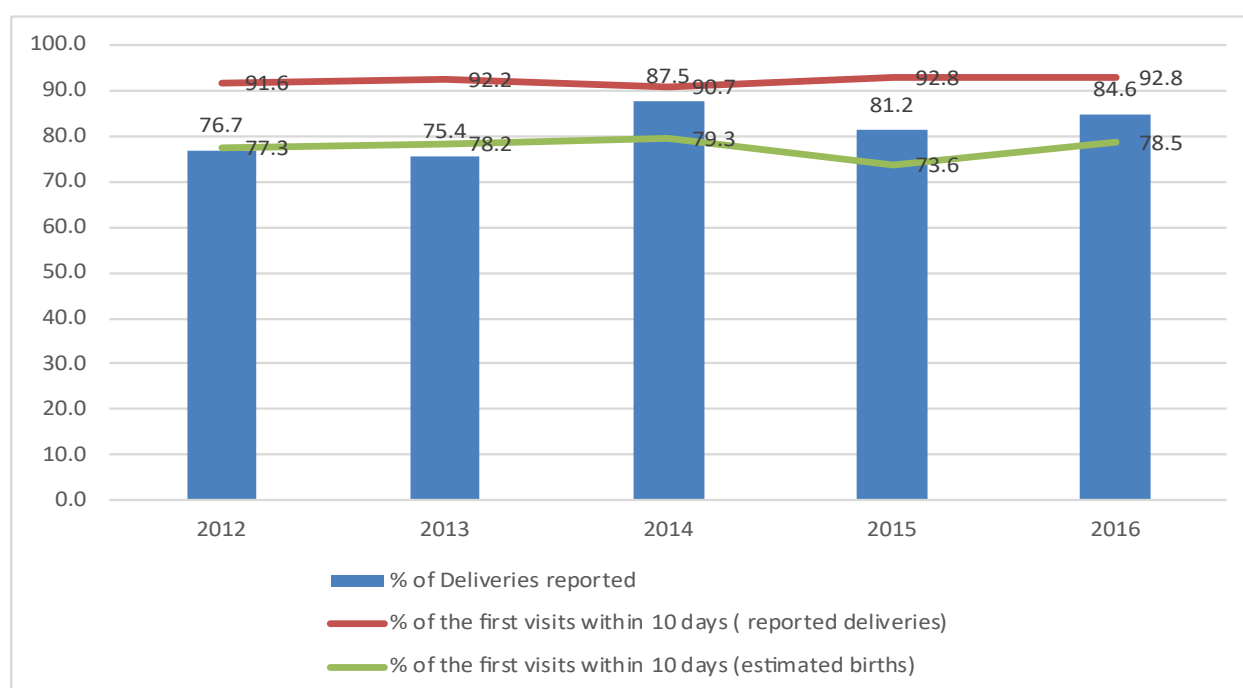
Source : FHB, RHMIS 2016

counsel for family planning, advice on other health matters, administer vitamin A to mothers in case she missed it at the hospital and register the newborn for future care.

3.4.1 Postpartum visits

The table 3.9 shows the coverage of postpartum visit activities. During 2016, PHMs

around the country had visited 92.8% of postpartum mothers who were identified and reported by them at least once during the first 10 postpartum days. On average 2 postnatal visits were made within the first ten days. However, it should be noted that percentage of deliveries reported out of actual births reported for 2016 was only 92.8 %.



Source : FHB, RHMIS 2016

Figure 3.9: Percentage of estimated births, who were receiving the first post natal visit within the first 10 days of delivery in 2012 -2016

3.4.2 Post partum morbidity

PHMs should report postpartum morbidities. In 2016, PHMs reported 32652 mothers with postpartum morbidities. This amounts to 10.8% of the total reported deliveries.

Figure 3.8 shows the cause specific postpartum morbidity rates for 10,000 reported deliveries. Most common postpartum problems include infections either in episiotomy or caesarean scar, engorged breast, separated episiotomy and fever. Infections were calculated for respective type of delivery. The mostly reported morbidities could have been prevented by proper infection control and breast feeding practices. However, high infection rate at episiotomy or caesarean scar also indicate the need for examining the PHM's ability to identify these morbidities objectively.

3.4.3 Care for the mother and newborn

Of the pregnant mothers delivered in a hospital, most of the deliveries have been taken place in hospitals with specialist facilities (92%).

Hospitals providing maternal and neonatal care are dispersed widely throughout the country. With the development of road networks delivery facilities are available within easy access.

Mother baby centers to care for sick babies and mothers are available only in 18 specialized hospitals. It is expected that all the specialist hospitals providing care for the newborns should have a mother baby centre. Lactation Management Centres (LMC) to support mothers with breastfeeding problems are available in 46 specialized hospitals. LMC should also be available in all the specialized hospitals.

Table 3.8: No. of mothers reported with postpartum morbidities 2013 - 2016

	Number Of cases Cases / 10.000 deliveries		Number Of cases Cases / 10.000 deliveries		Number Of cases Cases / 10.000 deliveries		Number Of cases Cases / 10.000 deliveries	
	2013		2014		2015		2016	
Heart Failure	109	3	158	5	99	3	66	2
Deep Vein Thrombosis	174	5	187	6	148	5	130	4
Diabetes Mellitus	N/A	N/A	N/A	N/A	698	22	746	25
hypertension	2419	75	2169	68	2608	82	2477	82
Postpartum psychiatric illness	711	22	615	19	619	19	579	19
postpartum depression		0		0	281	9	357	12
Haemorrhage	1994	62	2095	65	2365	74	2184	72
Urinary Tract Infection	1580	49	1297	40	1725	54	1497	49
Reproductive Tract Infections	494	15	440	14	471	15	439	14
Separated epis	3916	122	3844	120	4410	138	4268	141
Engorged Breast	4794	149	4357	136	5351	167	4657	154
Cracked Nipple	2145	67	1950	61	2053	64	2340	77
Breast abscess	919	29	810	25	717	22	590	19
Foreign material in vagina	407	13	405	13	347	11	231	8

Source : FHB, RHMIS 2016

3.5 Activities carried out in 2016 by Family Health Bureau for improvement of Maternal and Newborn Care

i. Technical Advisory Committee on Maternal Health And Family Planning- Under the chairmanship of DDG PHS II

Six committee meetings were held in 2016 and the following technical decisions pertaining to the maternal health and family planning were taken;

- A. Establishment of quality assurance programme for maternal and newborn care services in hospitals. Quality assessment tools were developed and finalized for antenatal, postnatal, labour room and newborn units.
- B. Guideline for use of misoprostol in Obstetrics and Gynecology was developed. Procurement and distribution process was initiated through the Medical Supply Division.
- C. Guideline on management of medical diseases complicating pregnancy was completed.
- D. Training programme on Emergency Obstetric Care (EMOC) for nonspecialized health staff (medical officers, nurses, midwives) in obstetric units: Development of training module for EMOC with the support of University of Liverpool, training of resource persons and conducted a training programme for health staff using this training module was started.
- E. Strengthen the hospital maternal care information system by introducing Obstetric formats.
- F. Development of Common Pregnancy Record for government sector services.
- G. Highly Specialized Maternal Care Units – the committee approved establishment of three units at Desoysa Maternity Hospital, Teaching Hospital Anuradhapura and Teaching Hospital Kandy
- H. Provision of Infusion pumps for labour rooms as a measure of reducing the incidence of amniotic fluid embolism.

ii. Technical Advisory Committee on Newborn and Child Health - under the chairmanship OF DDG PHS II

Six committee meetings were held in 2016 and the following technical decisions pertaining to the newborn and child health were taken;

- A. Newborn Screening for Congenital Hypothyroidism – In the national programme laboratory service provision was allocated in the following manner – Medical Research Institute – Laboratory facilities for hospitals from the Western, North Western Northern and North Central Provinces
Nuclear Medicine Unit of the Karapitiya Medical Faculty – Southern, Central, Eastern, Uva and Sabaragamuwa Provinces
- B. Technical Advisory Committee under the chairmanship of DDG PHS II for the Development of Sri Lanka Every Newborn Action Plan 2017-2020 was appointed and commissioned to proceed with the work related to its development. Costing of the SLENAP by experts from the Adelaide University, Australia was approved.
- C. Methodology for the development of the MNH SP 2017-2025 was approved. The committee also approved the appointment of a National Consultant for the Desk Review on MNH and to obtain the expertise of WHO Consultants for the
- D. Human Milk Fortifier – Director Medical Technology and Supplies informed about Registration of “Human Milk Fortifier” as a prescription only drug. This product only for preterm babies under the given prescription by a Consultant Paediatrician schedule IIB drug. This product can be available only at the government and private hospitals but not for the private market.
- E. Neonatal Retrieval/Transport System – Committee approved the establishment of system and as a first step Neonatal Transport was initiated at Lady Ridgeway Hospital Colombo for the Hospitals in the Western Province.

- F. Inclusion of premature growth charts to the Child Health Development Record
- G. Circular on Iron Supplementation to Low Birth Weight Babies
- H. Circular on Viability of Pre Term Babies
- I. Establish a standard training for Neonatal Intensive Care Nurses was recommended
- J. Carry out a national child health needs assessment
- K. Develop guidelines for child care
- L. Establish a national Feto infant mortality surveillance system
- M. Include neonatal information in to the eIMMR through the already existing neonatal formats.

iii. 2. Developed Quality Assessment Tools for Antenatal Ward, Labour Room, Postnatal Ward and Special Care Baby unit

Quality improvement in maternal and newborn health is a priority strategy to achieve effective coverage of the evidence based interventions. A set of tools to assess quality of care in the antenatal wards, labour room, postnatal ward and special care baby units was adapted using the WHO quality assessment tools and Indian Medical Association quality assessment tools.

At a three day workshop held in Kalutara, with the participation of members from SLCOG, SLCP, PSSSL, nursing and midwifery staff from Teaching Hospital Mahamodara, District General Hospital Kalutara a draft of quality assessment tools were adapted/developed.

Later these tools were pilot tested in TH Mahamodara, TH Karapitiya, PGH Badulla, DGH Vavuniya, BH Kuliypitiya and DH Maskeliya. Consultants from the Family Health Bureau supported by Post Graduate Trainees in Obstetrics, Paediatrics, Community Medicine and Medical Administration conducted the pilot test.

The pilot tested tool was later finalized including the comments from all the stakeholders.



iv. Newborn Screening for Congenital Hypothyroidism was scaled up nationally

Newborn Screening for congenital hypothyroidism – Newborn Screening for congenital hypothyroidism was introduced to all the districts in the country. The hospitals in the Western Province, North Western Province, North Central Province and Northern Province send samples to the Laboratory of the Medical Research Institute and Hospitals in the Southern Province, Sabaragamuwa Province, Uva Province, Eastern Province and Central Province send sample to the Laboratory of the Karapitiya Medical Faculty.

A progress review for the hospitals sending samples to the MRI was held in November 2017 to identify gaps in the process, sample collection, dispatch to the laboratory, reporting, tracing the positive cases, confirming the diagnosis and referring for management. Teams from the hospitals including Heads of Institutions, Consultant Paediatricians/Neonatologists, Consultant Pathologists and the District teams headed by MOOMCH too attended.



v. Introduced the Emergency Obstetric Care Course conducted by Liverpool School of Tropical Medicine to Sri Lanka

Trained Master Trainers – A team of trainers from the Liverpool School of Tropical Medicine UK – conducted this course from 15th to 18th and 21st – 24th March 2016 was completed at the Family Health Bureau. They trained 36 trainers and 25 participants in the Essential Obstetric Care Course.

Six master trainers headed by Dr. Theresa Kana trained fourteen master trainers and they in turn have trained 21 trainers in the subsequent programme.

Subsequently this group of trainers trained 21 Doctors, 54 nurses and 33 Midwives from fourteen hospitals on Essential Obstetric Care Courses.

vi. Training of Trainers in Essential Newborn Care and in Breastfeeding Counselling Courses

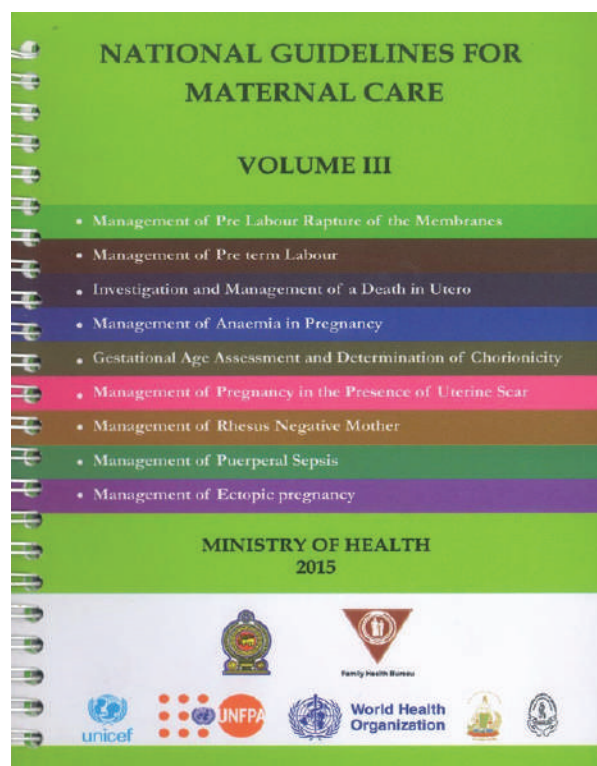
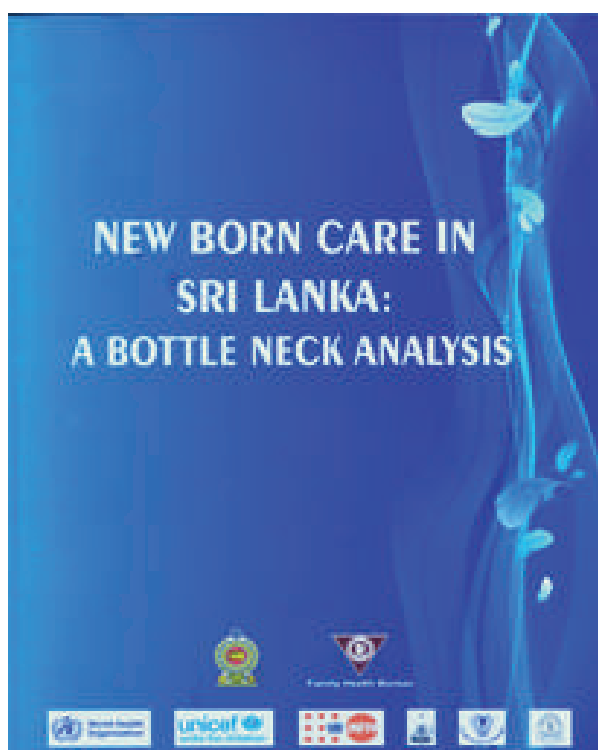
Twenty-four Pre MD Paediatrics-Medical Officers were trained as trainers in Essential Newborn Care and Breastfeeding Counselling. Following Consultants contributed as resource persons- Drs Nishan Lucas, Shyama Basnayake, Kapilani Withanarachchi, Sarojini Vicknarajah, Sandya Doluweera, Hiranya Jayawickrama, Dhammica Rowel, Irosha Nilaweera, Ranmali Rodrigo, Shanthini Ganesan, Uttara Hiddelarachchi, Nalin Gamaethige, Kumudini Cooray, Anura Jayawardena





vii. Completed the Bottle Neck Analysis of the Newborn Care Programme in Sri Lanka

A Bottle Neck Analysis was conducted to identify the gaps in services in the newborn care programme on the recommendation of the TACNCH prior to development of the Sri Lanka Every Newborn Action Plan. Dr. Lalani Rajapaksa supported as a National Consultant in this process. A Technical Working Group under the Chairmanship of the DDG PHS II was appointed to conduct BNA and final report was produced.



ix. Strengthen the services for non-communicable disease and mental health problems in maternal care programme.

Initiated the process of developing guidelines on management of heart diseases complicating pregnancy and risk screening assessment in mental health.



X. Programme for Elimination of Mother to Child Transmission of Syphilis and HIV Infection

Sri Lanka has been identified as country which can achieve the elimination status of Congenital Syphilis and mother to child transmission of HIV. Measures have been taken to strengthen the field screening services for HIV and Syphilis with the partnership of National STD / AIDS

Control Programme : advocacy, capacity building of health staff, lab screening and monitoring etc

Initiate the process to develop the MNH SP 2017-2025

The development of the MNH SP was started. A desk review of global and national documents were done by a National Consultant Dr Vineetha Karunaratne, former DMCH. Following the desk review six strategic areas were identified to be included in the MNH SP (2017-2025). This activity was followed by a series of consultations with relevant stakeholders supported by two WHO consultants Dr Mathews Mathai and Dr Katherine Ba Thike. The DGHS and related DDGs, Professional Colleges, related government organizations and Directorates, relevant National Programme Managers and Civil Society Groups were engaged in discussions. The preliminary draft was presented to the DGHS. This was followed by a large scale stakeholder discussion. Six groups were formed to discuss and give suggestions on each strategic objective. The final draft was developed following this meeting. This activity followed the development of a detailed activity plan and a set of key performance indicators to monitor the implementation of the MNH SP (2017-2025).



ix. Training of Trainers on Care of the Sick Newborn

Two workshops to train trainers on Care of the Sick Newborn by a team of SARRC Consultants including – Prof Salhan, Prof Harish Chellani, Prof Sushma Nangia and Dr Sathis Salujah was held. 52 Consultants, Doctors and Nursing Officers were trained





x. Strengthening of institutional maternal care services:

Resource development in obstetric units is a priority area needs to be addressed and it is important to strengthen the available facilities as well as establish new facilities in obstetric units. In EMOC Survey (2011/2012)

it was recommended that all hospitals with specialist obstetric units should have High Dependency Units (HDU) for the patients who need close monitoring. Five HDUs were established in 2016: Teaching Hospital Mahamoda, Base Hospital Puttalam, District General Hospital Gampaha, District General Hospital Trincomalee and District General Hospital Nuwareliya. Provision of equipment for maternal care services in hospitals to improve the quality of care: Hand Held Doppler (55) and Infusion Pumps (105) were distributed.



CHAPTER 04

INFANT AND CHILD

4.1 INFANT AND CHILD CARE SERVICE DELIVERY

PHM should register infants for domiciliary and clinic care which includes immunization, growth assessment and promotion of growth and development. In 2016, more than 95% of infants have been registered by PHMs and an average of 7 visits have been done per infant (Table 4.1).

Eighty-eight percent of the infants have been weighed by PHMs and all registered infants (100%) have been seen by a MOH in their clinics. Nearly eighty percent of the 1-2year age group had been weighed by the PHMs in

Children receiving Vitamin A mega dose at selected age groups are given in table 4.1 where more than 80 percent of children had received it, at the ages 6 months, 18 months and 3 years.

4.2 FIELD AND CLINIC CARE

Following infant registration, care is given to the infant until 5 years of age at clinic and in the field. Home visits carried out after 42 days of delivery are specifically aimed at the infant. Infants are brought to the field clinic for postnatal examination by the MOH at 4 weeks and subsequently for health screening, growth monitoring, immunization and development

Table 4.1: Infant and childcare provided by the field staff from 2012-2016

Indicator	2012	2013	2014	2015	2016
Infants registered by PHMM	88.2	91.7	90.6	89.3	95.3*
% Infants having at least 1 home visit after 42 days out of registered infants	69	63.9	58.0	53.7	53.4
Average number of home visits per infant	7.1	7.4	7.5	7.0	7.2
% of infants weighed	83.2	85.7	84.3	88.2	88.4
% of infants making at least one clinic visit (of registered infants)	100	99.6	99.1	100	100
Average number of clinic attendance for an infant	5.3	5.2	5.3	4.5	4.7
% of estimated infants given Vitamin A at 6 months	76.4	68.9	68.8	71.6	80.5
% of young children (1-2 years) weighed	76.1	79.3	77.1	80.2	79.2
% of estimated children given Vitamin A at 18 months	74.7	70.7	71.9	74.9	80.6
% of 2 - 5 years children weighed	78.8	77.8	63.0	78.7	80.5
% of estimated children given Vitamin A at 3 years	78.8	71.4	73.1	74.5	90.5

Source : FHB, RHMIS 2016

* calculated out of first visits by PHM

the weighing posts and among 2-5year group approximately 81% had been weighed.

assessment according to the schedule. The weighing is mainly done at child welfare clinics and field weighing posts by PHMs.

Table 4.2: Percentages of infants and children under care out of actual number of births reported by RGD

Indicator	2012	2013	2014	2015	2016
% Infants under care	88.4	94.6	93.7	95.0	94.4
% of young children under care (1-2 years)	93.1	96.5	102.3	95.0	99.4
% of Preschoolers under care (2 -5 year)	90.2	92.8	97.2	96.4	95.5

Source : FHB, RHMIS 2016

Data for individual children are not included in the RH-MIS.

Table 4.1 shows around 89% of infants and 80% 1-2 year old children were weighed by the PHMs. There had been 90.5% of clinic visits by infants during the first year. A package of interventions are provided to infants; the first postnatal examination at 1 month of age, growth and developmental assessment and medical screening and vaccinations at 2, 4, 6, and 9 months. This indicates, ideally at least 5 clinic visits are required during infancy. Table 4.1 shows the average number of clinic visits by an infant to be 4.7 in 2016.

4.3 CHILD NUTRITION

Undernutrition in children is a major public health problem in Sri Lanka. Growth monitoring is conducted through serial weight and length/height measurement of infants, young children and preschoolers, comparing their age specific weights and length/heights with that of WHO new growth standards in the CHDR. Nutrition counseling, more frequent growth assessment and increased field and clinic follow up are indicated when growth faltering and/or any form of malnutrition is identified; i.e: Infants should have been weighed 12 times during infancy. Children under two years should be weighed once a month. Children above two years are weighed once in three months if they do not

have any growth problems and if they have any issues monthly weighing is recommended.

Also, PHMs assess the length/height and weight of under five children at assigned time intervals in the routine programme to monitor growth in order to detect nutritional problems early and provide timely interventions.

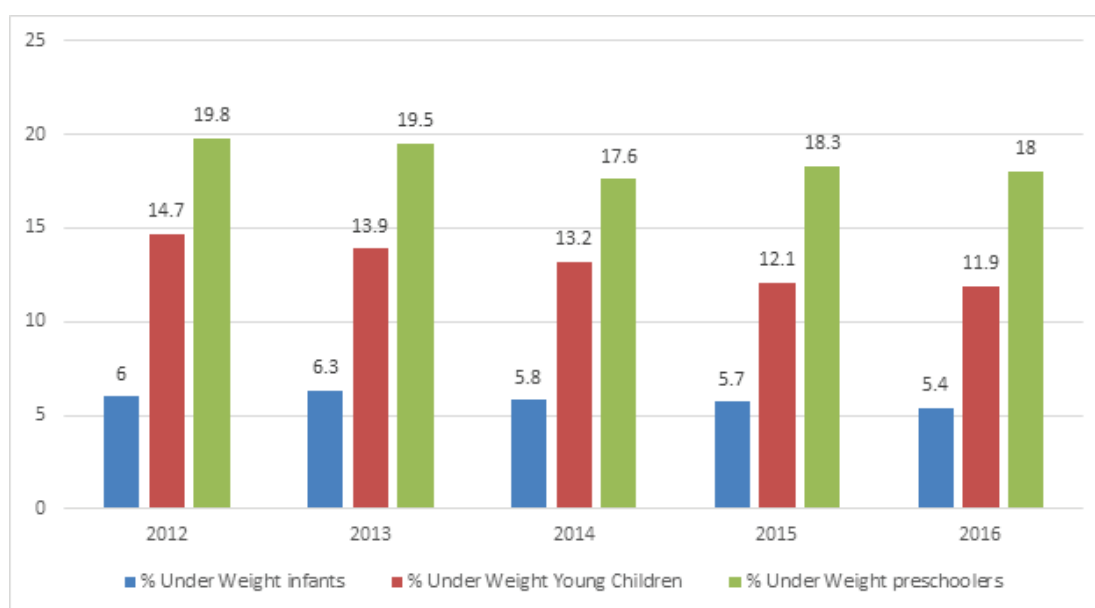
Over the years, rates of under nutrition have gradually declined in Sri Lanka. However, reducing under nutrition among children under the age of five years to be in par with other health and social indicators remains a challenge despite all relevant evidence based interventions to improve nutrition status being implemented through the RMNCAYH programme of the Ministry of Health.

Breastfeeding and appropriate complementary feeding is promoted at community level through the PHM and in all MCH field clinics by the public health staff headed by Medical Officers of Health. Growth monitoring and promotion of children under five is of priority concern. According to the routinely collected data through the RHMIS, in 2016, 5.4% of infants had moderate underweight and 1.1% had severe underweight. Among 1-2 year age group, 11.9% of children had moderate underweight and 2.4% had severe underweight. Among 2-5 year age group, 18% were having moderate underweight whereas 3.2%

Table 4.3: Percentages of underweight in infants, young children and preschoolers from 2012 to 2016

Indicator	2012	2013	2014	2015	2016
% Moderately Underweight infants	6	6.3	5.8	5.7	5.4
% Severely Underweight infants	1.3	1.3	1.2	1.2	1.1
% Moderately Underweight young children (≥ 1 -2 years)	14.7	13.9	13.2	12.1	11.9
% Severely Underweight young children (≥ 1 -2 years)	3.3	3.0	2.9	2.3	2.4
% Moderately Underweight preschoolers (≥ 2 to 5th year)	19.8	19.5	17.6	18.3	18.0
% Severely Underweight preschoolers (≥ 2 - 5th year)	3.9	3.8	3.4	2.0	3.2

Source : FHB, RHMIS 2016



Source : FHB, RHMIS 2016

Figure 4.1: Trends in infant, young child and preschool child underweight (moderate and severe) from 2012 -2016

Table 4.4: Stunting reported at selected age categories 2015 and 2016

		4 Months	9 months	18 months	3 years
Stunting out of measured	2015	2.20	3.48	4.50	4.47
	2016	1.39	2.21	2.98	2.83

Source : FHB, RHMIS 2016

had severe underweight (table 4.4). Stunting rates at the ages of 4, 9, 18 months and at 3 years are 1.4, 2.2, 2.98 and 2.83 respectively. The slow decline in under nutrition rates among infants, 1-2 year and 2-5 year age groups remain a challenge over the years.

Vitamin A supplementation, Zinc supplementation during diarrhoea, de-worming, provision of supplementary food “Thripasha” to undernourished children and management of severe acute malnutrition with therapeutic food are implemented throughout the country. The coverage of vitamin A supplementation at 18 months is 80%, and 90% at 3 years. In 2016, thirteen health districts were covered by the MMN programme to combat anemia among infants and young children. A policy decision was taken to scale up the Multiple Micronutrient (MMN) supplementation programme island wide from 2016 based on a national compliance study conducted by Family Health Bureau, and an evaluation report by Nutrition Coordination Division, MRI and Unicef.

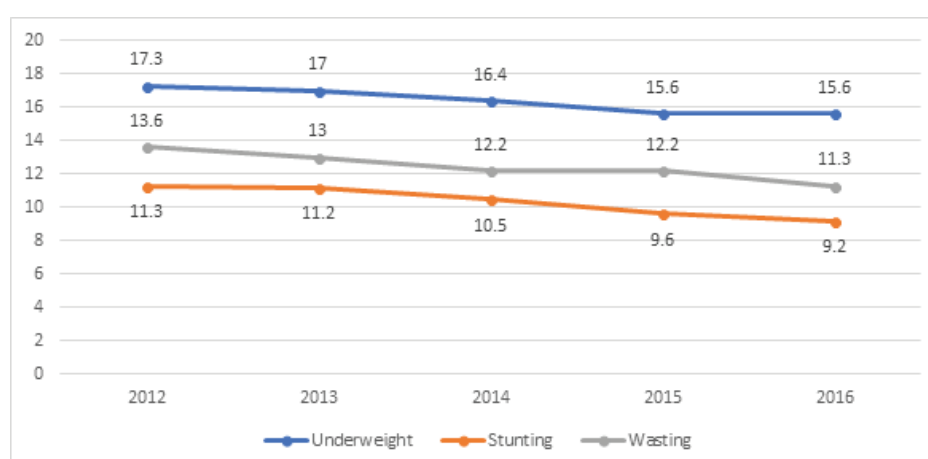
4.4 NUTRITION MONTH 2016

To draw more attention on nutrition, every year the month of June is declared as the “National Nutrition Month”. Intensive nutrition promotional activities are being carried out by FHB during this month focusing more on pregnant mothers, school children and adolescents and all under five children. The theme for 2016

nutrition month was “Shape your meal to shape your body”. During this month, an extra effort is made to reach the whole population of under five children. Hence, the assessment coverage of nutrition month is understandably higher than the routine assessment where these children are measured at assigned intervals only. During the nutrition month of 2016, all MOH areas submitted their returns on assessment of growth to the FHB with 94% of all under five children assessed for their growth status (weight, length/height).

The trends of under nutrition among under five children during the period from 2012 to 2016 according to nutrition month data which had a significantly high weighing coverage than routine programme are shown in Figure 4.2. It shows a declining trend albeit slow in all three indices, underweight (weight for age <-2SD), stunting (length/height for age <-2SD) and wasting (weight for length/height <-2SD) over the years.

Annual National Nutrition Review was conducted by the FHB with the participation of all relevant stakeholders in Nutrition including Nutrition Division, Nutrition Coordination Division, Health Education Bureau and Department of Nutrition, MRI in the Ministry of Health. MOOMCH representing the districts presented district level routine and nutrition month data and special nutrition activities conducted during the year 2016 including the nutrition month.

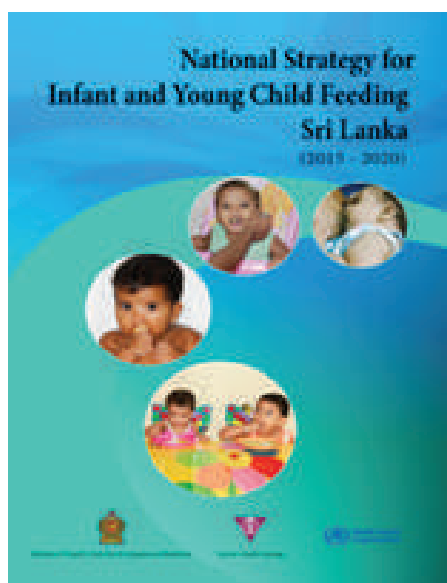


Source : FHB, NM 2016

Figure 4.2: Under nutrition among under five children from 2012 to 2016

4.5 Special activities carried out by the FHB on Child nutrition in 2016

i. Launched the National Strategy on IYCF 2015- 2020 which is expected to provide guidance to all relevant stakeholders in improving child nutrition.



ii. The nutrition month technical update was held at the FHB on 10th May to update peripheral health staff on nutrition month activities and new additions to the child health programme from 2017 (i.e. inclusion of preterm growth charts to the CHDR and scaling up of MN supplementation island wide etc) and the annual survey on growth status of children under age of 5 years was conducted successfully island wide during June/July.

iii. Breastfeeding week was celebrated under the theme “Breastfeeding; a key to sustainable development” during the month of



August with a national level workshop held at BMICH under the patronage of Hon. Minister of Health. To draw the attention of the public to risks of infant formula, a poster on risks of infant formula in all three languages was developed, printed and disseminated to curative and public health institutions.

iv. With a view to improve quality of growth assessment and targeted interventions, preterm growth charts developed by INTERGROWTH 21st study team of the Oxford University, UK was incorporated in to the Child Health Programme by consensus of local experts and the circular guideline prepared and disseminated to initiate use of these preterm growth charts from January 2017.

v. Child Health Development Record (CHDR) is being updated every year and in year 2016 also new additions to the programme were included into the CHDR. The existing head circumference chart with centiles was replaced by the new head circumference chart using standard deviates as recommended by WHO to facilitate monitoring of microcephaly

vi. To address the issue of iron deficiency anemia among infants and young children a circular guideline on iron supplementation of this important target group was developed through a consultative process with the involvement of relevant stakeholders.

vii. Preliminary work was initiated with relevant stakeholders to develop Maternal, Infant and Young Child Nutrition MIYCN targets for year 2025.

Viii A national level resource pool of 26 comprising medical administrators, consultant community physicians, legal officers, pediatricians was trained on ‘Monitoring and Enforcement of Sri Lanka Code for the Promotion, Protection & Support of Breastfeeding and Marketing of Designated Products’, by two international resource persons from ICDC – Penang- Malaysia at a 5 day training programme in June-July held at the FHB.



ix. District level trainers (MOMCHs, MOHs) and Master trainers including Provincial level & Ministry CCPs were trained on 'Infant and Young Child Feeding' and public health teams from districts of Moneragala and Trincomalee were trained on 'New WHO Growth Standards and Growth Monitoring and Promotion' at FHB to ensure that capacity building of peripheral health staff is continued uninterrupted to ensure quality of growth assessment and infant and young child feeding counseling to improve nutrition status of this important target group.

x. Facilities to provide quality care at MCH and Nutrition clinics in the field was provided by procurement and distribution of anthropometric equipment and Nutrition Clinic Register was introduced to the Nutrition Clinics conducted by MOOH to streamline the services further.

xi. IEC material on complementary feeding for public health staff in the form of panels which are to be used for complementary feeding classes conducted by field health staff and wall charts on Management of

Severe Acute Malnutrition with therapeutic food in the curative sector were printed and disseminated.

4.6 Child health, development and care for children with special needs

The Early Child Care and Development (ECCD) component was introduced to the Family Health programme in the year 2000. Currently, the main goals of the programme are to enable all children under five years of age to reach their full potential for development through the provision of optimal care and enable children with special needs to optimally develop their mental, physical and social capacities to function as productive members of society.

To achieve these goals, the child development and special needs programme operates through a wider scope of activities which has been drafted to be inline with National MCH policy. The main action areas are;

1. Designing, testing and scaling up child development intervention packages,
2. Building of capacity of primary care givers, service providers, and community on child development and stimulation,
3. Strengthening supportive environments and multi-sectoral collaboration in related to early child development & care,
4. Establishing early identification /screening programmes to detect developmental delays & disorders,
5. Establishing special need care services

4.6.1 Designing, testing and scaling up child development intervention packages

A child development program intervention package is drafted and reference /training materials on child development were developed. Special need care package was developed and submitted for Ministry of Health approval

4.6.2 Capacity building of primary caregivers, service providers, and community on

Child development master training is conducted and a comprehensive training guide – “Child Development Concepts, Interventions, Assessments, and Problems – Manual for Primary Health Care Workers of Sri Lanka” is disseminated among health care service providers. This is supplemented by a training guide book – “Training Programme on Early Child Development – Instructions for Participants” which guide the field training. Currently, ten districts are trained and the above training package has been distributed. It is expected that the PHC workers will enhance their knowledge and skills in child development and disseminate this knowledge to the primary caregivers. This will be accomplished through interactive educational sessions conducted in mother’s classes and subsequent field visits. Further, IEC materials will be developed to capacitate the primary caregivers. These include the instructional guide compiled into a booklet given to each mother, flex charts displaying key child development messages and docudrama demonstrating child development stimulation.

4.6.3 Creating supportive environments and multi-sectoral collaboration in ensuring optimal early child care

To optimize the development of children and to facilitate screening and early diagnosis of developmental disorders it is mandatory to create supportive environments. The child development communication strategy aims to enhance the community awareness and advocate on policy and strategic directions. This is facilitated by networking and engaging in collaborative programming with education, social service, child secretariat, Presidential Secretariat and other Governmental and non-Governmental organizations interested in ECCD.

Currently, the technical contribution is provided to the National ECCD Committee work conducted by the Child Secretariat, in developing the National ECCD policy. In addition, technical expertise is provided for the

training of island-wide ECD officers and for the development of “Child Development Training Manual for ECD Workers”. The “Autism Manual for Preschool Teachers” was developed in collaboration with the Child Secretariat. These collaborative efforts attempt to create community awareness and supportive environments that sustain optimal care for children.

4.6.4 Screening and early identification of developmental disorders

Integrating a systematic development screening system to the present child care programme is a strategy used for early identification of developmental disorders. Measures are being taken to develop a series of country specific developmental indicators that will be included in the Child Health Development Record. Series of CHDR revision workshops were conducted in order to finalize the development indicators. The revised CHDR will enable parents to screen their children at home and PHMs could confirm the screening. Additionally, a screening checklist will be provided for the PHC workers, which will be sensitive and more specific and screen-positive children will be referred for further assessment.

4.6.5 Provision of care for children with special needs

Establishment and integration of a new institutional arrangement comprising of Primary and Secondary Child Development Centres is a strategy that will be used to enable children with special needs to optimally develop their mental, physical and social capacities. A model secondary child development center is planned to establish in Colombo East base Hospital premise and the initial plan and design were completed

In addition to the above main action areas, the Child Development and Special Needs unit is currently finalizing the National Strategic Plan on Child Health for (NSPCH) 2017-2022. The National Child Health Programme (NCHP) of Sri Lanka is operational since 1926. Over past

8 decades, many strategic elements have been added to the programme making its scope much wider than that at the programme inception. The NSPCH 2017-2022 will improve and address this scope.

4.7 Activities carried out by Family Health Bureau in 2016 include

i. Training of trainers (TOT) workshops on early childhood development (ECCD) conducted for Master trainer groups from Kegalle, Galle and Kurunegala. Two workshops were conducted with participation of 30 participants and 28 participants in each group. These trainings were conducted as a two day training programmes to train master trainers for the district on new manual on ECCD for primary health care staff. During the training the concepts of development, developmental milestones, psycho social stimulation, development screening and development disorders were covered. The groups consisted of MOMCHs, MOHs and PHNs. They are expected to train the PHC staff in respective districts.



ii. Flex charts were developed on child development in both Sinhala and Tamil Languages and distributed to health institutions.



iii. A docudrama was developed on Early Childhood care and Development. It will be distributed among public health midwives to use to educate mothers during antenatal classes and any session on development.

iv. Validation of a development tool through clinical assessment in Ampara District - A tool including questions representing all the domains in development was developed based on international literature and Sri Lankan Research. This was used to screen children in Ampara District by midwives and identified those who have problems. Then the

identified children were examined by an expert team including Child Psychiatrists and Pediatricians. These experts concluded that PHM attempts were successful in identifying children with suspected development problems. Following this validation, some modifications were suggested for the tool.



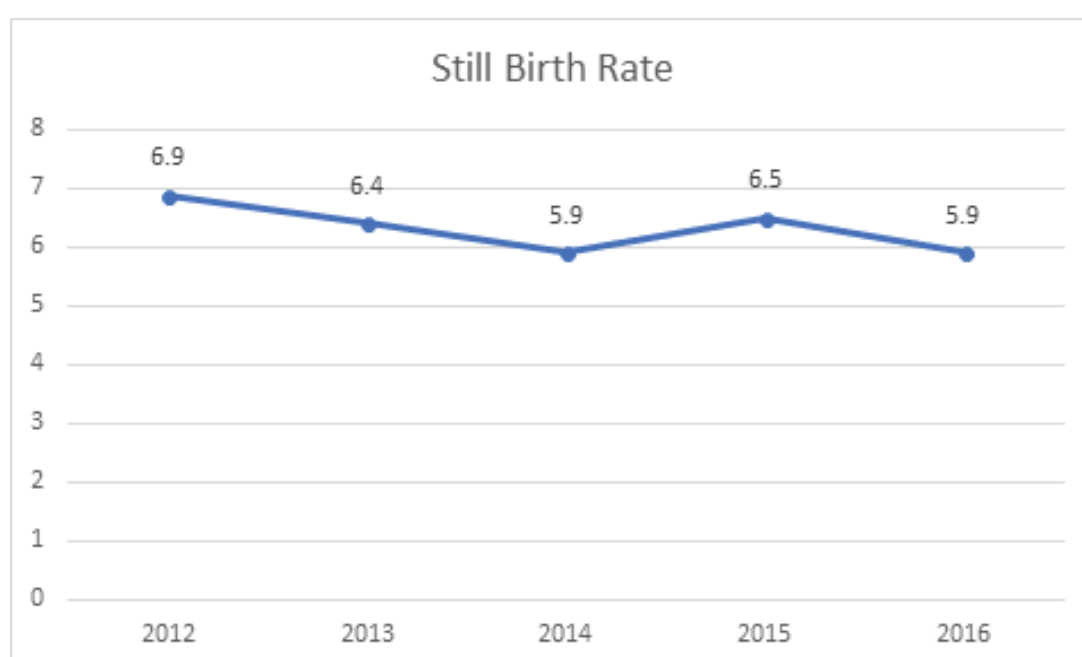
v. Development of quality assessment tool for paediatric wards- The tool was developed by adapting the WHO quality of care tools based on expert views. It was validated in several hospitals which included base hospitals, general hospitals and district hospitals. The tool has been finalized for dissemination.



4.8 Infant and under 5 children - Mortality reporting

PHMs are expected to report all mortality statistics related to under 5 deaths occurring in their areas through the routine RHMIS system.

PHMs have reported 1848 number of still births in their routine reports and the still birth rate is 5.9 per 1000 births in 2016.



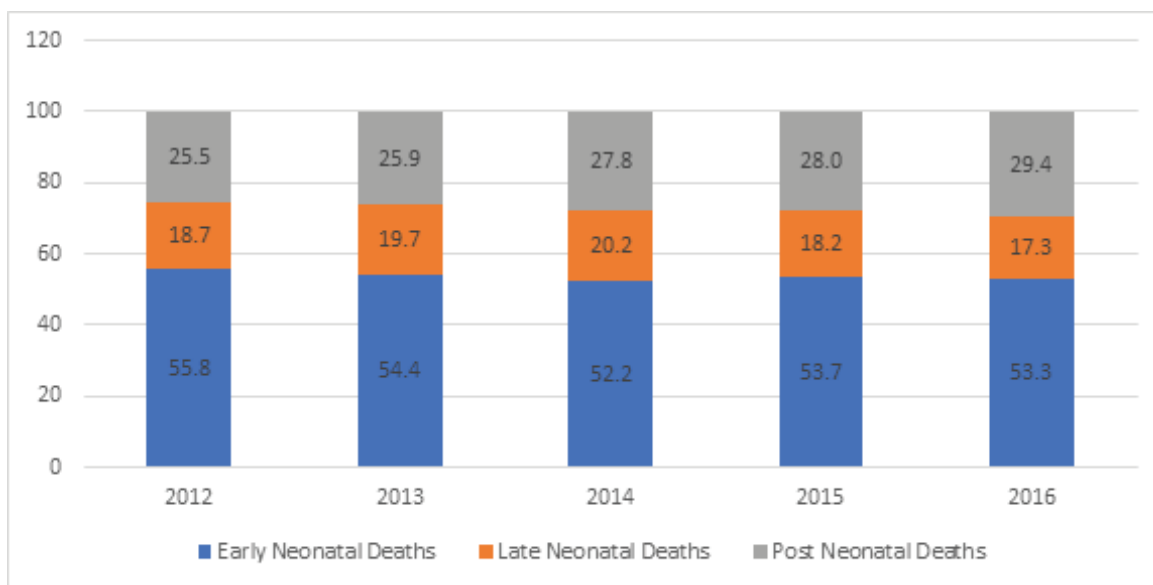
Source : FHB, RHMIS 2016

Figure 4.3: Still birth rates reported through RHIS from 2012-2016

Out of all infant deaths reported through the RHMIS, majority (53.3%) were due to early neonatal deaths (figure 4.4)

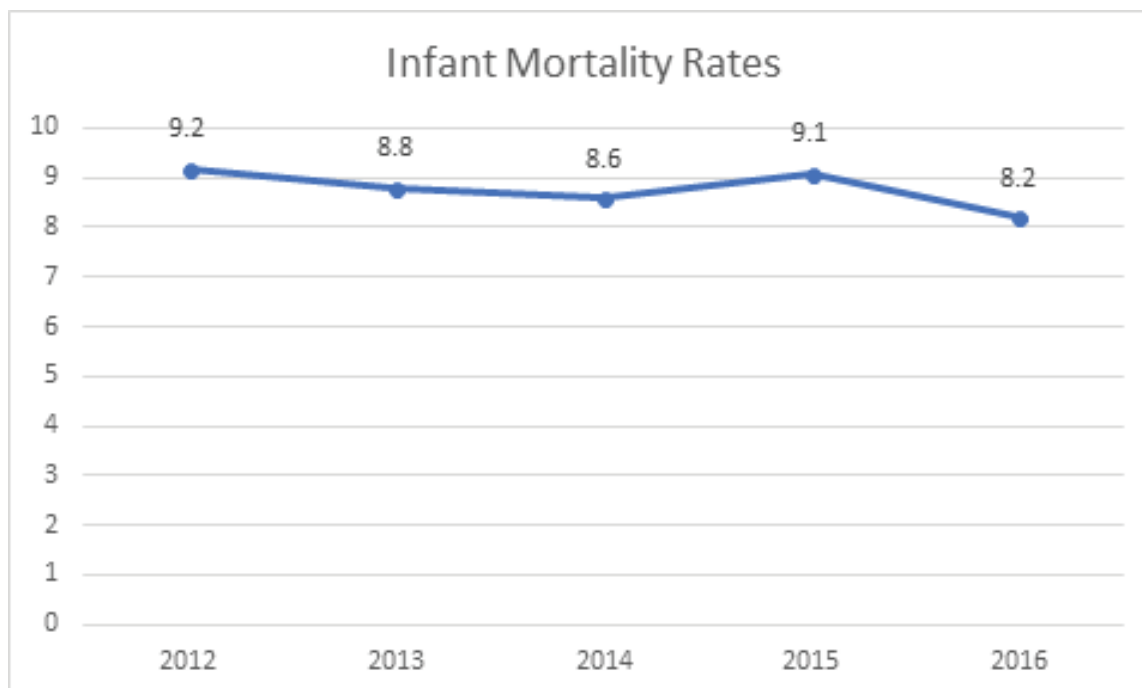
Total of 2542 Infant deaths (8.2 per 1000 live births) were reported in 2016 through the RHMIS (Figure 4.5).

Majority of infant deaths were due to congenital abnormalities (54.5%) followed by prematurity (27%). RHMIS has reported a under 5 mortality rate of 9.3 in 2016.



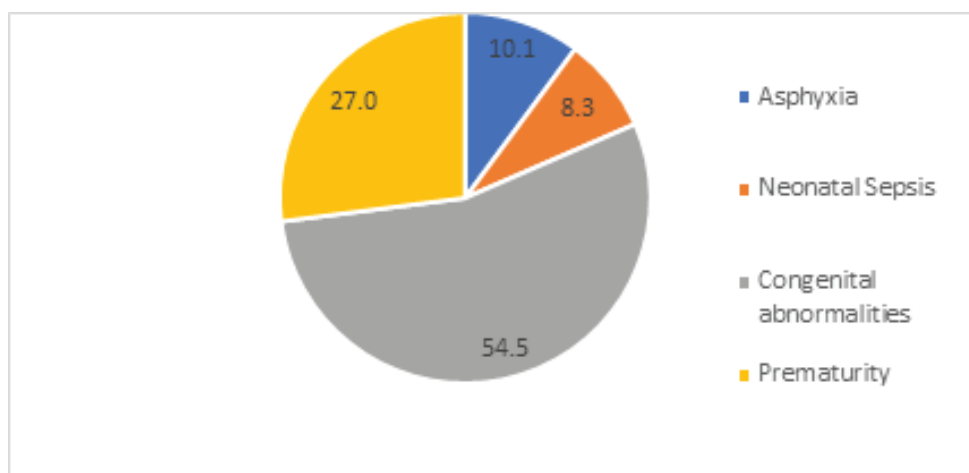
Source : FHB, RHMIS 2016

Figure 4.4: Infant deaths by category reported from 2012 - 2016



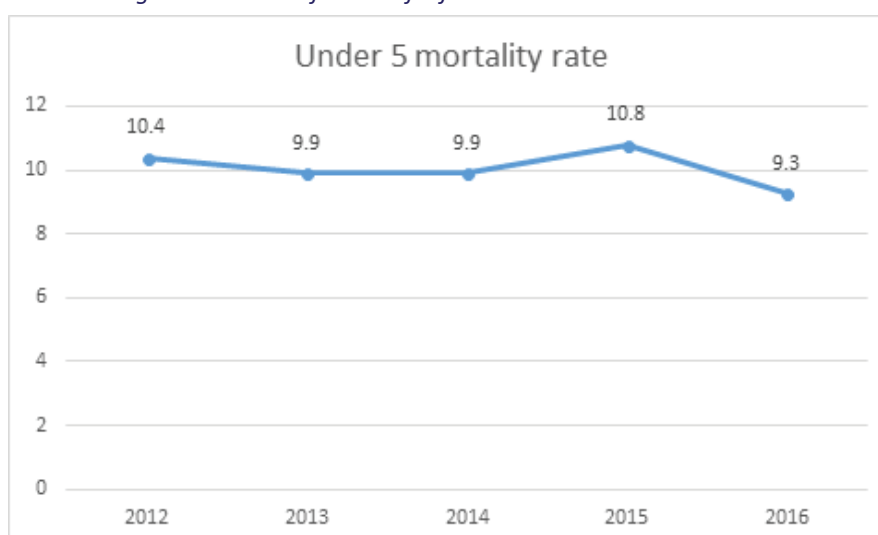
Source : FHB, RHMIS 2016

Figure 4.5: Infant Mortality Rates reported through RHMIS 2012 to 2016



Source : FHB, RHMIS 2016

Figure 4.6: Percentage distribution of cause of infant deaths 2016

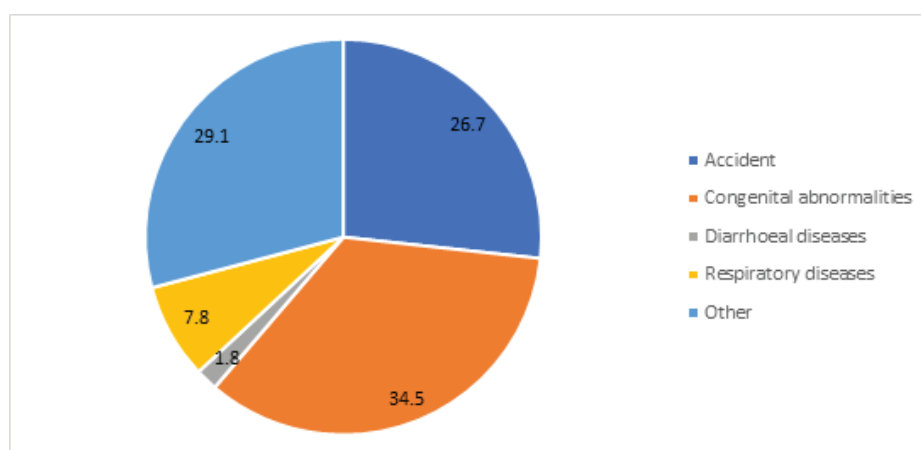


Source : FHB, RHMIS 2016

Figure 4.7: Under 5 mortality rates reported by RHMIS from 2012 to 2016

Congenital abnormalities remained the most frequent cause of 1 to 5 year mortality (34.5%) and 26.7% of reported deaths under

5 years have been due to accidents which are preventable deaths (Figure 4.6).



Source : FHB, RHMIS 2016

Figure 4.8: Percentage distribution of causes of 1-5 year child deaths 2016

CHAPTER 05

Maternal Child Mortality and Morbidity Surveillance

5.1 OUTCOME OF MATERNAL DEATH SURVEILLANCE AND RESPONSE

Review of maternal deaths is recognized as an internationally accepted best practice for reducing maternal deaths. World Health Organization (WHO) in 2004 introduced a guide, Beyond the numbers—Reviewing maternal deaths and complications to make pregnancy safer to initiate maternal death reviews & response systems.

Sri Lanka started reviewing maternal deaths way back in 1981. The review process evolved over the years with the addition of quality dimensions. In 1985, the gazette regulation on mandatory notification of probable maternal deaths was issued. In 1995, structured review of deaths was started by Family Health Bureau (FHB). In 2000, a national maternal death database was established. In 2009, Ministry of Justice issued a circular to all coroners on compulsory post-mortems on maternal deaths. In 2010, the review process was revolutionized with the addition of several quality dimensions; mandatory post-mortems, case scenario development, central level expert reviews and strengthening the 'response' part. FHB coordinates the surveillance process island wide with the expertise contribution from professional Colleges of Obstetricians, Anaesthesiologists, Community Physicians, Administrators, physicians, cardiologists and Forensic Pathologists. The British Journal of Obstetrics & Gynaecology (BJOG) in 2014 acknowledged Sri Lanka's MDSR system to be the best organized and structured.

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 a MMR of 1694 per 100,000 live births in the

year 1947 and gradually reduced the same over the last few decades to achieve the best in the South Asian Region.

Maternal Death

-death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

It is important to note that both health and non-health interventions made a significant impact on maternal care service delivery and reducing maternal mortality. These include; socio-economic development, free education and related high literacy rate of population, improved transport services, free health services, improved quality of obstetric care, control of communicable diseases and well organized PHC systems.

When a probable maternal death is known, field and hospital health staff notify, conduct post-mortems, review at field and hospital levels and send a detailed report to FHB. At FHB, the Maternal & Child Morbidity and Mortality Surveillance Unit, a database is maintained and comprehensive case scenarios are developed to be reviewed by an expert panel. A national team of experts from related specialties visit each and every district in the following year to conduct National Maternal Mortality Reviews (NMMR) at district level with the participation of all concerned stakeholders. Each maternal death is reviewed based on 3 delays- deficiencies in seeking healthcare, reaching and treating, and lessons learnt are translated into practice, programs and policies at district and national levels.

For the year 2016, all NMMRs in 26 health regions were conducted and review of all deaths completed by November 2017.

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

Preliminary review of all probable maternal deaths (n=190) reported during the year identified 112 deaths as maternal deaths giving a national maternal mortality ratio of 33.8 per 100,000 live births. Live births reported by the Registrar General's Department for the year 2016 was taken as the denominator (331,073) (Figure 1). It is notable that there was a reduction of 3748 live births in the denominator (2015- 334,821).

Figure 2 gives number of reported and confirmed Maternal Deaths from 2001 – 2016. Although there is a gradual reduction of number of deaths up to the year 2014, the number remains nearly the same over the last three years.

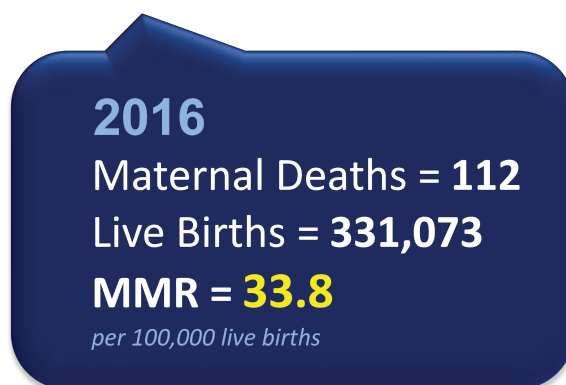


Figure 5.1: Calculation of MMR 2016

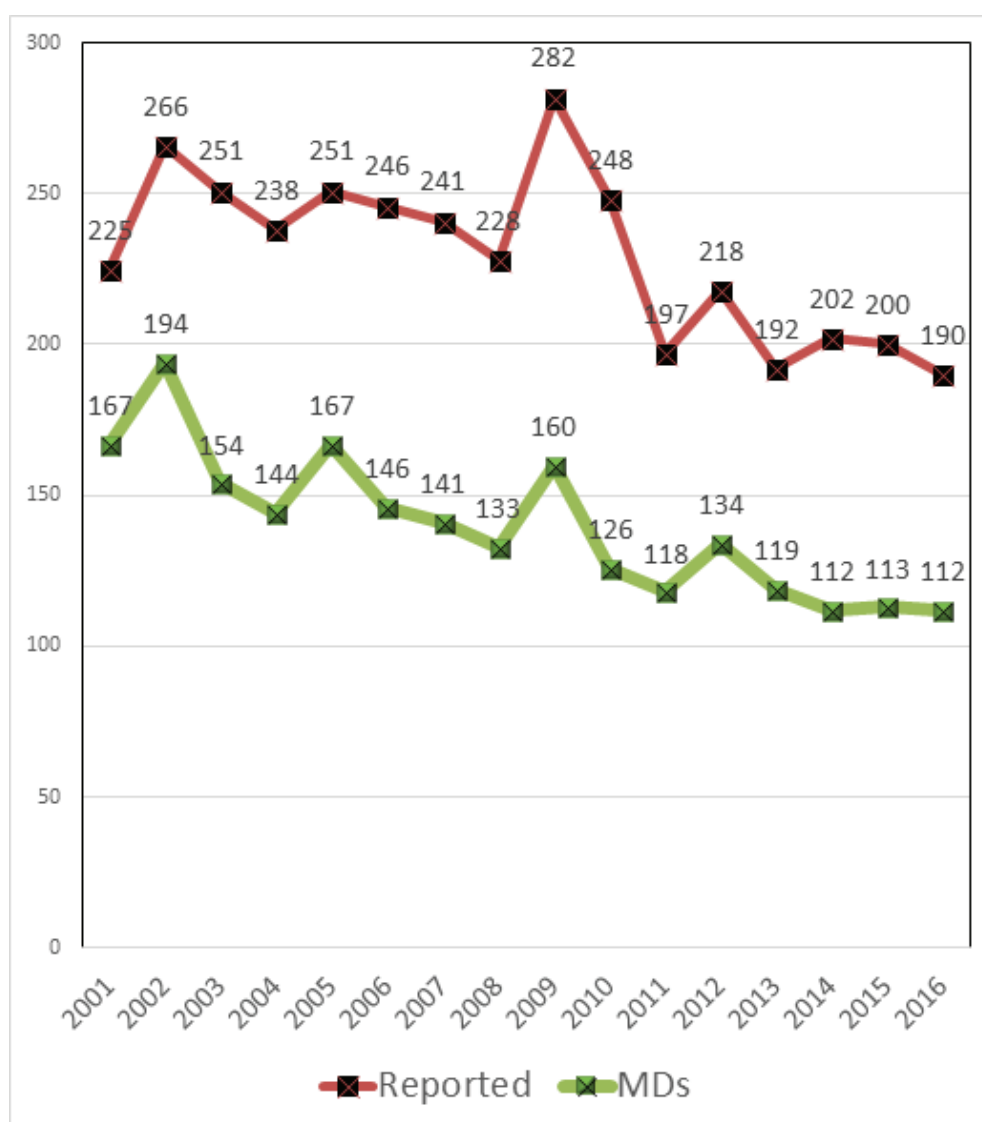


Figure 5.2: Number of Maternal Deaths (2001 – 2016)

Source : FHB, MCMMSU 2016

Figure 3 shows the declining trend of MMR over the years from 1995 – 2016. The graph stagnates at a same level of MMR over the last 9 years. However, Sri Lanka is well-placed with regard to maternal mortality on par with high income countries.

In the year 2016, a post-mortem was conducted in 105 (94%) cases. Final determination of the cause of death was carried out through a consensus reaching process involving a panel of experts from different fields.

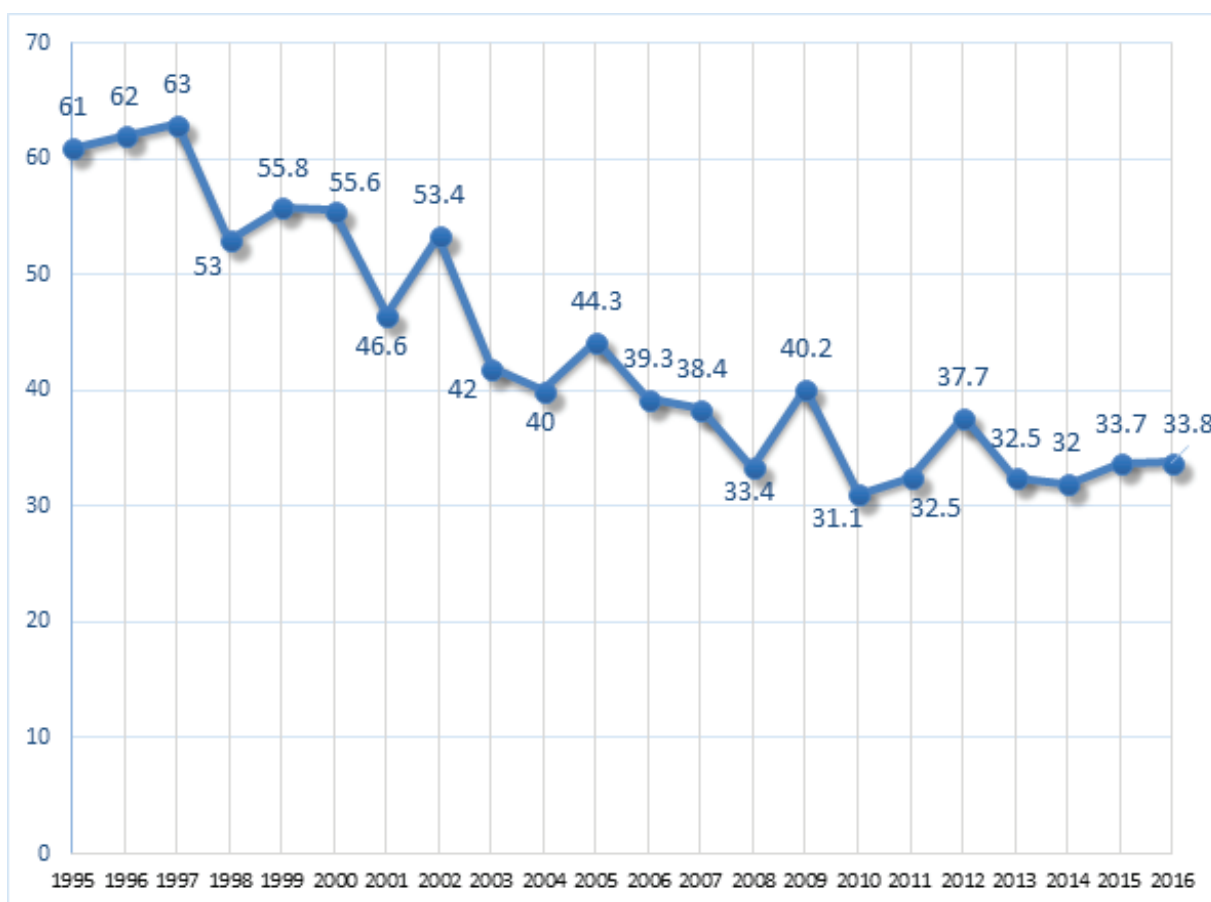


Figure 5.3: Maternal Mortality Ratio from 1995-2016

Source : FHB, MCMMSU 2016

Detailed analysis of maternal deaths revealed that the majority (n=71, 63%) of women died were Sinhalese, Tamils (n=22, 20%) and Muslims (19, 17%). However, this is not in line with the population composition of three ethnicities based on 2012 census (Sinhalese 74.9%, Tamil 15.3%, Muslim 9.3%).

Many (n=70, 62%) were from the rural sector while others were from urban (n=39, 35%) and estate sectors (n=03, 3%). A large proportion (n=99, 88.4%) had either secondary or higher level of education. Ninety five percent (n=106) of them were married. There were 6 (5%) women either unmarried or divorced.

Cause of death profile of the year 2016 shows that the category of maternal deaths shifted from indirect causes to direct causes (55%) (Figure 4). The leading causes of deaths were; obstetric haemorrhage. Heart disease and Amniotic fluid embolism (Figure 5).

The changing cause specific maternal mortality ratios (CSMMR) are depicted in figure 6. It is evident that CSMMR for direct causes are in an increasing trend.

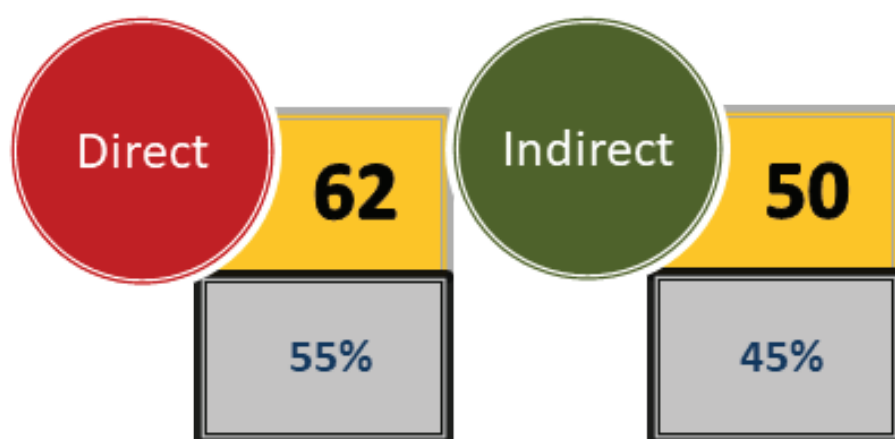


Figure 5.4 : Category of Maternal deaths

Source : FHB, MCMMMSU 2016

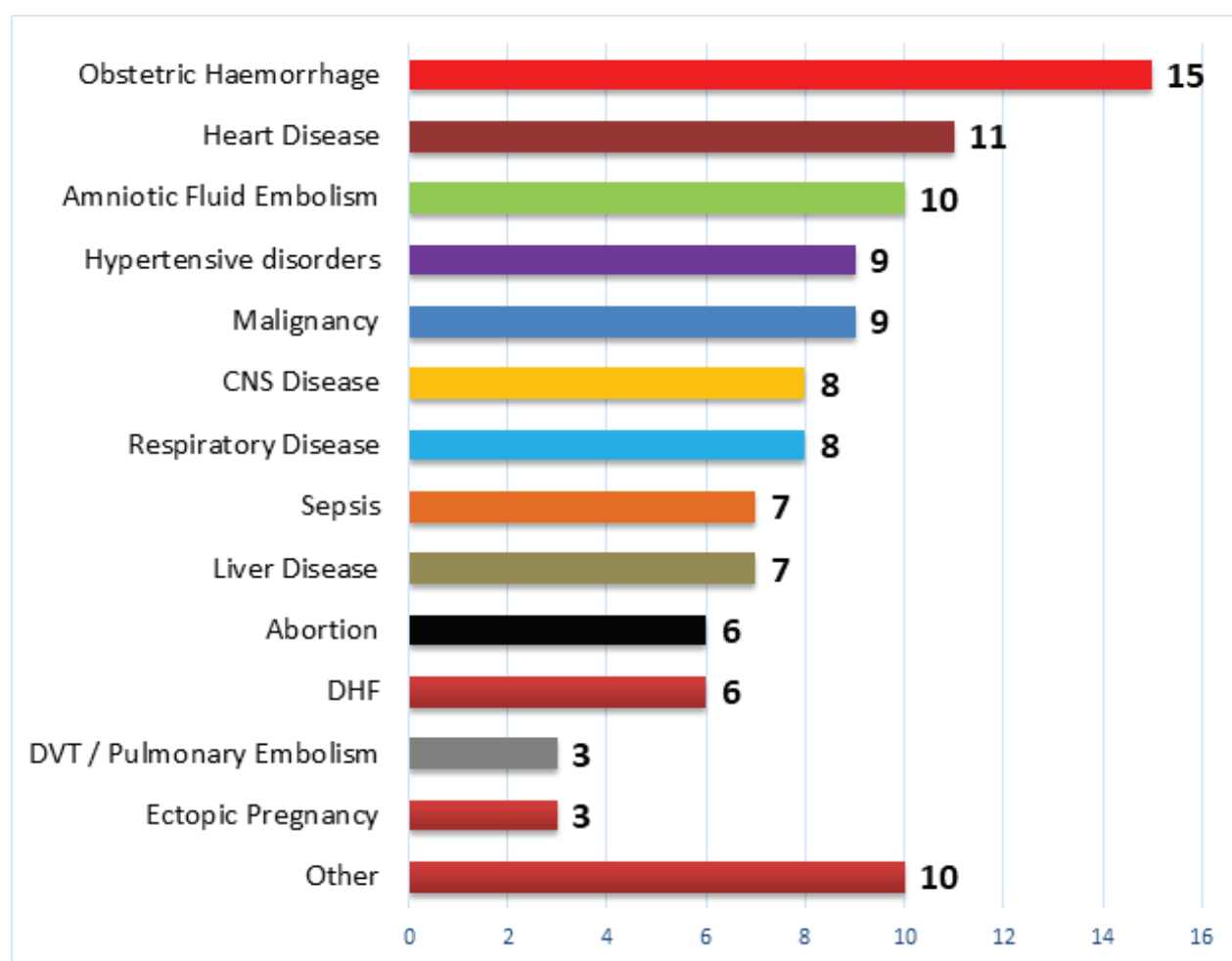


Figure 5.5 : Leading causes of maternal deaths 2016

Source : FHB, MCMMMSU 2016

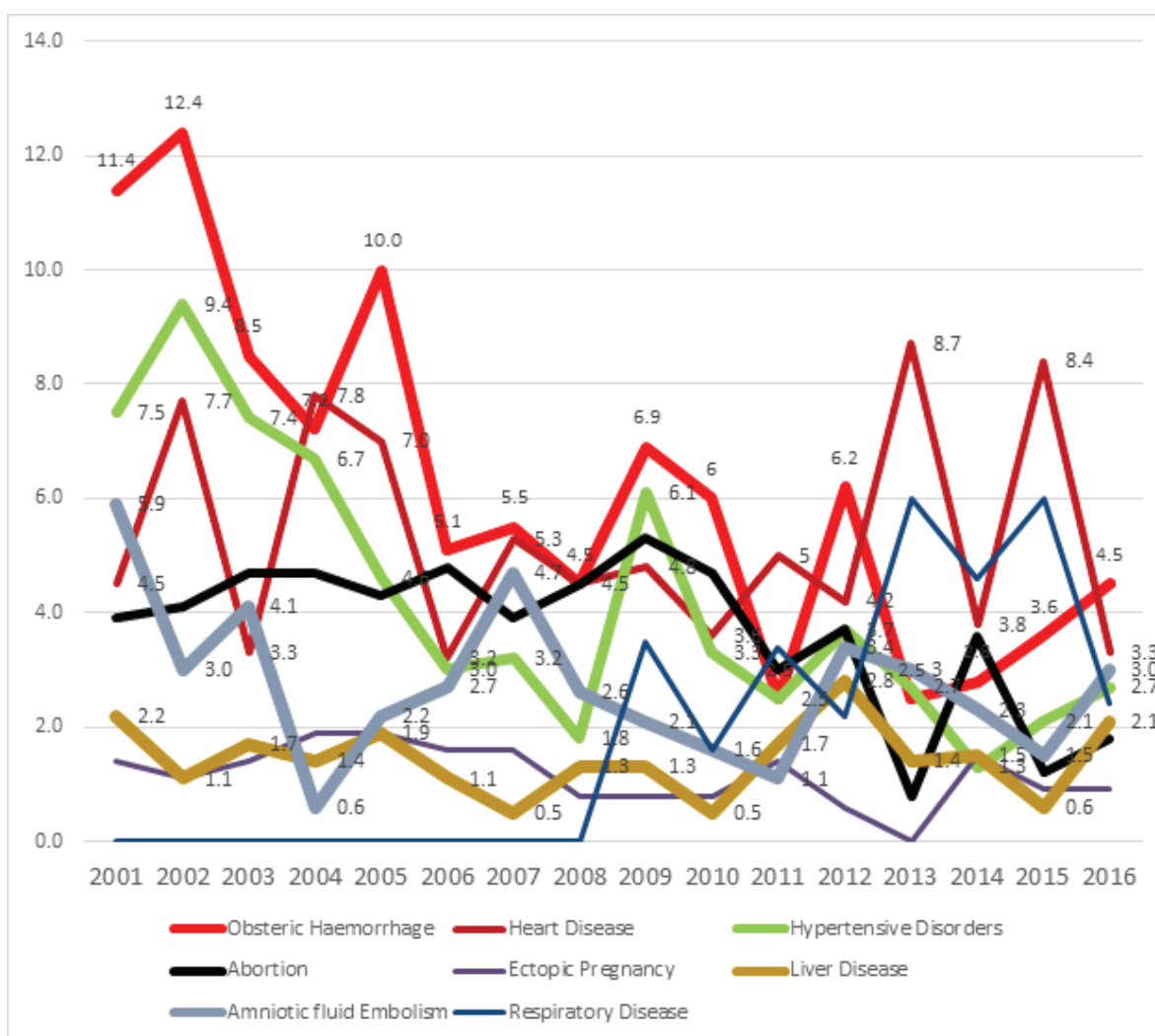


Figure 5.6: Cause Specific MMRs (2001 – 2016)

Source : FHB, MCMSMU 2016

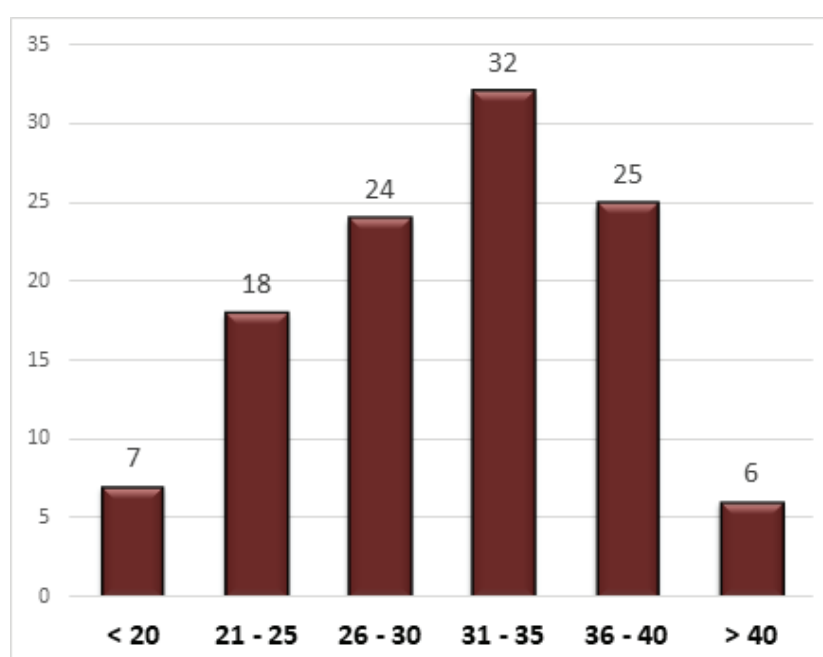


Figure 5.7: Age profile of the women died

Source : FHB, MCMSMU 2016

The analysis of district level number of deaths and MMR based on live births reported for each district by Registrar General's Department shows a wide variation. Gampaha and Colombo districts reported highest number of deaths. Kilinochchi reported the highest level of district MMR (Figure 7).

The parity level of the maternal deaths shows that one third of women were primies (n=40,

36%). A proportion of 31% (n=35) of women were in their third pregnancy or over. (Figure 9).

Age pattern of the women died are depicted in the figure 8. A significant number (n=7,6.3%) teenage maternal deaths and over the age 35 years (n=31, 27.7%) were also noted.

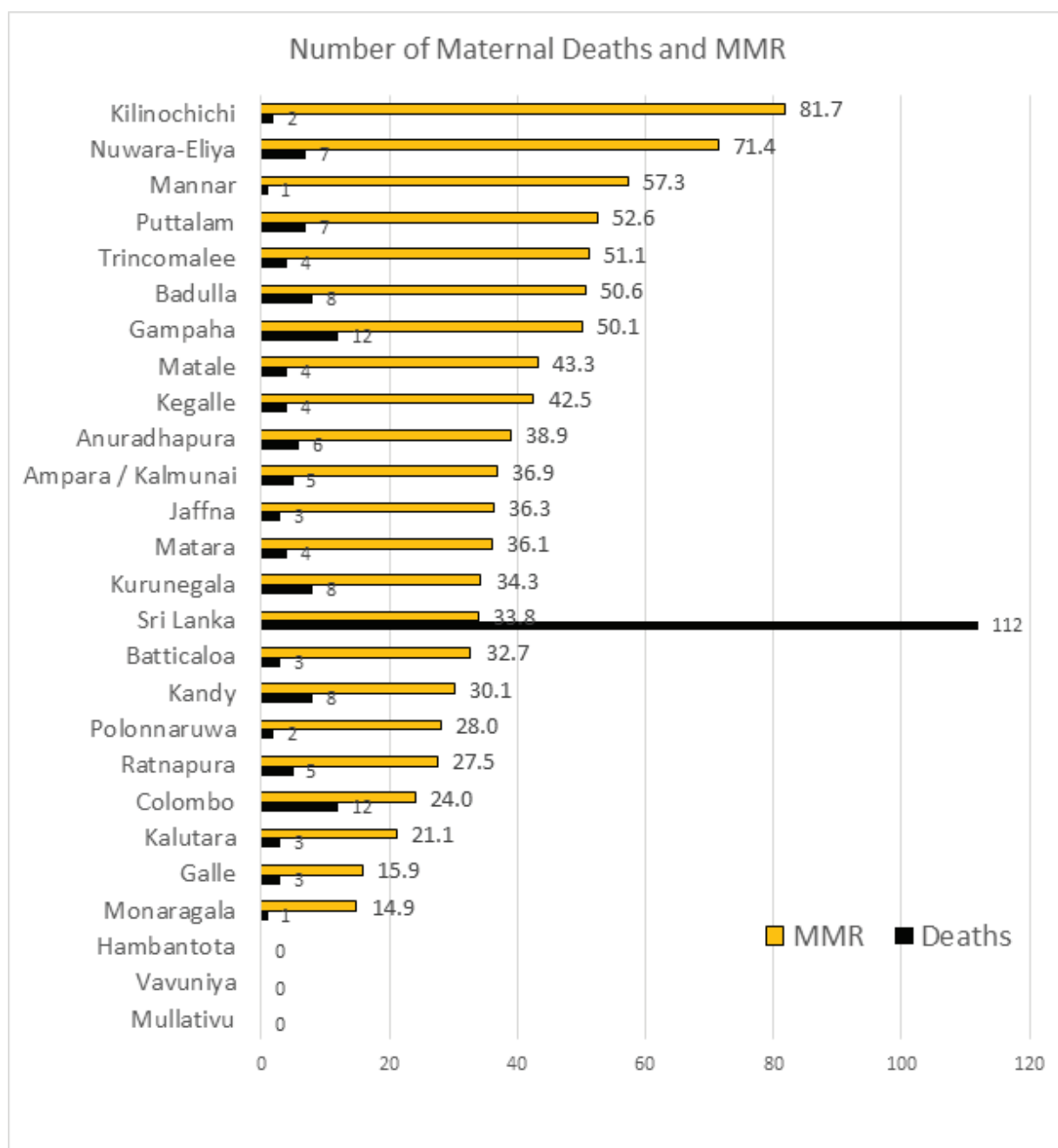


Figure 5.8: District MMRs and number of maternal deaths

Source : FHB, MCMSU 2016

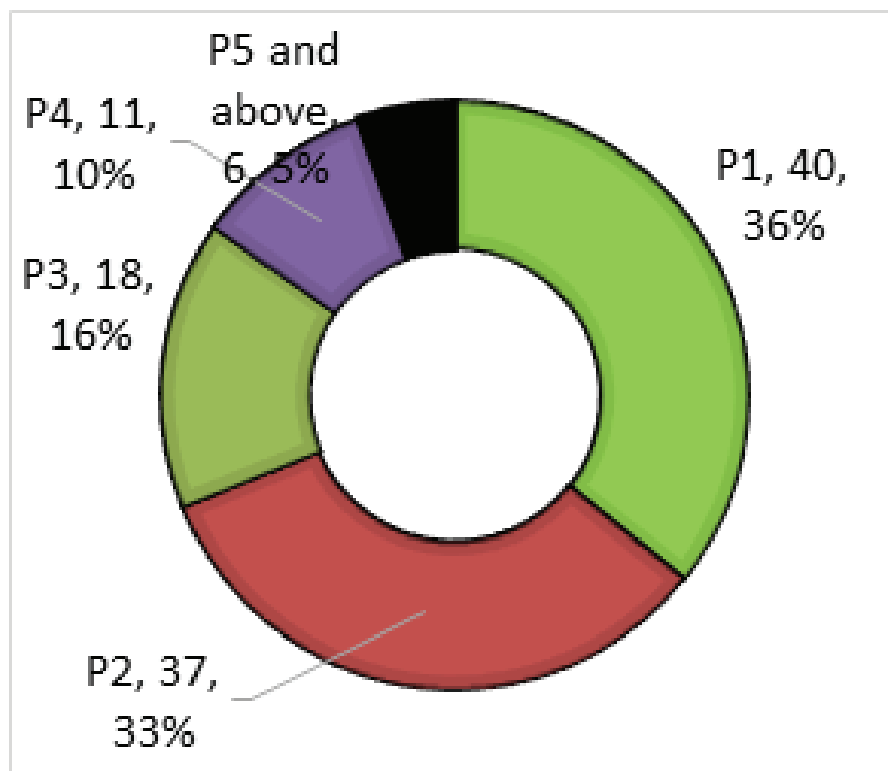


Figure 5.9: Parity of the women died

Source : FHB, MCMMSU 2016

Many women (n=70, 63%) were in advanced pregnancies when they died (Figure 10).

Outcomes of the pregnancy of dead women are presented in table 1. A live baby was delivered in many (48.2%) cases.

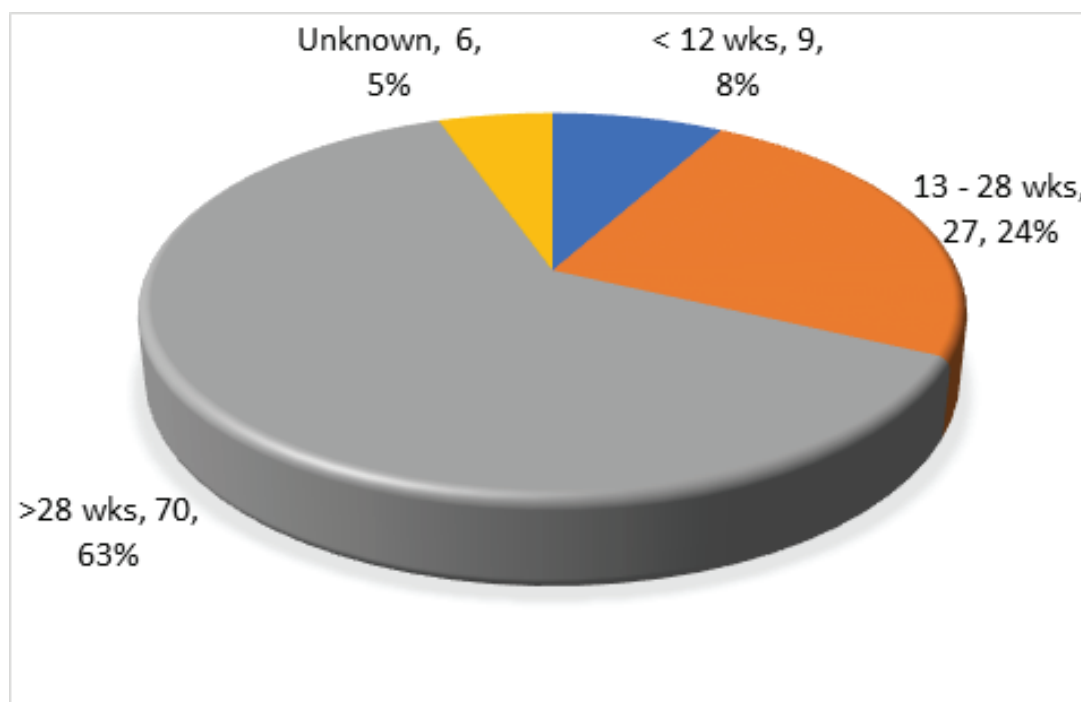


Figure 5.10 : Period of gestation completed before the death or delivery

Source : FHB, MCMMSU 2016

Table 5.1: Pregnancy outcome of dead women

Pregnancy outcome	N	%
Abortion / Ectopic	10	8.9
Not delivered	31	27.7
Live baby	54	48.2
Stillbirth / Neonatal deaths	14	12.5
Not available	3	2.7
Total	112	100.0

Thirteen and three mothers were initially managed at peripheral hospitals (district hospitals or peripheral units) and Private Hospitals respectively. A majority (n=101, 90.2%) of women were cared at a hospital before they died. Nine women died in transit or pronounced dead on admission to a hospital (Table 2). Out of the women died at hospital, a majority (n=57, 56.2%) died at a teaching hospital and 12 (11.9%) at a general or provincial hospital. Twenty eight (27.7%) women

were last managed at either district general or base hospital before they died. Two women died at the Army Hospital.

Three delays (seeking, reaching and treating) were assessed in confirmed maternal deaths. Delays were identified in 76 (68%) deaths (Figure 11). Delay in seeking care was attributable to 48 (42.9%) cases. Suboptimal care provision, both at field and hospital, was revealed in 44 (39.3%) cases.

Table 5.2: Place of death

Place of death	N	%
Home	2	1.8
In transit / On admission	9	8.0
Hospital	101	90.2
Total	112	100.0

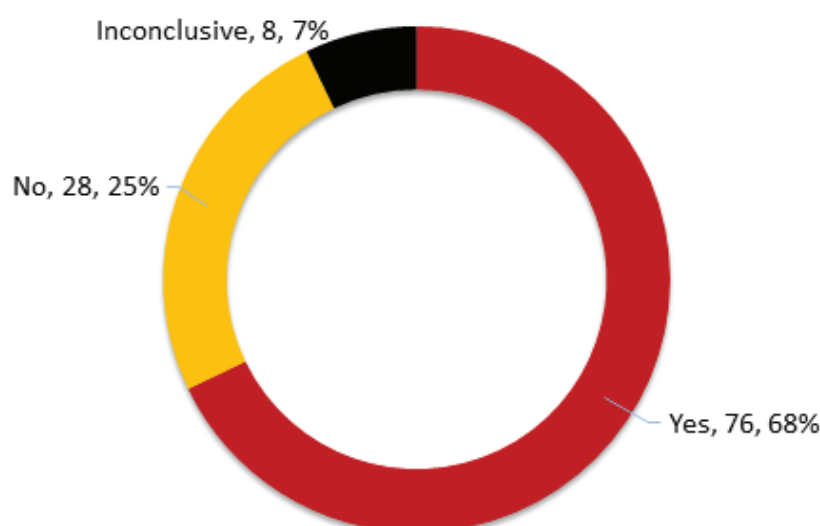


Figure 5.11 : Presence of delays

Source : FHB, MCMMMSU 2016

Causes of death of cases with delay 3 are listed in Table 3. In many of the obstetric haemorrhages, sepsis, Amniotic Fluid Embolism, Heart Disease and respiratory diseases,

Out of the 112 maternal deaths reported, 62 (55%) were categorized as preventable based on the expert opinion (Figure 12). Out of the preventable deaths, overall management of the index cases has been carried out at Provin

Table 5.3: Case profile of deaths with delay 3

Cause of death	N
Obstetric Haemorrhage	12
Sepsis	5
Amniotic Fluid Embolism	4
Heart Disease	4
Respiratory disease	4
Abortion	3
Hypertensive Disorder	3
Ectopic Pregnancy	2
Misoprostol overdose	2
Acute Liver Disease in Pregnancy	1
CNS -Obstructed VP shunt	1
DVT - Pulmonary Embolism	1
TB Meningitis	1
Unascertained	1
Total	44

Source : FHB, MCMMSU 2016

healthcare service provision was not up to the expected levels. It is also reported 2 cases attributable to Misoprostol overdose.

cial General or Teaching Hospitals (30), Base or District General Hospitals (18), Army Hospital (2), District Hospitals (3) and Private Hospital (1).

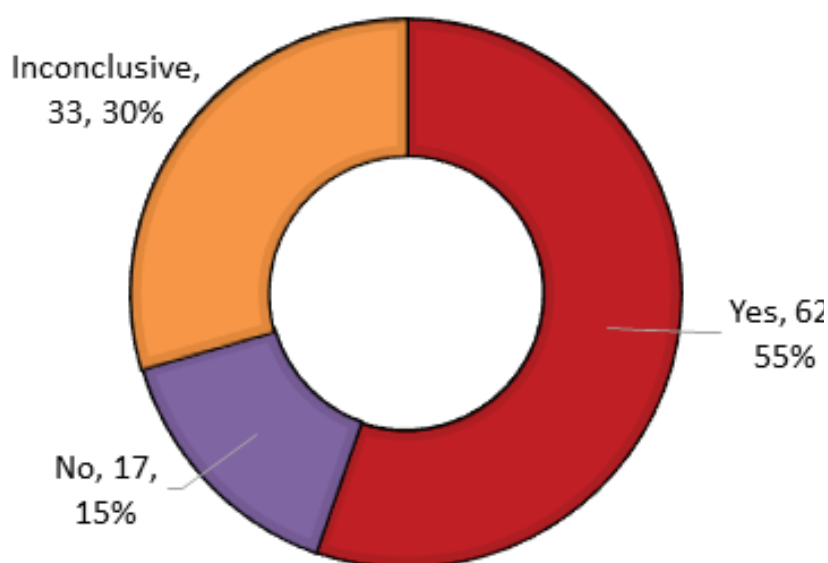


Figure 5.12 : Preventability of maternal deaths

Source : FHB, MCMMSU 2016

Cause of death and the number of deaths of preventable deaths are given in the table 4. A majority of the obstetric haemorrhages, especially post-partum haemorrhage, were the leading causes of preventable deaths. Next leading causes were abortion, hypertensive disorders and pneumonias.

Unmet Need of Family Planning was incriminated in 20 (18%) cases. This is one third of the all preventable cases. The cause of death profile of the cases with Unmet Need of Family Planning is given in the Table 5.5.

Table 5.4: Case profile of preventable deaths

Cause of death	N
Obstetric Haemorrhage	11
Abortion	6
Hypertensive Disorders	6
Respiratory diseases	6
Heart diseases	5
Sepsis	5
Amniotic Fluid Embolism	4
Central Nervous System conditions	3
Ectopic pregnancy	3
Acute Fatty Liver in Pregnancy	2
Dengue Haemorrhagic Fever	2
Misoprostol overdose	2
DVT - Pulmonary Embolism	1
Hyperemesis Gravidarum	1
Intestinal Obstruction	1
Malignancy -Choriocarcinoma	1
Suicide - Postpartum Depression	1
Tuberculous Meningitis	1
Unascertained	1
Total	62

Source : FHB, MCMMSU 2016

Table 5.5: Case profile of deaths with Unmet Need of Family Planning

Cause of death	N
Abortion	5
Obstetric haemorrhage	4
Heart Disease	3
Respiratory -Pneumonia	2
Acute Fatty Liver in Pregnancy	1
CNS -colloid cyst of brain	1
Hypertensive Disorder - Eclampsia	1
Malignancy -Choriocarcinoma	1
Sepsis - Home delivery	1
Unascertained	1
Total	20

Source : FHB, MCMMSU 2016

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 minute and disseminated to all stakeholders.

National level dissemination of the outcome of the maternal death reviews was conducted on 12th December 2017 at FHB with the participation of all the stakeholders.

Sri Lanka College of Obstetricians and Gynaecologists (SLCOG) played a pivotal role in contributing to reviewing cases at national level and expert review at district level.

Professional colleges of Anaesthesiologists and Forensic Pathologists also contributed in the maternal death review process.

Maternal and Child Morbidity and Mortality Surveillance Unit of FHB collated all documents related to index cases, compiled case scenarios, conducted national maternal mortality reviews, sent minutes of the reviews, processed data, analysed data and disseminated the outcome among all stakeholders.

At the health region level, Regional Director of Health Services (RDHS), hospital heads and Medical Officer – Maternal & Child Health (MOMCH) coordinated maternal mortality surveillance and conducting NMMRs.

UNICEF and Ministry of Health provided financial support for the MDSR activity.

CHAPTER 06

FAMILY PLANNING

Family planning (FP) is an essential pre-requisite for development of any country. Sri Lanka records the best family planning performance in the region and has experienced tremendous improvement in family planning practices, which immensely contributed to the impressive health indicators and socioeconomic development. However, in the recent past, a stagnation could be observed in family planning practices and services. This will have far reaching adverse consequences in health and non-health sectors. A number of factors ranging from non-availability of certain family planning methods to negative social perception may have contributed to this stagnation.

Family planning was accepted as a part of the national health policy in 1965, and was integrated into MCH services. The programme offers a wide range of modern family planning services to enable all couples to have a desired number of children with optimal timing and spacing. Contraception as well as services for sub-fertile couples are provided to achieve that objectives. MOHs, MOs, PHNs, PHMs and PHIs are being trained in providing awareness and counseling for clients on family planning, supported with appropriate BCC material.

6.1 CONTRACEPTIVE SERVICES

Needs of the community have changed over generations, so have the services the programme offers. Oral Contraceptive Pills (OCP), DMPA injections, Intra Uterine Devices (IUD), Condoms and Implants are the modern

temporary methods offered by the present-day programme. Modern permanent methods include vasectomy and tubal ligation (LRT).

The indicators are used to assess the performance of contraceptive services are categorized into two broad categories. They are the new acceptor rates and the current user rates. Two definitions are used in describing current user and new acceptors.

- Current user is a woman/man (eligible family) who is using any method of contraception at a given point of time. This indicator provides the CPR among eligible families for a given year. Data reported in H 509 is used for calculation of this.
- 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. Data reported in H1200 used to calculate this.

6.1.1 CURRENT USERS: CONTRACEPTIVE PREVALENCE AMONG ELIGIBLE FAMILIES

Percentage of eligible families using any contraceptive method is expressed as contraceptive Prevalence Rate (CPR) among eligible families. Of the eligible families registered by PHMs (n= 3,739,544) 67.1% had been using any contraceptive method at the end of year 2016. These using a modern contraceptive

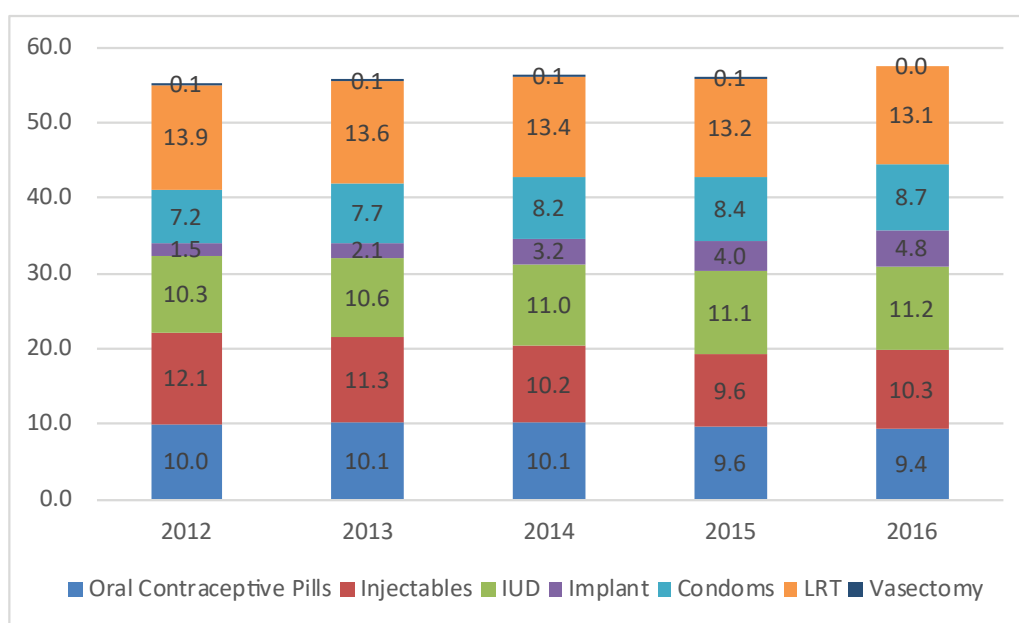
Table 6.1: Percentage of eligible families using Contraceptive methods 2012 - 2016

Indicator	2012	2013	2014	2015	2016
Modern methods Prevalence(mCPR)	55.1	55.4	56.2	55.9	57.6
Traditional method / Natural prevalence	9.5	9.5	9.6	9.4	9.5
Contraceptive Prevalence Rate (CPR)	64.6	64.9	65.8	65.3	67.1

Source : FHB, RHMS 2016

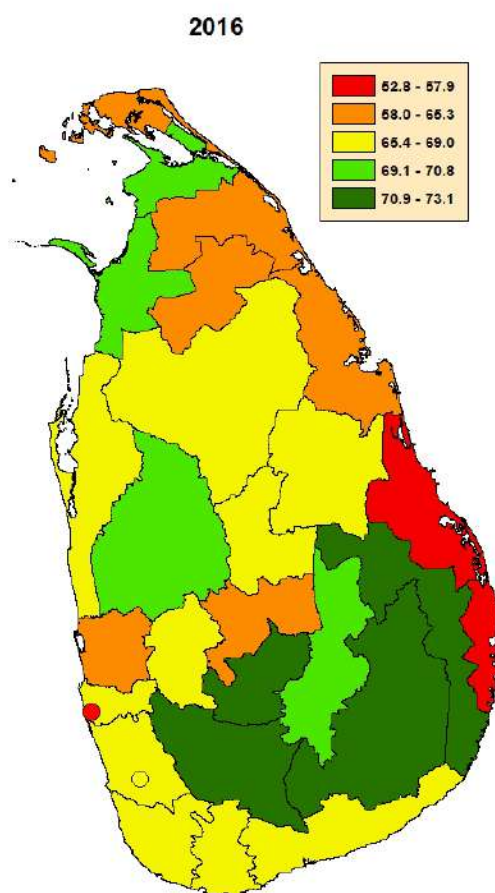
method are calculated in the modern method prevalence rate (mCPR). In 2016 was 57.6% and the Traditional / natural method prevalence was 9.5%. Figure 6.1 presents the trends in method preference since 2012 to 2016. The most popular temporary

method of contraception in 2016 was IUD (11.2%), followed by DMPA injections (10.3%), OCPs (9.4%) and condoms (8.7%). Approximately 13% of eligible families practiced female sterilization (LRT) for fertility control.



Source : FHB, RHMIS 2016

Figure 6.1: Current users of modern family planning methods, from 2011 - 2015



Source : FHB, RHMIS 2016

Figure 6.2: Geographical variations in Contraceptive Prevalence Rate (CPR) in 2016

6.1.2 NEW ACCEPTOR RATE

RHMIS has a special registration system to record the pattern of new acceptance of modern contraceptive methods by couples. During 2016, 157,191 couples had been recruited for various modern contraceptive methods (Table 6.2). Out of total new acceptors, 90.6% had accepted temporary methods

as a new method from the programme during 2016.

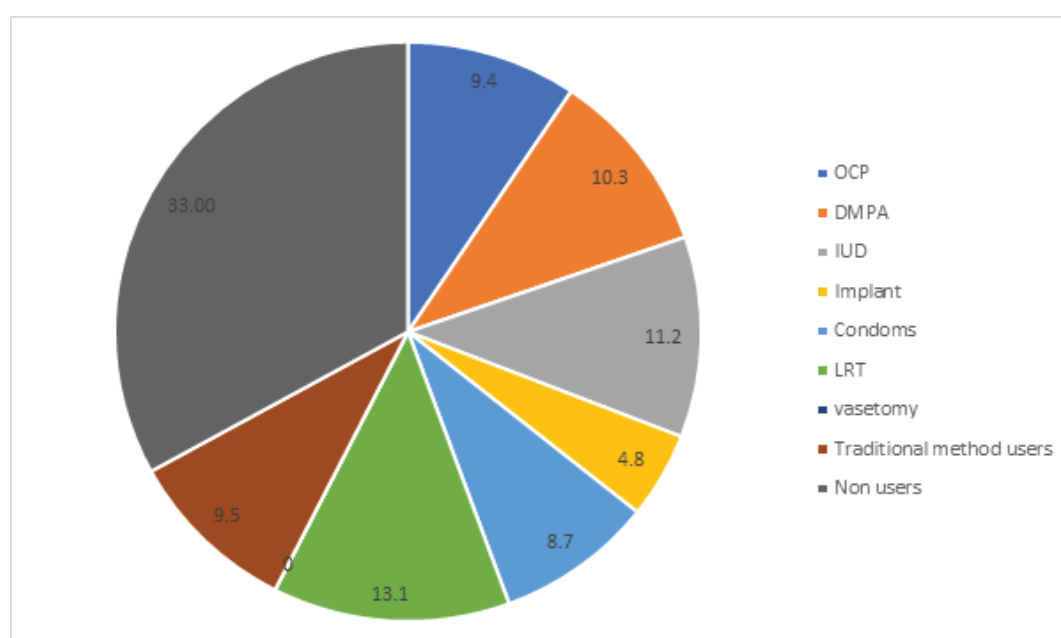
6.1.3 New Acceptors by method

The change in new acceptors as a percentage of eligible couples over time is given in figures 6.2.

Table 6.2: Contraceptive methods new acceptors by method from 2012 - 2016

Item	2012	2013	2014	2015	2016
New Acceptors (No.)	238,016	181,645	127,130	153,901	157,191
IUD	73,932	52,917	40,813	44,916	37,517
Oral Pills	79,957	43,556	26,644	33,279	27,609
Sterilizations	21,109	15,771	11,657	14,919	14,806
Injectable	37,886	34,713	8,195	14,491	36,322
Implants	25,132	34,688	39,821	46,796	40,937

Source : FHB, RHMIS 2016



Source : FHB, RHMIS 2016

Figure 6.3 : Distribution of various contraceptive methods in 2016

6.1.4 Contraceptive failure rate and complications

Contraceptive method failures are supposed to be reported through RHMIS and special notification and investigation format provided. Failure rates for different methods as reported in RHMIS are given in Table 6.3. A total of 1872 method failures were reported and the highest failure rate was among IUD users which was 18.4 per 10,000 users. Failure rate reporting is an area needing attention as there are lot of under reporting.

6.1.5 Unmet need for Family Planning

Unmet need for family planning means a fertile woman married or living in union, not using any contraception (modern, natural or traditional), not wanting any more children or wanting to postpone for at least 2 years. PHMs gather this information from their eligible families. Figure 6.4 presents the trends in unmet need for family planning from 2012 to 2016.

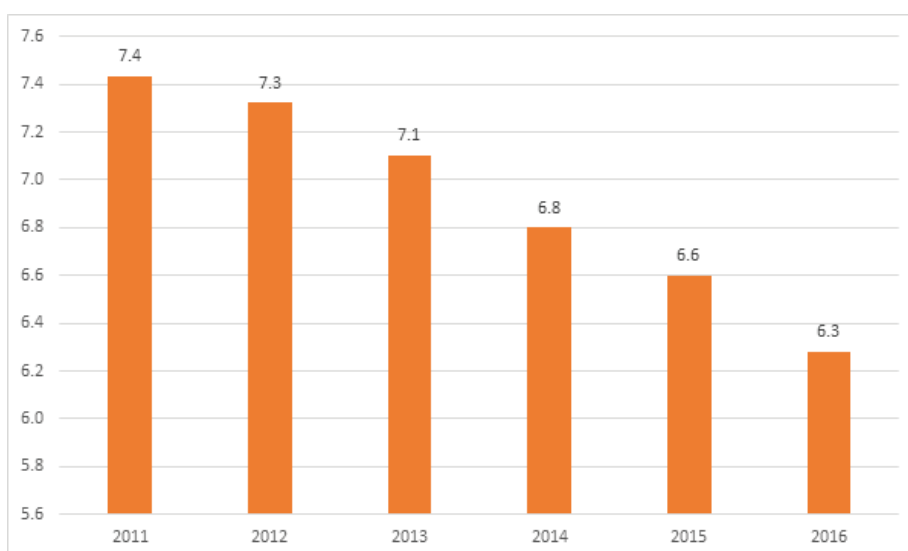
6.1.6 Services for subfertile couples

Provision of services for subfertile couples is an important component of the National Family Planning programme. Field staff should identify sub fertile couples among the families registered in the Eligible Family

Register. They are expected to refer the couples identified for further management. The couples with risk factors also need to be identified and referred for early interventions. Reporting of subfertility is low and in 2016 it was only 2.7% which is again a grossly under reported value.

6.2 Some of the special activities carried out in 2016 by Family Health Bureau related to family planning services includes

- i. Eight '3 day TOT' programmes on reproductive health for two hundred and forty Medical Officers providing family planning services.



Source : FHB, RHMIS 2016

Figure 6.4: Percentage of eligible couples having unmet need for family planning 2011-2016



ii. Six '1 day, Technical Updates on Reproductive Health' for 240 service providers in hospitals providing reproductive health services.



iii. Ten consultative meetings to develop FP IEC material. For each meeting about 15-20 resource persons participated and contributed in developing the IEC material.

iv. Eleven 2 day District level programmes on Reproductive Health were conducted in MOH areas of Maharagama, Rathmalana, Dehiwala, Piliyandala; one programme each in Mullaithivu, Gampaha, Kalmunai, and Polonnaruwa; 2 programmes in Trincomalee) Programmes were organized by Medical Officers of Maternal and Child Health in each district. Master Trainers in respective districts conducted the programmes for untrained health staff. More than 250 master trainers were trained during this training session.

v. Seven programmes were carried out to train data collectors for the "National Family Planning Programme Review" (NFPPR)

and two consultative meetings were conducted to discuss the outcome of "National Family Planning Programme Review" The report of the 'National Family Planning Programme review' was the outcome of consultations



with stakeholders working at all levels, including development partners, implementing partners and professional associations.

vi. Dissemination workshop on NFPP review main findings of the National Family Planning Programme Review were disseminated amongst all relevant stakeholders.

vii. A sensitization programme for marriage registrars was conducted as a collaborative effort between the Health Education Bureau and Family Health Bureau together with other relevant stakeholders to launch a booklet targeting newly married couples to address most important aspects related to their reproductive health.



CHAPTER 07

SCHOOL CHILD, ADOLESCENTS AND YOUTH

7.1 SCHOOL HEALTH PROGRAMME

School health is a shared responsibility of both the Health and the Education Ministries. FHB is the focal point for the School Health Programme in Sri Lanka and is involved in planning, providing technical guidance, monitoring, evaluating the programme activities, conducting research and management of logistics relevant to school health activities. The services are delivered through the primary health care staff in collaboration with the provincial health and education ministries. The Medical Officer Maternal and Child Health (MOMCH) is the coordinating officer at regional level. Designated officers are being assigned as School Medical Officers (SMO) in Kandy, Galle, Jaffna, Colombo, Anuradhapura, Gampaha, Kurunegala and Matara to conduct school health activities in urban areas.

The Family Health Programme includes the preventive health care needs of both school children and adolescents. The Ministries of Health and Education share a joint responsibility in implementing the school health interventions. The target group for the School Health Programme are children and adolescents attending government schools. A successful programme to reach out-of school adolescents is yet to be established.

The Medical Officer of Health (MOH) is responsible for implementation of the school health programme in collaboration with the Zonal Educational Officers and School Principals. The Public Health Inspector (PHI) organizes the school health activities at the local level.

In the Municipality areas of Colombo, Kandy, Galle, Anuradhapura, Gampaha, Kurunegala, Matara and Jaffna, School Medical Officers implement the school health programme.

At present the school health programme focuses on five major thematic areas. These include:

1. School medical services including counseling
2. Maintenance of healthy school environment
3. Life skills based health education (includes sexual and reproductive health)
4. School community participation
5. Healthy school policies

School medical services include School Medical Inspection (SMI) of children and making relevant referrals. The PHI carries out the initial screening of children and the MOH conducts the medical inspections. 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.

Assessment of nutritional status, detection and correction of health problems, providing immunization and worm treatment, provision of micronutrient supplementations to children are the main activities conducted during the SMI.

The children detected with defects are either treated locally or referred to the closest specialist clinic for necessary management. Thereafter, they are followed up by the PHIs to ensure the correction of defects. In addition, the MOHs organize Behaviour Change Communication programmes aimed at children with a view to promote their health. The behaviour change communication specifically targets sexual and reproductive health, as well as the reduction of risk behaviours for tobacco, alcohol, drugs abuse and HIV/AIDS.

Apart from the SMI, the PHIs conduct a school sanitation survey in the schools annually, the findings of which are used to make the school environment safe and healthy. The necessary recommendations are sent to the school principals for corrective actions.

These officers work closely with officials of the Education Ministry and other Government and Non-Governmental Organizations to provide services such as safe water, sanitary facilities and refuse disposal in the school premises.

In 2016, only 335 out of 340 MOH areas (98.5%) submitted the Quarterly School Health Returns (H 797). The MOHs of Baddegama, Negombo, Gampaha, Minuwangoda and Colombo MC have not sent any quarterly return during 2016. There were 10162 schools and 1,650,370 children to be examined out of the enrolled 4,143,330 children. The SMIs were conducted in 9,579

7.1.1.1 Water, Sanitation and Hygiene

The proper sanitation, hygiene and use of safe water are vital in providing a safe school environment. Ninety eight percentage (98.7%) of schools had adequate toilet facilities. Nearly 85 % of the schools are with a drinking water source. The School Health unit of the Family Health Bureau and Ministry of Education facilitated the International Water Sanitation and Hygiene conference in June 2015.

7.1.1.2 Malnutrition among School Children

During the SMIs students are assessed for their nutritional status. Stunting is assessed in grades 1 and 4 only. In 2016, 9.2% and 6.7% of

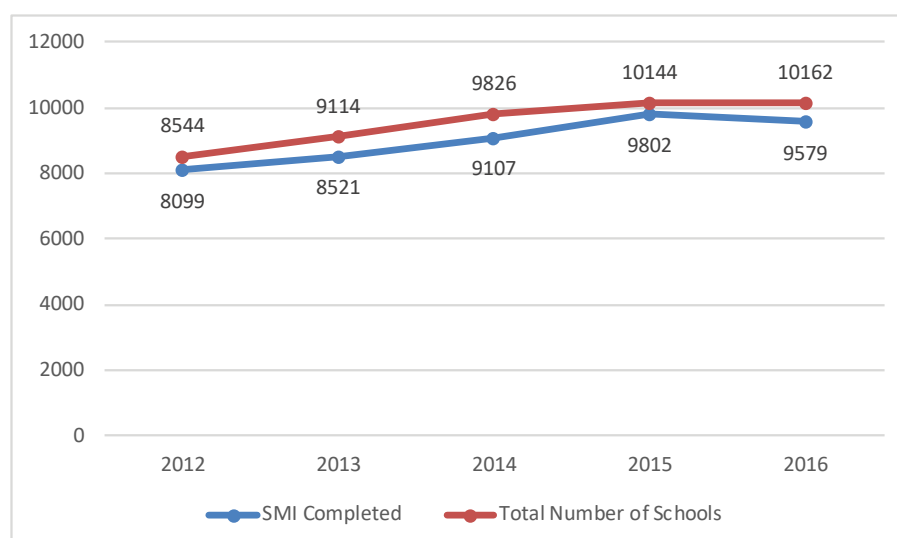


Figure 7.1: Total number of schools versus number of schools where SMI were conducted 2012 to 2016

Source : FHB, H797 2016

schools resulting in an overall school coverage of 94.3%. The coverage of schools with less than 200 and more than 200 students were 92.6% and 87.8% respectively.

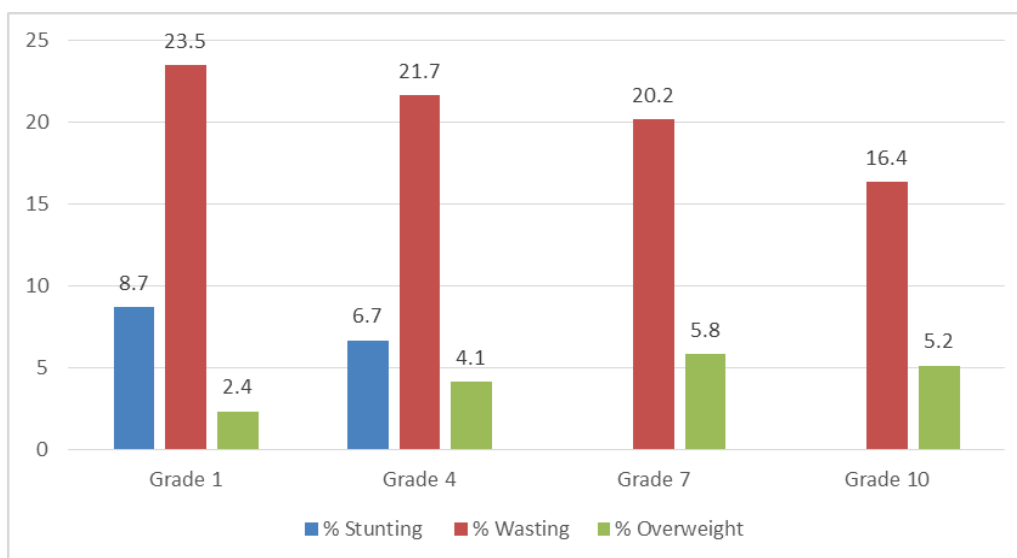
7.1.1 School Health Surveys

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 2016, school health surveys of 95% of the schools had been conducted islandwide.

children in grades 1 and 4 were stunted respectively. Wasting was higher compared to stunting in both grades with 23.5% wasted children in grade 1 and 21.7% wasted children in grade 4.

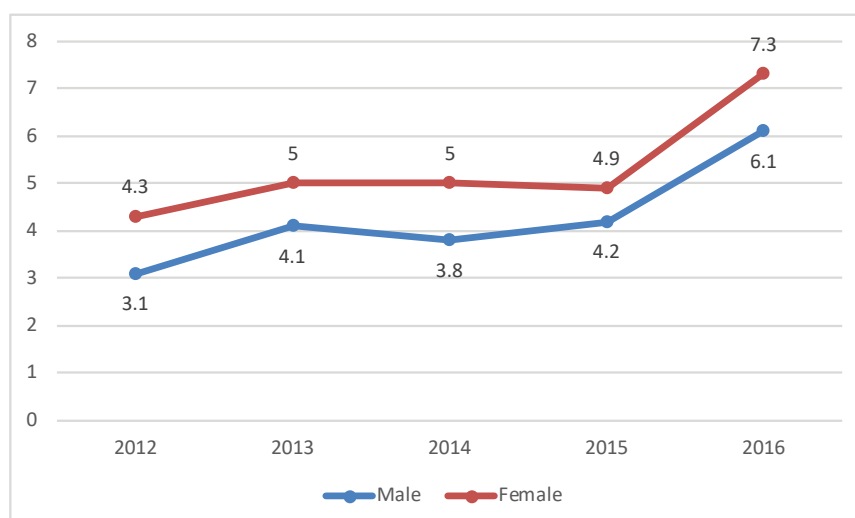
In 2016, 20.2% and 16.4% of children in grades 7 and 10 were wasted respectively. The highest rate of over weight was reported among children in grade 7 (5.8%), while among children in grade 10 it was 5.2% (Figure 7.2).

In addition, the Body Mass Index (BMI) of all students in grade 10 is assessed and the necessary nutritional interventions are done



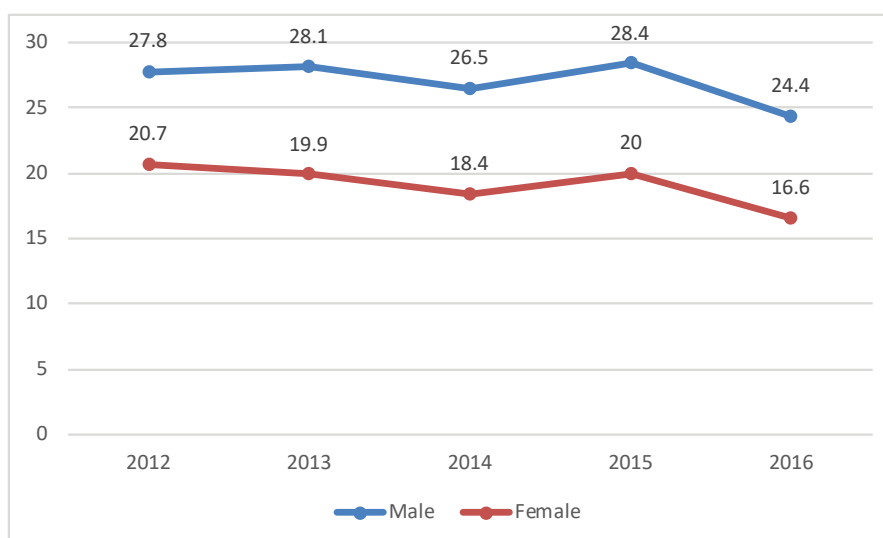
Source : FHB, H797 2016

Figure 7.2: Frequency distribution of school children in different grades with stunting, wasting and overweight in 2016



Source : Nutrition Month 2016

Figure 7.3: frequency distribution of Grade 10 children with an overweight 2012-2016



Source : Nutrition Month 2016

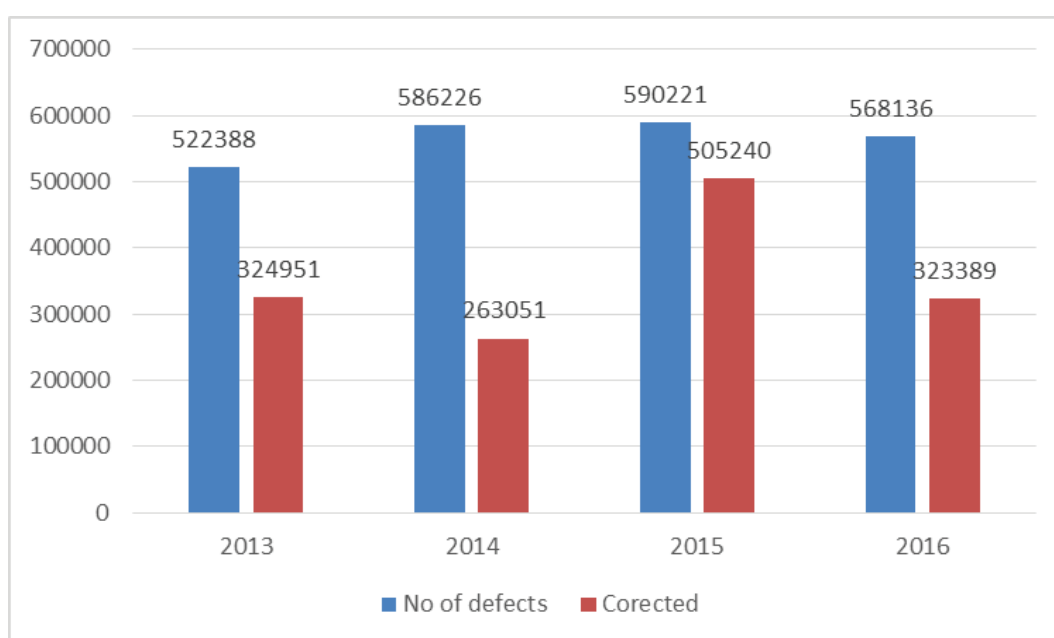
Figure 7.4: Frequency distribution of Grade 10 children with a low BMI 2012- 2016

during the nutrition month each year. During the year 2016, 97,348 (89.5%) 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 7.3 and 7.4 respectively. Low BMI among grade 10 students in 2016 was 20.4%, whereas overweight among grade 10 students in 2016 was 6.7%.

immunization coverage for the aTd vaccine for children in grade 7.

7.1.3 Health promoting school initiative

This programme was launched in 2007 and an appreciable level of effort had to be made to implement the programme at schools. The necessary technical guidance for implementation was provided by the



Source : FHB, H797 2016

Table 7.5: Prevalence of health problems detected at SMIs 2016 (Cases per 1000 students examined)

7.1.1.3 Strengthening follow up of defects

The follow up of children with special needs, suspected heart disease, visual defects & hearing defects has been strengthened. The follow up visits by the PHI for the students identified with correctable defects are closely monitored at the monthly MOH conferences and this has resulted in a significant number of identified defects being corrected. The number of defects that were corrected showed a steady increase from 2013 to 2016 (Figure 7.5).

7.1.2 Immunization

The expanded programme of Immunization (EPI) has performed well with nearly a 100%

School Health Unit of the Family Health Bureau. During 2016, all the schools were evaluated using an evaluation tool developed by experts in the field. An expert team from the School Health unit of the Family

Health Bureau randomly supervised the Gold level schools throughout the country via field visits during the year 2016.

Out of 10162 schools, 3066 schools were identified as Health Promoting Schools (HPS).

HPS were categorized as follows;
 80 – 100 marks (Gold level) – 873 schools
 70 – 79 marks (Silver level) – 1076 schools
 60 – 69 marks (Bronze level) – 1127 schools

Table 7.1: Prevalence of health problems detected at SMIs 2016 (Cases per 1000 students examined)

Health problem	2012	2013	2014	2015	2016
Dental caries	249.0	245.8	228.4	228.7	231.9
Pediculosis	59.5	60.6	56.9	57.8	58.2
Malocclusion	31.1	34.6	34.3	27.9	29.6
Visual defects	25.9	25.8	22.3	27.6	31.0
Fluorosis	17.8	14.9	15.1	13.2	12.8
Heart disease	12.1	12.9	12.7	16.6	16.9
Skin diseases	13.3	13.5	11.9	13.4	16.1
Pallor	16.0	15.1	11.2	13.1	11.0
Gingivitis	4.0	4.0	3.7	3.7	2.8
Asthma	2.7	3.4	2.8	3.01	5.3
Glossitis	6.0	2.6	2.3	1.2	1.4
Learning problems	2.9	2.5	2.0	2.8	2.8
Squint	2.2	2.0	1.8	1.8	1.9
Behavioural problems	1.6	1.8	1.7	2.1	2.2
Speech Defects	1.4	1.6	1.5	1.6	1.6
Scabies	1.9	1.7	1.4	1.6	1.2
ENT Problems	1.3	1.4	1.2	1.4	1.4
Lung disease	1.5	1.0	0.9	0.8	0.5
Hearing defects	1.1	0.8	0.9	0.8	0.8
Xerophthalmia	1.2	2.7	0.8	0.6	0.4
Goitre	1.3	0.6	0.7	0.7	0.6
Lymphadenopathy	1.0	0.7	0.5	0.5	0.3
Orthopaedic problems	0.4	0.4	0.4	0.4	0.5
History of fits	1.0	0.6	0.4	2.7	1.7
Bitot spots	0.7	0.5	0.3	0.2	0.1

Source : FHB, H797 2016

7.1.4 Weekly iron Folate Supplementation (WIFS)

WIFS is an evidence based intervention to prevent anaemia among school children, in which treatment with an anti-helminthic is followed by the weekly treatment with iron, folic acid and vitamin C for a period of six months. The leaflet for WIFS programme targeting primary school children was prepared, printed and distributed throughout the country.

7.1.5 Contribution to National Policies and Guidelines

The school health unit had coordinated six National Coordinating Committee (NCC) meetings on School Health during the year 2016. The National Coordinating Committee (NCC) on School Health of the Ministry of Health is chaired by the Director General of Health Services and functions as the main executive body that takes decisions with regard to the school health activities and providing policy, guideline and technical directives to be taken up at the Steering committee of the Ministry of Education.

School is a place where healthy practices can be rooted into adolescent behavior. Further, considering the fact that a student spends nearly one third of a day at school, the school has been identified as a place where healthy practices such as physical activity and consumption of healthy food, can be practiced among students. The School Health Unit of the Family Health Bureau assisted the Ministry of Education to advocate the healthy canteen policy and issued a circular describing the healthy food items that should be available in a school canteen.

While the road to ensuring healthy school children is not without challenges, particularly in an ever changing environment, the School Health unit remains committed to working with the education and health departments and national organizations to ensure that a continuum of support is avail

able to meet the healthy development needs of all school children.

7.1.6 Some of the activities carried out in 2016 by Family Health Bureau

- i. National Coordinating Committee on School Health chaired by DGHS is the main executive body in the Ministry of Health, which takes the decisions with regard to school health activities. The stake holders from relevant health and education sectors participate at the committee meetings. The committee has 36 members and six committee meetings were organized and conducted successfully in the year 2016.
- ii. Seventeen Life Skills TOT were conducted as three days residential training of trainers' programmes and two, 2 days programmes on ten life skills throughout the country. A total of 760 trainers were trained on these trainings.



iii. Four, three days residential training of trainers programmes on School Medical Inspection done in order to improve the quality of Health Promoting schools programme and trained 160 trainers.



iv. Health Promoting Schools Accreditation Ceremony 2015 and 717 Gold standard level schools were accredited.



v. Preparing health syllabus in coordination with the Ministry of Education- school health unit involved actively for the curriculum reforms on Health subject done during the year 2016.



vi. Conducting Exhibitions- Four exhibitions were conducted by the School Health Unit of FHB. Nearly 10,000 students, teachers and parents gained knowledge from these exhibitions. These exhibitions were arranged in order to improve the knowledge of adolescents, teachers and parents.



vii. Evaluation of Health Promoting schools - National level re assessment of 19 Gold standard Health Promoting schools done island wide and given technical support for further improvement.



viii. Conducted 6 advocacy programmes to the high officials in the Ministry of Education and provincial level high officials



7.2. Care for Adolescents and Youth

Adolescent and Youth Health component was incorporated into the RMNCAYH programme in 2014 which includes the health needs of the 10-24 years age group. PHMs are supposed to register adolescents in her area and provide home visits and identify problems for those who are under care. These activities were initiated few years ago and data collection on adolescent care into the routine RHMIS system was introduced in 2015. As reported through H 509 in 2016, only 14.5% of the adolescents were under the care of PHMs whereas by 2016 it has increased up to 38.1%. Out of under care adolescents, only 15.5% were visited by the PHMs. Among the adolescents under care, 4042 were identified as having problems and out of them 25.9% had been referred for services. Services for adolescent by Public Health staff need to be improved with the closely monitoring.

7.2.1. Some of the activities carried out in 2016 by the Family Health Bureau on adolescent care activities include;

- i. Four TOT programmes for 120 youth leaders/trainers on adolescent and youth health were conducted for youth leaders attached to vocational training centers.
- ii. Three TOT programmes for 90 public health staff were conducted for public health staff attached to MOHs



iii. Three Technical Advisory Committee meetings on Young person's Health were conducted under the chairmanship of Director General Health Services TAC, was conducted to provide technical expertise on matters related to out of school adolescents and young persons.

iv. Counseling programme for 30 staff members attached to Yowun Piyasa Programme was conducted to build the capacity on counseling techniques among AYFHS staff.

v. Commenced to collect articles to develop Yowun Piyasa web site. With the objective of giving relevant timely needed health information for youth a web site was planned to develop.

vi. Short programme review was done on Youth Friendly Health services in Kandy/Ragama/Kurunagala and AYFHS centers were assessed.

vii. National youth programme was reviewed with the international expert



viii. Yowun Piyasa centers were strengthen by giving furniture and equipment to improve the quality service provision, centers were given necessary equipment.

ix. Field supervisions done in Yowun Piyasa centers. Supervision done to evaluate the service provision in centers



x. Developed a curriculum for vocational training centers. To incorporate the ASRH into the vocational training center's curriculum to provide ASRH knowledge to students in training centers

xi. Launching of national youth health survey report.v



CHAPTER 08

GENDER AND WOMENS' HEALTH

The Government of Sri Lanka was a signatory to the Program of Action adopted at the International Conference on Population and Development (ICPD) in Cairo in 1994. The concept of Reproductive Health (RH) has been introduced to the Maternal and Child Health programme since then and the programme was reorganized to address gender equity and equality in RH and specific reproductive health issues of women and their partners throughout the life course and women with special needs.

8.1 WELL WOMAN CLINIC SERVICES

The concept of Well-Woman Clinic (WWC) was introduced in 1996, and Sri Lanka stands as a pilot country in the whole of South Asia to successfully implement WWC at primary health care level with the aim of improving the health status of women. Family Health Bureau is the focal point at the national level in the Ministry of Health for WWC. In its implementation, the Family Health Bureau works very closely with the National Cancer Control programme, Sri Lanka College of Pathologists and Sri Lanka College of Obstetricians and Gynaecologists. Over the last two decades the number of WWCs have significantly risen to cover the whole country. WWCs are mostly based at MOH offices. These clinics provide screening services for women against three non-communicable diseases, (obesity, Hypertension, Diabetes Mellitus) three cancers (Breast, Cervical, Thyroid gland).

In addition WWCs provide family planning services health education controlling for menopause, post menopause problems.

The main target groups for the WWC are woman aged 35 years and 45 years.

The Public Health Midwives (PHM) identifies women aged 35 years and 45 years from the eligible family registers maintained at the office and invites them during the home visits to attend the WWCs. An invitation from the MOH is also sent to each woman as she attains the age of 35 years, reminding her to visit the WWC. Women who are identified with problems are referred to appropriate centres for further management and they are followed up in the field by the area PHM.

Table 8.2 Shows the number of women attending WWCs by age groups. The attendance of 35 year age cohort of women to the WWCs in 2016 was 111,798 (52.8% of the estimated number of 35 years old woman).

In order to increase the coverage of WWC services, an annual award ceremony for best performance was initiated in 2011. In 2010, only 3 MOH areas had a coverage of over 50% for the 35-year cohort of women where as by 2016 there were 143 MOH areas with a 60% coverage. Districts of Matale, Nuwara Eliya, Hambantota, Mannar, Ampara, Anuradhapura, Polonnaruwa, Monaragala and

Table 8.1: Number of first visits to WWCs from 2012 to 2016 (by age groups)

Indicator	2012	2013	2014	2015	2016
Under 35 Years	10884	8585	8585	15066	5412
35 Years	62833	73359	74871	94089	111798
Above 35 Years	61872	60054	55620	52675	50411
Total	135589	141998	139006	161830	167621

Source : FHB, RHMIS 2016

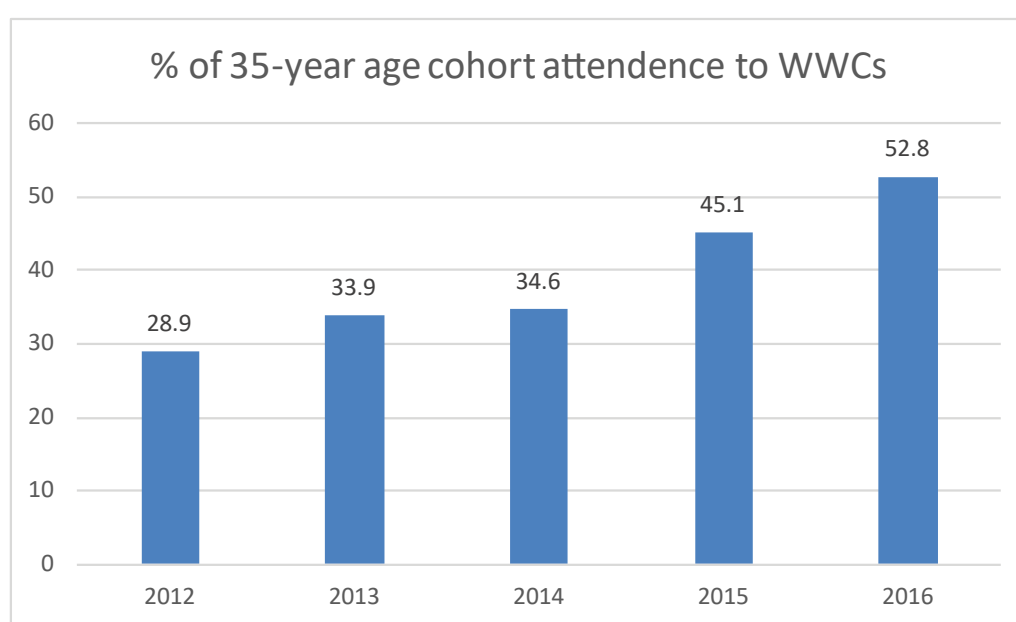
Kegalle, had an overall coverage of over 60% in 2016 and 40 full time cytoscreeners were engaged in screening pap smears. In 2016, cyto screeners in 36 hospital laboratories screened a total of 176704 pap smears. In addition, Family Health Bureau procured and supplied medical equipment (such as microscopes), surgical items (such as vaginal speculums), consumables for fixing and staining

pap smears (e.g. Alcohol, Xylene, DPX mountant, EA 50, Orange G etc.) and all stationary required for the WWC, to hospital labs and MOH offices. An inventory management software; 'CHANNEL' (UNFPA) was installed in all the computers in the Gender & Women's Health Unit and pilot tested for functionality. From 2017, Well Woman Clinic supplies, including stationary will be issued through

Table 8.2: Clinic attendance and morbidities detected at Well Woman Clinics from 2015 to 2016

	2014		2015		2016	
	No	%	No	%	No	%
Number of 35 year cohort attending WWC clinics	74,871	34.6	94,089	45.1	111,798	52.8
Cervical smears reported as high and low grade lesions	249	0.2	505	0.3	665	0.5
Cervical smears reported as malignant (Carcinoma)	35	0.03	32	0.02	44	0.03
Cervical smears reported HPV	202	0.2	229	0.2	237	0.2
Breast abnormalities detected	1965	1.5	2652	1.5	2697	1.6
Diabetes Mellitus detected	2173	1.8	2780	1.6	3741	2.2
Hypertension detected	4576	3.6	5899	3.4	6374	3.8

Source : FHB, RHMIS 2016



Source : FHB, RHMIS 2016

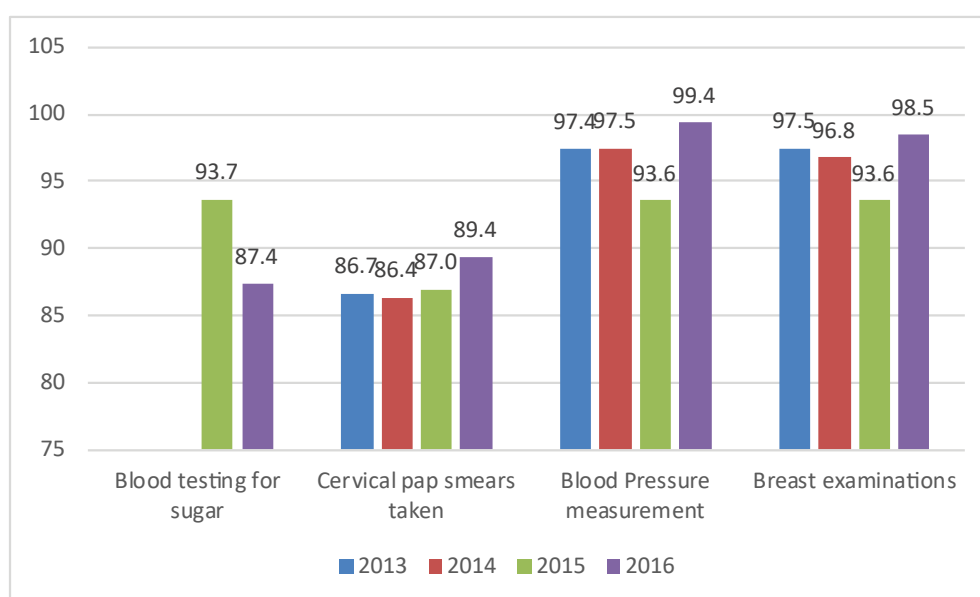
Figure 8.1: Percentage coverage of women in 35 years cohort attending WWC clinics from 2012 to 2016.

Figure 8.2 shows the percentages of women who are subjected to different types of examinations when they attended WWCs.

In 2016, More than 98% of women attending WWCs were screened for hypertension and breast problems. Only 89% of women attending WWC had Pap smears were taken. Urine /Blood sugar testing has been carried out in 87.4% of attendees and among them 2.2% were identified as having diabetes mellitus. Hypertension was identified among 3.8% of women.

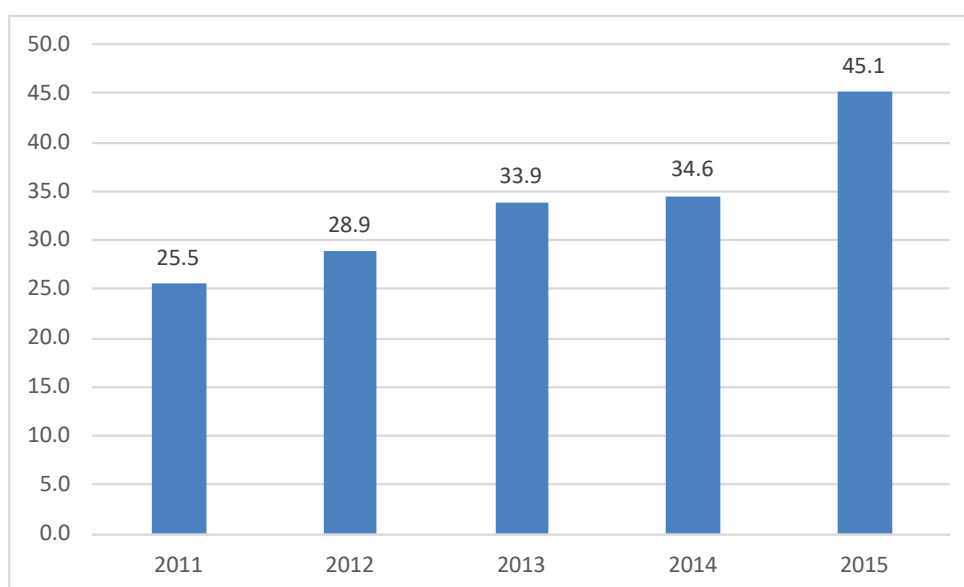
8.1.1 Special activities and achievements in 2016 related to Well Women Clinic programme.

i. Information on the awareness by ever-married women about the WWC, services was collected through Sri Lanka Demographic and Health Survey 2016.



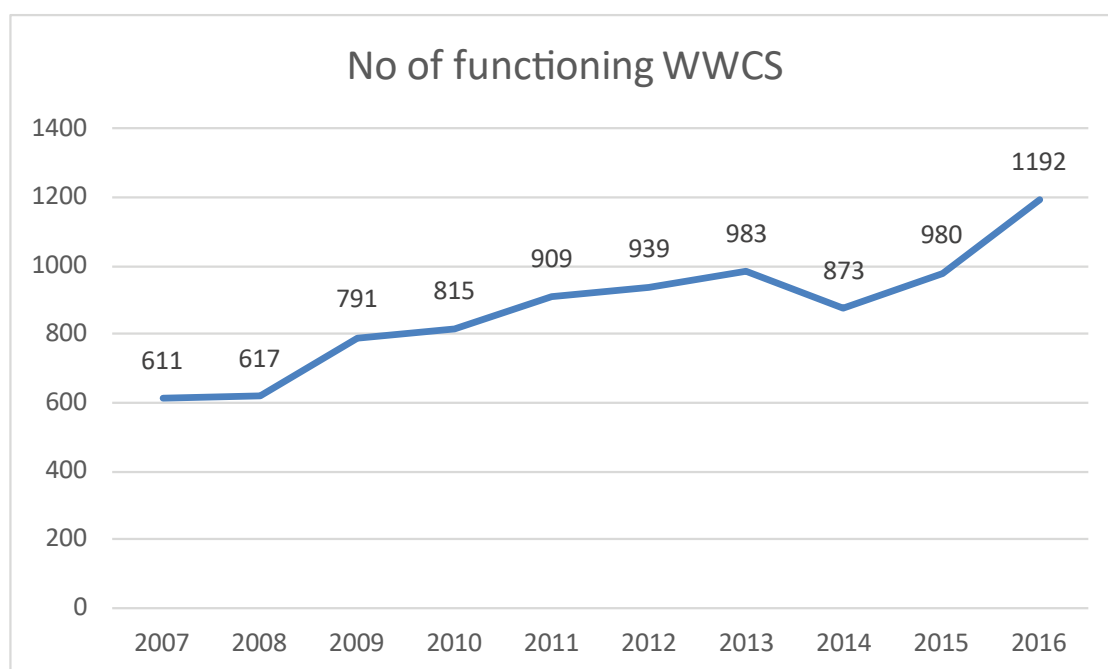
Source : FHB, RHMIS 2016

Figure 8.2 : Percentage of women screened for different non-communicable diseases at WWC in 2016



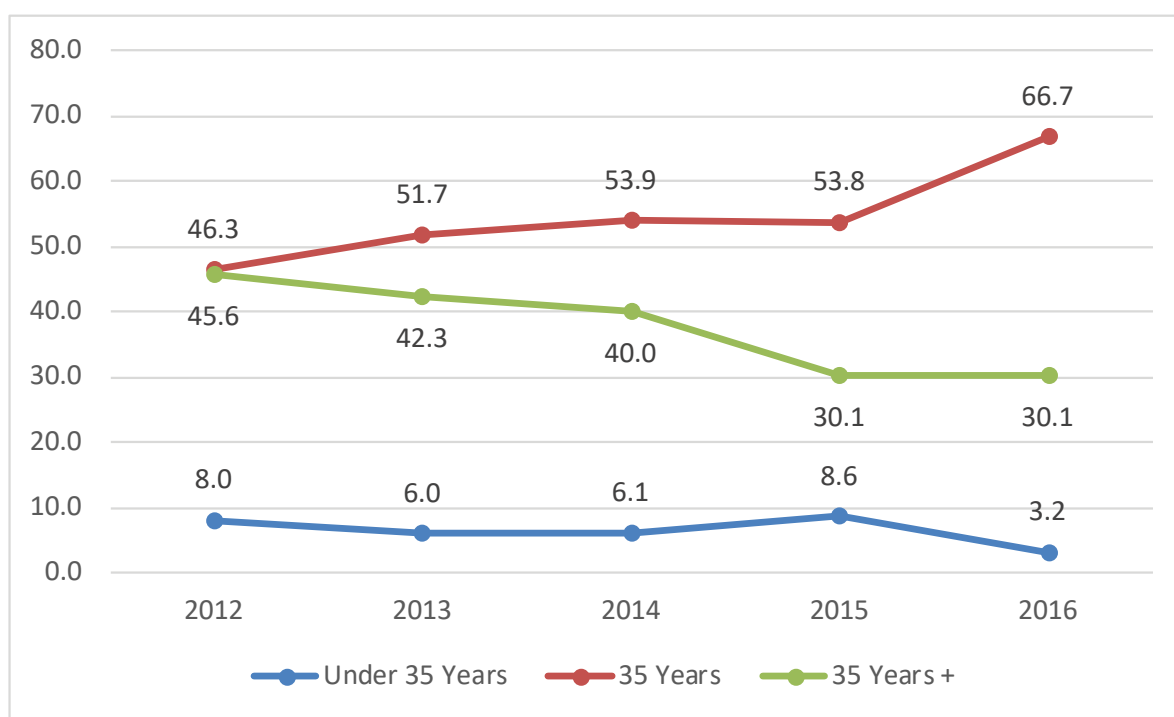
Source : FHB, RHMIS 2016

Figure 8.3 : Percentage of 35 year age cohort screened with Pap Smear in WWCs since 2011



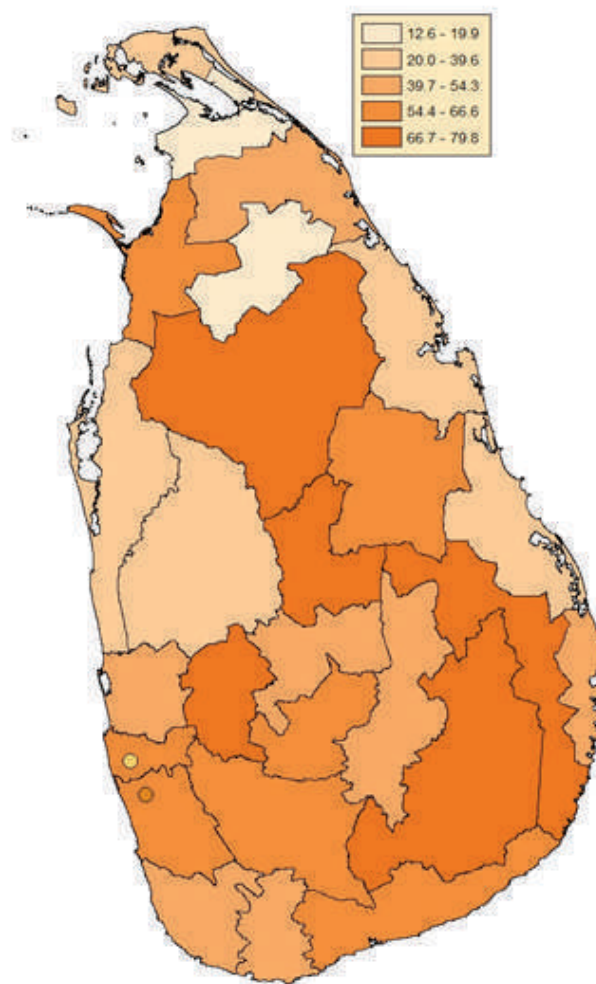
Source : FHB, RHMIS 2016

Figure 8.4 : Number of WWC from 2007 to 2016



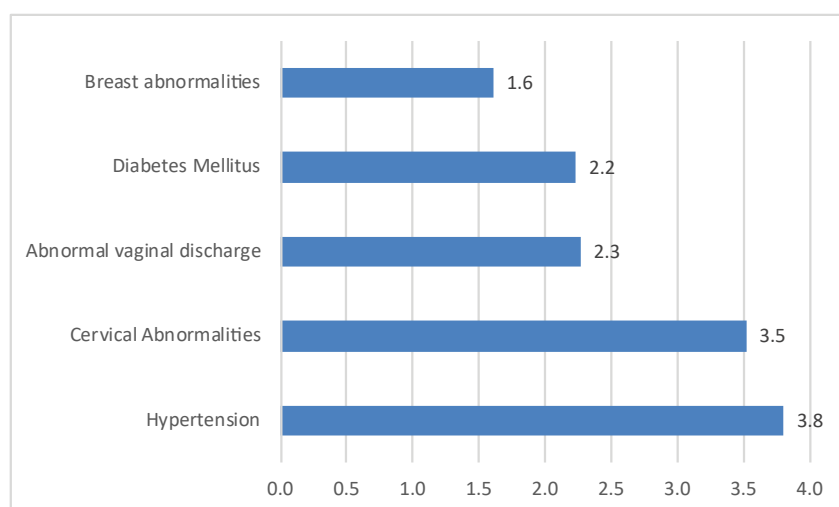
Source : FHB, RHMIS 2016

Figure 8.5 : Percentage of women attending WWCs in different age groups from 2012 to 2016



Source : FHB, RHMIS 2016

Figure 8.6 : Percentage of 35 year age cohort subjected to pap smear testing 2016



Source : FHB, RHMIS 2016

Figure 8.7 : Percentage of women with positive screening 2016



ii. With the main objective of improving the quality of cervical cancer screening, which is a vital component of WWC, a 10 days formal training programme and 21 days informal trainings for newly appointed cytoscreeners on cervical cytoscreening was conducted. The Cyto screeners trainings were conducted by Family Health Bureau in collaboration with Sri Lanka College of Pathologists.



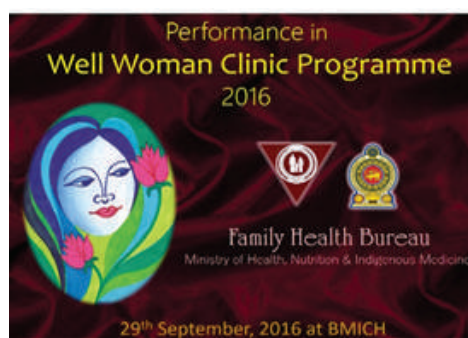
iii. In view of improving the quality of the on WWC, supervisory visits to carried out in selected MOH areas in Anuradhapura, Ampara, Monaragala, Kegalle & Colombo districts. WWC district level reviews were done in Trincomalee and Colombo.



iv. Consultative meetings were held to develop “Positive follow up register” of MOH level



v. The sixth annual awards ceremony on best performance in WWC programme was held, in order to motivate and encourage all the categories of staff in both public health and laboratory services related to WWC services. The share-holders of the success achievements of the WWC programme of 2015 were awarded at this ceremony. The districts of Ampara, Kegalle and Matale won the first, second and third places for the highest coverage of attendance of 35 year cohort to WWC services Many MOH areas were awarded a place from first to tenth for the highest coverage of attendance of 35 year cohort of women for WWC services.





8.2 Health Sector Response to Gender Based Violence

The distinct roles and behaviours of men and women in a given culture, dictated by that culture's gender norms and values, give rise to gender differences. Not all such differences between men and women imply inequity, however some give rise to gender inequalities.

Yet, gender norms and values are not fixed. They evolve over time, vary substantially from place to place, and are subjected to change. Thus, the poor health consequences resulting from gender differences and gender inequalities can be changed. The knowledge regarding the presence of gender differences and inequalities, effect of those on individuals' health status and, strategies to minimize gender inequalities through healthcare settings among healthcare professionals is important to change the prevailing norms and values.

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 health issue with a wide range of consequences to the survivors creating a negative impact on children, and acting as an inhibiting factor towards the family wellbeing. The World Health Organization in a world report in 2004 has stated that GBV is a major cause of disability and death among women, and that every one-in-third woman all over the world suffers from intimate partner violence.

Although this is a common problem, it is also considered a hidden problem as most of the women 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 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 mean of achieving control and eventually have a greater chance of being a perpetrator. On the other hand girls learn to accept violence as an inevitable helplessness and have a higher chance of being survivors in adult life.

It is also well recognized that women who present themselves to formal service delivery points such as health institutions or police posts are the minority, while many more suffer in silence and do not seek assistance due to the stigma and other social constraints related to gender.

Health system and its providers are strategically placed and are very likely to come across these survivors and have a unique opportunity to provide solace and assistance to them because :

- Women are more likely to visit the health facilities more often than men for other RH service needs, such as maternity care, contraceptive services or immunization services.
- Health care providers are more likely to be entrusted with confidential and sensitive information.
- They are more likely to recognize some injuries, occult and hidden instances of abuse even when it is not declared by the survivor
- Health facilities are spread cross cutting geographical and all social boundaries which links up to a wide network of service points

Therefore, health sector response within a country is often the initial, and a crucial response from governments. As such, all countries in the region, including Sri Lanka, have addressed this issue through the health sector to a varying extent.

The health sector in Sri Lanka has responded favourably by addressing GBV in the areas of prevention as well as in the response to the survivors, in an effective manner, cross cutting the health sector. Gender and Women's Health Unit of the Family Health Bureau (FHB) is the nodal agency at national level responsible for addressing GBV in health sector. The programmes implemented by Family Health Bureau include programmes which focus mainly on prevention of GBV, programmes concentrating on prevention and response to survivors of GBV and programmes centered mainly on provision of care for survivors of GBV.

i. The package for newly married couples is a newly added such programme, which focuses mainly on prevention. One main component of this package is sensitization of the new couples on some important topics which would enable them to have a good marital life. This sensitization would empower the couple to improve their marital relationship without violence which would improve the health and wellbeing of the couple and the family.

ii. Capacity building of curative and preventive health staff is also done at basic, in-service and post graduate level on GBV. Inclusion of a module on GBV in the curriculum of Medical Undergraduates on the responsibilities of a Medical Officer in responding to Gender Based Violence is one such programme.

iii. Setting up of Gender Based Violence Care Centres named "Mithuru Piyasa/ Natpu Nilayam" at hospitals, which are dedicated to provide emotional and medical support to survivors of GBV is designed to respond to survivors in an effective manner. They are operated by the hospital staff working in the out patient's department. The staff at Mithuru Piyasa are given an extensive training by FHB prior to establishment of "Mithuru Piyasa/ Natpu Nilayam" centres.

Considering the importance of the focus area, the level and characteristics of domestic violence or violence perpetrated by an intimate partner among ever married women in Sri Lanka, a module with questions on women's experience of domestic violence in the last 12 months and help seeking behavior was included in the 2016 SLDHS questionnaire for the first time in Sri Lanka. All ever-married women were asked about the organizations such as "Mithuru Piyasa", MOH offices, Public Health Midwives etc. which provide services to combat violence against women.

Table 8.3: List of Mithuru Piyasa centres by the end of 2016

1) Army Hospital- Narahenpita	24) Kegalle- Teching Hospital
2) Ashraff Memorial Hospital- Kalmunai	25) Kethumathie Maternity Hospital
3) Avissawella- Base Hospital	26) Kilinochchi- Base Hospital
4) Akkareipattu- Base Hospital	27) Kiribathgoda- Base Hospital
5) Badulla- Provincial General Hospital	28) Mahamodara- Teaching Hospital
6) Balangoda- Base Hospital	29) Marawila- Base Hospital
7) Bandarawela- Divisional Hospital	30) Matara- General Hospital
8) Batticaloa- Teaching hospital	31) Meerigama- Base Hospital
9) Castle Street Hospital For Women	32) Nawalapitiya- District General Hospital
10) De .Soysa Hospital For Women	33) Nuwara Eliya- General Hospital
11) Dickoya- District General Hospital	34) Peradeniya- Teaching Hospital
12) Diyathalawa- Base Hospital	35) Pimbura- Base Hospital
13) Elpitiya- Base Hospital	36) Ragama- Teaching Hospital
14) Embilipitiya- Base Hospital	37) Rathnapura- Provincial General Hospital
15) Family Health Bureau	38) Rikillagaskada- Base Hospital
16) Base Hospital- Gampola	39) Thalangama- Divisional Hospital
17) Hambanthota- General Hospital	40) Thambuththegama- Base Hospital
18) Horana- Base Hospital	41) Tissamaharama- Base Hospital
19) Jayawardanepura- General Hospital	42) Trincomalee- General Hospital
20) Kalmunai (North)- Base Hospital	43) Valachchenai- Base Hospital
21) Kalubowila- Teaching Hospital	44) Vavuniya- District General Hospital
22) Kaluthara- General Hospital	45) Welimada- Base Hospital
23) Kandy- Teaching Hospital	

Source : FHB, RHMIS 2016

8.3 Some of the special activities carried out in 2016 to improve the health sector response to GBV

In 2016, the following activities were done by FHB to strengthen the health sector response to Gender Based Violence.

i. Prior to establishment of “Mithuru Piyasa/ Natpu Nilayam”centres in the hospitals, the staff members of the the hospitals were trained for 04 days on prevention and man

agement of GBV and Mithuru Piyasa. During the year 2016, 03 extensive and comprehensive training programmes were conducted covering 14 hospitals in the country.

DGH-Nawalapitiya, BH- Gampola,
BH-Theldeniya
BH-Diyathalawa, DH-Bandarawela &
BH-Welimada
DGH- Polonnaruwa & other hospitals
in the polonnaruwa district

Table 8.4: Services provided by Mithuru Piyasa centres from 2012 - 2016

Year	Number of mithuru piyasa centres	Total number of new survivors seeking care over the year 2015	Total number of subsequent consultation held with the survivors	Total number of consultation held with the family members of survivors	Total number of consultation held with the perpetrators	Total number of consultations
2011	06	447	230	232	101	1010
2012	08	870	355	432	249	1906
2013	16	1722	726	827	471	3746
2014	20	2949	1360	1309	717	6335
2015	31	4670	2683	2135	1261	10749
2016	45	7577	4131	3077	2243	17028

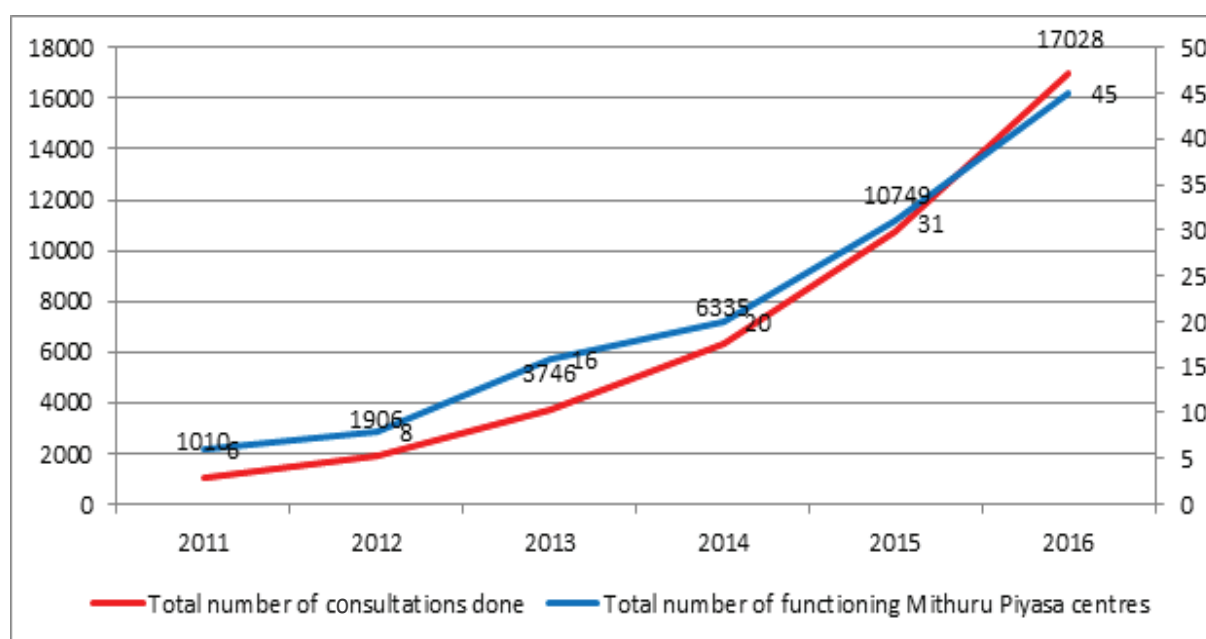


Figure 8.8: Number of functioning Mithuru Piyasa Centres & consultations



ii. In order to strengthen the health sector response to GBV in Sri Lanka, 06 “Mithuru Piyasa/ Natpu Nilayam” centres were launched in Army Hospital-Narahenpita, Base Hospital-Horana, Base Hospital- Pimburra, Base Hospital-Elpitiya, Teaching Hospital-Gampola and Base Hospital-Welimada

iii. Four days training programme to establish a National Resource Pool on GBV was conducted with the aim of expanding the pool of trainers in GBV



4. Two experience sharing work shops were conducted for the staff of “Mithuru Piyasa/ Natpu Nilayam” covering all the centres in the country

Workshop in Colombo – Covered the centers in Western, Uva, Sabaragamuwa, Eastern, Northern & Southern provinces

Workshop in Kandy – Centers in Central, North Central, & North Western provinces



The main aim was to share and learn from the experiences of different “Mithuru Piyasa/ Natpu Nilayam” centres in the country and to give an opportunity to members of the staff of the centres to establish the networking and linkage with each other with the final goal of strengthening the health sector response to GBV in Sri Lanka.

5. Refresher trainings for the staff of “Mithuru Piyasa/ Natpu Nilayam” were conducted. Covering all the centres in the country 02 trainings were held in Colombo and Kandy. The expected outcome was to prevent and manage GBV in Sri Lanka in an efficient manner through effective implementation of the guideline on “Mithuru Piyasa/ Natpu Nilayam” and through capacity building of the staff involved in the service provision.



6. Four day programme for health officials from Timor- Leste to share experiences on addressing GBV in the health sector in Sri Lanka at Family Health Bureau, Ministry of Health, Nutrition & Indigenous Medicine, Ministry of Womens' & Child Affairs



7. Mithuru Piyasa supervisory visits to Trincomalee, Batticaloa, Kalmunai South & North, Kandy, Nuwara-Eliya, Rikillagaskada, Dikoya, Rathnapura, Balangoda, Awissawella, Kiribathgoda etc...



CHAPTER 09

ORAL HEALTH SERVICES

Family Health Programme is a collection of packages and interventions to promote the health of the families with special emphasis on pregnant women and children. Oral Health Unit (OHU) of the Family Health Bureau is responsible for provision of essential oral health care services through existing maternal and child health programme. This mainly includes School Dental programme and oral health programme for the pregnant women.

The outline of the activities carried out by the unit during the year 2016 is as follows;

9.1 School Dental Service

The main objective of the School Dental service is to reduce morbidity due to common oral diseases in preschool and school children between the age of 3y-13y. The services are delivered by 383 School Dental Therapists (SDTT) who work in School Dental Clinics (SDCC). Their target group includes students of grades 1, 4 & 7 and in schools where total number of students are less than 200, all the children below the age of 13 years.

Stated below is the summary of annual performance of School Dental Services submitted by SDTT for the year 2016.

9.1.1 Work performances of the School dental Service – 2016

All the School Dental Therapists around the country collectively have screened 73% of the total target group. Among screened children 51% had completed their treatments. However, out of screened population 22% identified as having dental problems, have not completed treatment. This is a drawback in the system which need to be addressed in future.

There are vacant school dental clinics in many districts without School Dental Therapists. Most of these vacant areas are covered up by relief duty and by mobile clinics. Though the norm for SDT population ratio is 1:2000 currently it is 1:3163 which is approximately 1.5 times. Hence, this coverage was achieved totally due to the high commitment of SDTs.

Table 9.1: Annual work performance of the School Dental Service

Year	No. of SDT	No. of students per SDT	% of caries				% of calculus			% of children screened ²	Coverage percentage ³
			Gr 1	Gr4	Gr4 ¹	Gr7 ¹	Gr 1	Gr4	Gr7		
2014	379	3733	58%	57%	7%	18%	2%	12%	19%	78%	69%
2015	383	3035	54%	55%	9%	19%	2%	13%	18%	75%	66%
2016	382	3163	56%	57%	9%	18%	1%	14%	18%	73%	63%

¹Permanent teeth

² Percentage of children screened out of the target group

³ Percentage of children who are healthy or whose treatment has been completed out of the screened group

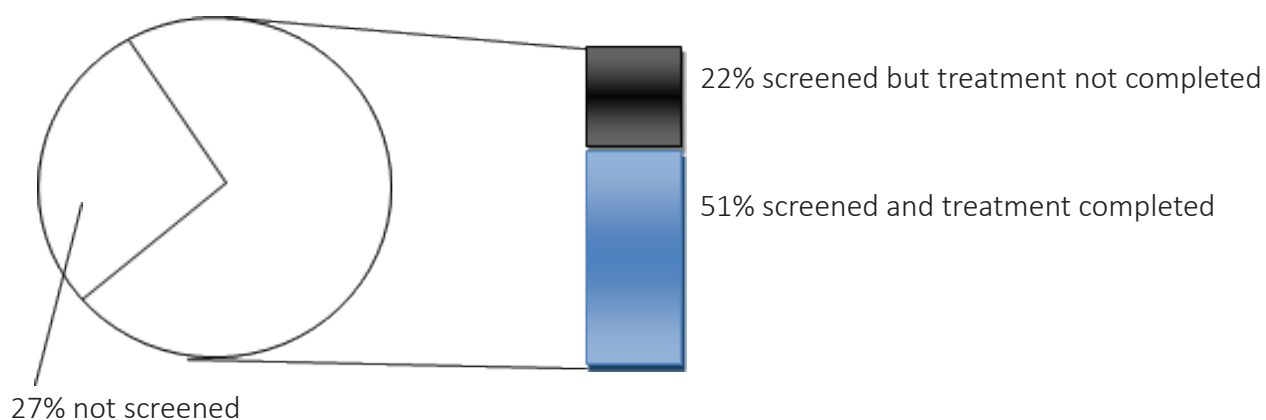


Figure 9.1: Status of oral health screening

9.2 Other activities conducted by the Oral Health Unit, FHB

- i. In-service training programmes were conducted for all the School Dental Therapists in all Districts. This was successfully conducted in 27 health regions with over 95% attendance.
- ii. OHU carried out training of school dental clinic assistants in 4 provinces. Total number of participants were 191.
- iii. School Dental Service annual review was conducted. It was a two day programme, with the participation of all Regional Dental Surgeons, Supervising School Dental Therapists representing all 27 health regions.
- iv. Preschool teacher training programme on prevention of common oral diseases was conducted in the Gampaha District.
- v. Oral health unit of the Family Health Bureau with the support and coordination of Deputy Director General Dental Services was able to secure 250 million rupees to renovate and construct new school dental clinics from the national budget for 2016.
- vi. In 2016 OHU was able to purchase 37 School Dental Chairs and 33 micro-motors which were distributed among school dental clinics throughout the country.

CHAPTER 10

MONITORING, SUPERVISION AND RESEARCH

10.1 MONITORING

Monitoring is a routine process of data collection and measurement of progress towards programme objectives. Monitoring of overall RMNCAYH programme is vital as to understand clearly about the national programme progress, whether the resources are used appropriately, activities are happening as per plan, achieving the set objectives and factors contributing for good performers or not so good performances. It also helps to identify how we could make the programme more efficient and effective.

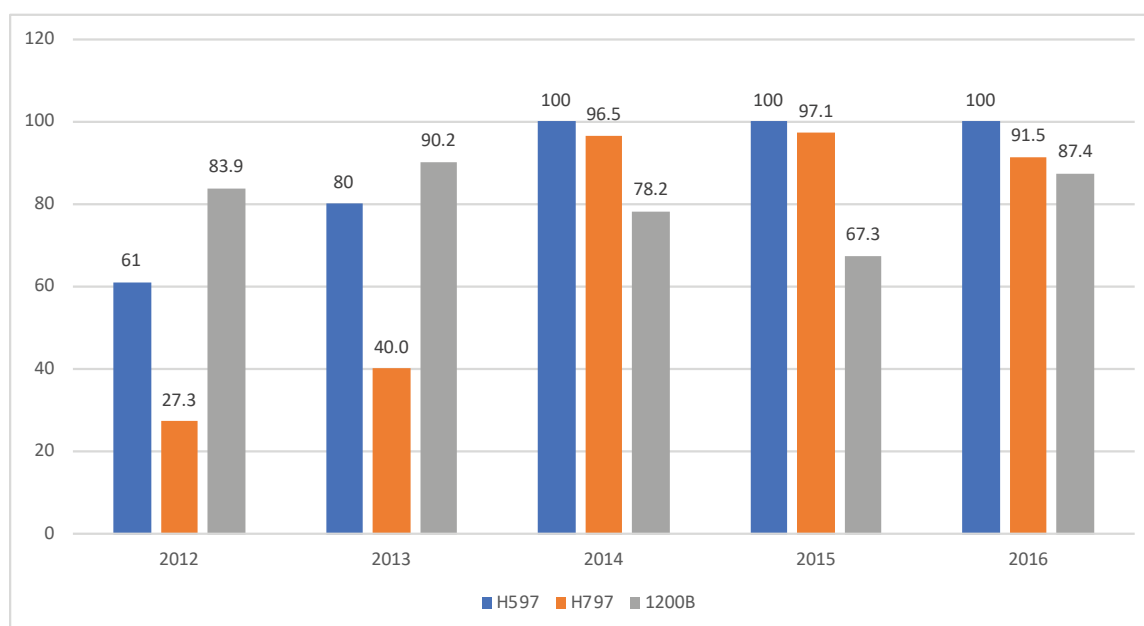
In programme monitoring, data is collected on regular basis or in periodic basis to measure performance indicators. MCH data, school health data and FP new acceptor data is collected by FHB quarterly from all MOH offices in order to monitor the national programme.

In 2016, H 509 has been received from all MOH areas in the country. School Health Returns have been received from 99% of MOH areas in first quarter, 98% in second quarter, 94% in third quarter and 95% in fourth quarter.

Family planning new acceptor data has been received 39.6% in first quarter, 74.6% in second quarter, 81.1% in third quarter and 74% in fourth quarter (Figure 10.1).

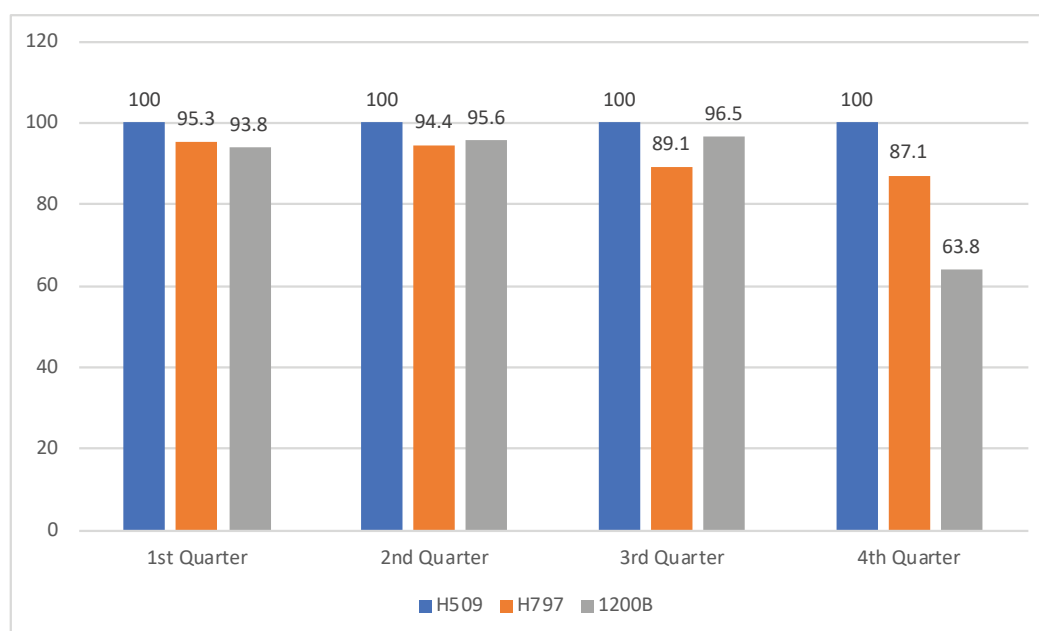
Each return is scrutinized for completeness and accuracy of data at Monitoring and Evaluation Unit at the FHB. Discrepancies are verified by contacting the MOHs over the phone and in some cases the returns were sent back to the respective MOHs to revise and resubmit. At FHB, these returns are entered into Epi data based data entry format. The analysis is carried out using SPSS version 21 software. Data entry validation is done by re-entering 5% of the returns.

Quarterly feed backs were sent to all RDHS on timeliness and completeness of returns received. However, completeness and timeliness of returns received by the FHB has to be closely followed up and need improvement from next year.



Source : FHB, RHMIS 2016

Figure 10.1: Status of Returns received from 2011 to 2016



Source : FHB, RHMIS 2016

Figure 10.2: Status of the Returns received in 2016

eRHMIS Development

In order to improve the quality of data including accuracy, completeness and timeliness RHMIS should be digitalized. Development of software for digitalizing was initiated by the FHB and it was decided to customize the DHIS2 platform for this purpose. Following customization of this open source software for Sri Lankan setting, pilot testing of the new web based system was done in Kurunegala, Kalutara and Puttlam districts. It was decided to scaleup implementation this system by first quarter of 2017 to cover the whole country and to shift from paper based system to web based system in a phased out manner.



National MCH Reviews

RMNCAYH programme is reviewed periodical-ly at national and district levels to identify and improve the deficiencies and to assess whether the program is producing the results as prioritized in the strategic and operational plans. Family Health Bureau conducted national MCH reviews in all twenty-six districts in 2016. Each district was visited by a team led by a Consultant Community Physician.



iii. Annual MOMCH reviews

Bi annual MOMCH reviews were conducted in 2016 in Hambantota and Colombo. Field supervisions were carried out in Districts of Hambantota covering all MOH areas following the MOMCH review with the participation of all MOMCHs and Provincial Consultant Community Physicians. All MOH offices were supervised and it was highlighted that the maternal, intranatal and child care provisions were satisfactory while the school health, adolescent health and family planning services needed improvement in the district.



iv. RSPHNO workshop

Three-day workshop for the Regional Supervising Public Health Nursing Officers (RSPHNOs) was conducted in Kegalle district followed by a field supervision covering all MOH areas in the district.

v. Annual Nutrition Review

Annual Nutrition Review was conducted in November 2016 to review nutritional indicators in all districts. MOMCHs presented their district nutrition data on maternal, under five, adolescent, school children and activities carried out during nutrition month of 2016.

vi. Survey Statistical Officers (SSO) workshop

Three-day workshop was conducted for the Survey Statistical Officers (SSO) attached to the RDHS offices in order to improve the quality of RMNCAH data reported from the districts.

10.2. Supervisions

Supervision from each supervising categories of public health staff was monitored by the Family Health Bureau using the information received from the format C on supervisions. Format C have been received from 275 MOH offices out of all 340 MOH offices in 2016. As reported in H 509, there were 626 MOOH/A-MOOH serving in the field. According to the return on supervision, they have done a total of 22,547 supervisions of expected 44,496 supervisions to be done annually. Therefore, out of expected supervisions, only 50.7% have been covered by the MOOH/AMOOH. However, reports have been submitted only for 5150 supervisions giving only 22.8% of completed supervisions.

Number of supervision to be done by 232 PHNSS were 16,704 for the year. Only 11,968 have been carried out during the year giving rise to a percentage of 71.6%. Reports have been submitted for only 9493 with a percentage of 56.8% of completed supervisions.

Number of supervisions to be carried out by 308 SPHMM were 36,960 of which only 20,669 were reported to be carried out. This gives rise to a percentage of 55.9%. Reports have been submitted for only 15,782 with a 76.4 % of completed supervisions.

MOMCHs are expected to send their monthly MOMCH returns to FHB. During 2016, FHB has received 215/360 (59.7%) number of returns from MOOMCH. The field visits revealed that the reports submitted were far less than the supervisions reported in the format C. Overall, supervisions are inadequate and need close monitoring at Divisional level, District level, Provincial level and at National level.



10.2 RESEARCH

Family Health Bureau conducted several operational researches in 2016 on MCH care and service delivery. This included a national research done to assess the coverage of management of severe acute malnutrition and assess the availability of service provision in Sri Lanka on nutritional rehabilitation programme for severe acute malnutrition among 6 to 59 months children in secondary and tertiary level hospitals in 2016.

Research and Development unit also conducted one day training programmes for field level health care workers on basic research methodology

10.2.1 coverage of management of severe acute malnutrition and assess the availability of service provision in Sri Lanka on nutritional rehabilitation programme for severe acute malnutrition among 6 to 59 months children in secondary and tertiary level hospitals in 2016.

This study done to describe the coverage and adherence to practices in the management of Severe Acute Malnutrition in 6 to 59 months old children in Sri Lanka and to assess the current availability of services and service provision on Nutrition Rehabilitation Programme(NRP) for children under 5 years in Sri Lanka in secondary and tertiary level hospitals in 2016. Following key findings were observed.

Study was conducted in all health districts of the country and response rate was 98.6% (n=801).

There were two types of children seen at the hospital (N= 185). New referrals 96 (51.9%) and the children who were already on hospital follow up at the time of survey 89 (48.1%). Among them eighty eight were prescribed on BP 100 therapy at least once during the last 6 months (47.6% of children seen at the hospital clinic) and eighteen were on BP 100 for more than 3 months (20.4% of children who were prescribed). Only 84 mothers had given BP 100 to their children (95.4%). 27 children had improved with the therapy (30.7%).

Effectiveness of the referral pathway for SAM children is 13.4% (95% CI 10.9 to 16.9). Accessibility to the intervention (who had reached the hospital) was 23.1 % (95% CI 20.2 to 26.2%) while intervention coverage (provided with BP 100 therapy) was 10.9% (95% CI 8.9 to 13.4%). The effectiveness of intervention (who were successful after receiving BP 100 therapy) was 30.7% (95% CI 21.3 to 41.4%).

Ninety percent (N=81) of hospitals have ever used the therapeutic food BP 100. Out of the hospitals that have ever used BP 100, 82%(N=67) of hospitals used BP 100 at the time of study. In 81.3%(N=66) hospitals drug stores were used for stock maintenance. Forty two percent (N=34) hospitals maintain a separate register for SAM children. In 92.6%(N=75) of hospitals, weight of SAM children is measured at first visit. In 86%(N=70) of hospitals consultant or the

medical officer(MO) regularly examines SAM children at the clinics. In 59%(N=48) hospitals stock out situation was experienced. In 18.5% (N=15) hospitals there was a system to track defaulted SAM children in hospitals.

Finally followings were recommended by above study

1. Therapeutic feeding services should be strengthened in all hospitals.
2. Need to improve the documentation on BP 100 management at hospital setting.
3. Tracking of defaulters of SAM children was poor and is recommended to have a proper system to improve the compliance.
4. Coverage of services for children with SAM was low in terms of referral and provision of therapeutic feeding at the hospital setting.
5. Although many mothers opted to give BP 100 to their children, they have failed to adhere to correct management practices.

ii. Training programmes for field level health care workers on basic research methodology

One day basic research training workshops were conducted for MOOH, PHNS, SPHMM, SPHII, PHII and PHMM at RDHS offices. This will encourage them to do researches and will plan to help them for publication

ANNEXTURE

Annexure 1 : Population, birth rates, eligible families, pregnant mothers, reported number of deliveries and first antenatal clinic visits by health district 2016

RDHS/Health Area	Population	Birth Rate	Estimated eligible families	Eligible families registered by PHMs		Estimated Births	Number of reported live births (Actual from RG)	Estimated pregnancies (Births x 1.1)	Pregnant mothers registered by PHM (out of estimated pregnancies)		Number of first antenatal clinic visits	Number of reported deliveries
				No.	%				No.	%		
Colombo	1,815,215	15.4	335,815	294,481	87.7	27,954	49,993	54,992	33,871	61.6	23,455	21,351
Colombo M.C	577,927	15.4	106,917	73,143	68.4	8,900					8,733	6,228
Gampaha	2,369,606	13.7	438,377	405,721	92.6	32,464	23,957	26,353	36,740	139.4	35,729	30,284
Kalutara	960,597	14.8	177,710	165,423	93.1	14,217	14,251	15,676	20,367	129.9	14,329	12,918
N.I.H.S	298,131	14.8	55,154	53,009	96.1	4,412					4,954	4,552
Kandy	1,430,195	18.8	264,586	250,016	94.5	26,888	26,587	29,246	24,976	85.4	23,674	20,611
Matale	507,588	19.1	93,904	94,605	100.7	9,695	9,244	10,168	9,637	94.8	8,947	8,250
NuwaraEliya	747,370	17.5	138,263	133,181	96.3	13,079	9,799	10,779	13,080	121.3	12,584	10,492
Galle	1,099,912	16.7	203,484	186,397	91.6	18,369	18,905	20,796	17,472	84.0	16,118	15,165
Matara	843,316	15.2	156,013	139,834	89.6	12,818	11,075	12,183	13,843	113.6	13,448	12,025
Hambantota	636,853	20.9	117,818	114,046	96.8	13,310	10,732	11,805	12,201	103.4	11,354	10,759
Jaffna	600,876	14.9	111,162	92,514	83.2	8,953	8,264	9,090	8,722	95.9	7,761	7,111
Kilinochchi	121,770	19.1	22,527	20,860	92.6	2,326	2,447	2,692	2,205	81.9	1,925	1,695
Mannar	105,306	15.4	19,482	19,702	101.1	1,622	1,744	1,918	2,552	133.0	2,148	1,795
Vavuniya	181,766	19.6	33,627	28,905	86.0	3,563	3,417	3,759	3,141	83.6	2,893	2,499
Mullaitivu	94,761	11.6	17,531	20,095	114.6	1,099	874	961	1,834	190.8	1,678	1,513
Batticaloa	546,791	18.1	101,156	101,371	100.2	9,897	9,167	10,084	11,155	110.6	10,305	9,236
Ampara	263,484	21.1	48,745	52,376	107.4	5,560	13,538	14,892	14,988	100.6	4,828	4,209
Kalmunai	423,538	21.1	78,355	77,421	98.8	8,937					8,850	8,353
Trincomalee	403,423	22.1	74,633	75,751	101.5	8,916	7,829	8,612	9,036	104.9	8,189	7,372
Kurunegala	1,671,821	16.0	309,287	284,345	91.9	26,749	23,307	25,638	28,405	110.8	26,569	24,564
Puttalam	799,710	19.2	147,946	151,461	102.4	15,354	13,307	14,638	14,987	102.4	13,534	11,642
Anuradhapura	902,930	17.8	167,042	184,044	110.2	16,072	15,423	16,965	17,645	104.0	16,742	14,854
Polonnaruwa	423,574	17.7	78,361	91,159	116.3	7,497	7,132	7,845	8,151	103.9	7,657	6,763
Badulla	853,066	18.4	157,817	153,754	97.4	15,696	15,817	17,399	14,830	85.2	14,372	12,515
Monaragala	478,459	19.5	88,515	96,418	108.9	9,330	6,707	7,378	9,659	130.9	9,392	8,233
Ratnapura	1,138,787	18.0	210,676	201,156	95.5	20,498	18,155	19,971	18,515	92.7	17,704	15,672
Kegalle	867,686	16.0	160,522	147,410	91.8	13,883	9,403	10,343	13,305	128.6	12,681	12,042
Sri Lanka	21,164,458	16.9	3,915,425	3,708,598	94.7	357,679	331,073	364,180	361,317	99.2	340,553	302,703

Annexure 2 : Antenatal care 2016

RDHS/Health Area	% Pregnant mothers registered before 8 weeks	% Pregnant mothers registered 8-12 weeks	% Teenage pregnant mothers (less than 20 Yrs) registered	% of Primies registered	% Pregnant mothers P5 and above registered	% Registered pregnant mothers protected for Rubella	% of pregnant mothers with antenatal morbidities	Average antenatal home visits by PHM	Mothers protected with T.T. at delivery	Mothers tested for Grouping Rh at delivery	Mothers tested for VDRL at delivery
Colombo	67.7	17.4	14.9	38.9	1.3	95.3	36.5	5.2	99.5	99.9	100.0
Colombo M.C	53.8	28.6	17.5	35.1	3.3	90.4	37.3	5.0	99.7	99.8	99.9
Gampaha	77.2	14.9	7.9	37.3	1.5	92.4	33.1	5.7	99.8	100.0	100.0
Kalutara	77.5	15.7	6.8	34.6	1.9	99.2	36.7	5.7	99.9	106.7	100.0
N.I.H.S	81.8	13.7	4.5	33.6	3.4	99.0	24.3	5.8	99.8	99.8	99.9
Kandy	75.4	17.8	6.8	31.5	2.6	98.7	24.0	6.3	101.5	101.4	100.0
Matale	84.0	11.6	4.4	31.2	1.6	96.4	35.2	6.7	100.4	100.5	99.9
NuwaraEliya	65.4	24.4	10.2	30.7	1.7	94.1	18.0	6.8	101.3	101.3	100.0
Galle	81.5	13.4	5.1	32.1	2.0	97.8	26.2	6.4	100.1	99.6	99.9
Matara	85.0	11.3	3.6	31.4	2.2	99.1	31.0	6.6	100.2	100.3	100.0
Hambantota	87.5	9.8	2.7	28.0	2.2	98.0	30.1	6.4	99.7	99.7	100.0
Jaffna	86.1	9.7	4.2	35.1	1.5	99.3	50.4	7.5	101.4	101.4	100.0
Kilinochchi	77.7	15.9	6.3	33.8	2.0	94.3	43.2	5.9	99.9	100.0	99.8
Mannar	77.8	16.3	6.0	29.7	2.8	79.0	18.4	6.0	96.0	96.0	100.0
Vavuniya	73.0	17.5	9.5	34.8	3.2	92.1	22.4	9.6	99.4	99.2	100.0
Mullai vu	73.0	17.6	9.4	32.1	2.4	95.6	36.4	8.3	100.3	100.1	100.0
Ba caloa	77.1	16.0	7.0	37.0	2.7	97.5	19.0	6.2	99.5	99.7	100.0
Ampara	86.0	11.1	2.9	30.8	1.9	98.7	37.9	6.5	99.9	100.0	99.6
Kalmunai	81.6	13.8	4.6	32.7	4.7	94.9	25.3	6.7	99.9	99.8	99.3
Trincomalee	72.7	20.6	6.7	31.5	5.0	96.1	34.4	7.0	100.0	100.0	99.6
Kurunegala	86.0	10.1	3.9	30.3	1.6	99.7	41.3	7.1	103.6	103.6	100.0
Pu alam	77.7	15.6	6.7	29.6	3.5	96.9	35.8	6.0	101.9	101.9	100.0
Anuradhapura	82.5	12.8	4.7	28.3	2.4	99.1	31.6	6.9	99.6	99.9	99.9
Polonnaruwa	83.2	12.5	4.3	28.8	1.5	99.4	38.3	6.8	100.2	100.3	99.9
Badulla	79.2	15.8	5.1	31.5	1.6	99.0	27.4	7.2	102.8	102.8	99.7
Monaragala	87.2	9.9	2.9	27.9	2.2	99.1	33.3	6.3	99.5	99.6	99.9
Ratnapura	77.6	15.9	6.5	32.8	1.6	98.5	33.1	6.8	99.8	99.8	99.7
Kegalle	81.0	13.7	5.3	33.2	1.9	86.0	32.3	6.2	101.4	101.6	100.0
Sri Lanka	78.5	14.9	6.6	32.7	2.1	96.5	32.1	6.4	100.6	100.9	99.9

Annexure 3 : Indicators of clinic care, ante-natal screening and status of BMI among pregnant mothers in 2016

RDHS/Health Area	% Pregnant mothers registered before 8 weeks	% Pregnant mothers registered 8-12 weeks	% Teenage pregnant mothers (less than 20 Yrs) registered	% of Primies registered	% Pregnant mothers P5 and above registered	% Registered pregnant mothers protected for Rubella	% of pregnant mothers with antenatal morbidities	Average antenatal home visits by PHM	Mothers protected with T.T. at delivery	Mothers tested for Grouping Rh at delivery	Mothers tested for VDRL at delivery
Colombo	67.7	17.4	14.9	38.9	1.3	95.3	36.5	5.2	99.5	99.9	100.0
Colombo M.C	53.8	28.6	17.5	35.1	3.3	90.4	37.3	5.0	99.7	99.8	99.9
Gampaha	77.2	14.9	7.9	37.3	1.5	92.4	33.1	5.7	99.8	100.0	100.0
Kalutara	77.5	15.7	6.8	34.6	1.9	99.2	36.7	5.7	99.9	106.7	100.0
N.I.H.S	81.8	13.7	4.5	33.6	3.4	99.0	24.3	5.8	99.8	99.8	99.9
Kandy	75.4	17.8	6.8	31.5	2.6	98.7	24.0	6.3	101.5	101.4	100.0
Matale	84.0	11.6	4.4	31.2	1.6	96.4	35.2	6.7	100.4	100.5	99.9
NuwaraEliya	65.4	24.4	10.2	30.7	1.7	94.1	18.0	6.8	101.3	101.3	100.0
Galle	81.5	13.4	5.1	32.1	2.0	97.8	26.2	6.4	100.1	99.6	99.9
Matara	85.0	11.3	3.6	31.4	2.2	99.1	31.0	6.6	100.2	100.3	100.0
Hambantota	87.5	9.8	2.7	28.0	2.2	98.0	30.1	6.4	99.7	99.7	100.0
Jaffna	86.1	9.7	4.2	35.1	1.5	99.3	50.4	7.5	101.4	101.4	100.0
Kilinochchi	77.7	15.9	6.3	33.8	2.0	94.3	43.2	5.9	99.9	100.0	99.8
Mannar	77.8	16.3	6.0	29.7	2.8	79.0	18.4	6.0	96.0	96.0	100.0
Vavuniya	73.0	17.5	9.5	34.8	3.2	92.1	22.4	9.6	99.4	99.2	100.0
Mullaitivu	73.0	17.6	9.4	32.1	2.4	95.6	36.4	8.3	100.3	100.1	100.0
Batticaloa	77.1	16.0	7.0	37.0	2.7	97.5	19.0	6.2	99.5	99.7	100.0
Ampara	86.0	11.1	2.9	30.8	1.9	98.7	37.9	6.5	99.9	100.0	99.6
Kalmunai	81.6	13.8	4.6	32.7	4.7	94.9	25.3	6.7	99.9	99.8	99.3
Trincomalee	72.7	20.6	6.7	31.5	5.0	96.1	34.4	7.0	100.0	100.0	99.6
Kurunegala	86.0	10.1	3.9	30.3	1.6	99.7	41.3	7.1	103.6	103.6	100.0
Puttalam	77.7	15.6	6.7	29.6	3.5	96.9	35.8	6.0	101.9	101.9	100.0
Anuradhapura	82.5	12.8	4.7	28.3	2.4	99.1	31.6	6.9	99.6	99.9	99.9
Polonnaruwa	83.2	12.5	4.3	28.8	1.5	99.4	38.3	6.8	100.2	100.3	99.9
Badulla	79.2	15.8	5.1	31.5	1.6	99.0	27.4	7.2	102.8	102.8	99.7
Monaragala	87.2	9.9	2.9	27.9	2.2	99.1	33.3	6.3	99.5	99.6	99.9
Ratnapura	77.6	15.9	6.5	32.8	1.6	98.5	33.1	6.8	99.8	99.8	99.7
Kegalle	81.0	13.7	5.3	33.2	1.9	86.0	32.3	6.2	101.4	101.6	100.0
Sri Lanka	78.5	14.9	6.6	32.7	2.1	96.5	32.1	6.4	100.6	100.9	99.9

Annexure 4: Natal care 2016

RDHS/Health Area	% of institutional deliveries out of total reported deliveries	% of home deliveries out of total reported deliveries	% of untrained deliver- ies out of total reported deliveries	% LSCS out of total reported deliveries	% of deliveries reported out of total estimated pregnancies	% of deliveries reported out of total registered pregnancies
Colombo	100.0	0.02	0.02	40.3	70.9	84.4
Colombo M.C	99.9	0.06	0.03	29.2	64.6	80.5
Gampaha	100.0	0.01	0.01	40.1	86.2	83.5
Kalutara	100.0	0.03	0.02	39.0	82.6	86.9
N.I.H.S	100.0	0.00	0.00	42.1	97.0	90.0
Kandy	99.9	0.12	0.09	38.3	75.5	85.6
Matale	99.8	0.16	0.11	42.4	76.0	85.0
NuwaraEliya	99.5	0.49	0.32	25.5	71.3	86.3
Galle	100.0	0.04	0.03	32.8	78.3	87.9
Matara	100.0	0.03	0.02	36.8	82.6	84.8
Hambantota	100.0	0.03	0.02	36.7	74.1	82.8
Jaffna	99.9	0.08	0.05	33.5	65.0	83.9
Kilinochchi	99.7	0.32	0.25	12.5	46.9	80.5
Mannar	99.7	0.28	0.27	26.1	83.5	84.1
Vavuniya	99.6	0.40	0.41	31.0	61.1	85.0
Mullaitivu	99.8	0.18	0.19	15.8	130.9	87.4
Batticaloa	99.9	0.12	0.09	24.8	76.1	87.3
Ampara	99.9	0.07	0.04	28.1	70.2	86.1
Kalmunai	99.9	0.11	0.06	36.3	75.8	83.9
Trincomalee	99.9	0.14	0.08	24.7	83.5	83.1
Kurunegala	100.0	0.03	0.01	36.1	86.8	86.9
Puttalam	99.8	0.19	0.13	32.6	69.7	77.9
Anuradhapura	99.9	0.09	0.07	29.4	81.0	84.8
Polonnaruwa	99.9	0.10	0.09	32.8	82.1	82.1
Badulla	99.9	0.13	0.09	26.5	80.9	86.0
Monaragala	100.0	0.03	0.03	28.1	86.7	83.9
Ratnapura	99.9	0.08	0.05	33.8	71.7	86.0
Kegalle	99.9	0.07	0.03	41.1	87.5	86.9
Sri Lanka	99.9	0.09	0.06	34.5	77.8	84.9

Annexure 5: Indicators of post natal care, post natal visits, Vitamin A supplementation, post natal complications by

RDHS/Health Area	% of mothers receiving the 1st post natal visit within the 1st 10 days out of estimated births	% of mothers receiving the 1st post natal visit within the 1st 10 days out of reported deliveries	% of postnatal visits to the mother around 42 days	% of mothers receiving Vitamin A mega dose for reported deliveries	% mothers who received Vitamin A for of estimated pregnancy	% of reported deliveries with post natal morbidities
Colombo	67.6	86.6	75.4	94.7	85.2	12.4
Colombo M.C	49.7	69.9	34.0	92.5	83.8	15.7
Gampaha	81.1	85.6	68.5	90.1	78.8	12.1
Kalutara	82.0	90.2	80.3	93.0	83.6	10.1
N.I.H.S	96.4	90.4	71.8	96.3	86.9	5.4
Kandy	79.4	95.6	71.8	90.3	78.2	11.4
Matale	77.9	93.3	74.6	96.3	88.1	12.0
NuwaraEliya	76.4	97.4	76.4	85.6	74.5	8.6
Galle	82.3	95.6	74.9	92.1	84.1	10.7
Matara	84.9	93.5	79.4	97.2	88.7	16.2
Hambantota	74.4	91.3	82.4	96.9	86.9	12.0
Jaffna	71.2	99.7	80.4	98.7	90.0	8.0
Kilinochchi	44.9	87.1	86.7	97.6	87.7	3.0
Mannar	80.8	88.0	77.5	98.7	87.2	5.3
Vavuniya	55.3	82.3	61.3	93.8	86.8	6.0
Mullaitivu	135.6	94.1	78.9	94.4	86.9	5.1
Batticaloa	82.8	99.0	77.5	99.1	90.2	5.3
Ampara	73.8	95.5	85.1	92.7	84.3	11.0
Kalmunai	78.3	93.9	81.1	97.7	89.8	10.7
Trincomalee	83.5	90.9	78.1	97.4	86.2	6.3
Kurunegala	82.7	86.7	84.7	87.7	75.4	14.9
Puttalam	69.7	90.9	76.5	95.1	84.4	8.9
Anuradhapura	82.2	92.2	76.1	97.8	87.5	10.5
Polonnaruwa	82.7	91.6	86.5	97.0	86.5	12.5
Badulla	80.0	89.9	79.5	99.3	86.3	10.1
Monaragala	85.5	89.6	76.5	99.4	89.4	9.9
Ratnapura	71.5	90.7	69.3	88.9	80.6	12.2
Kegalle	81.4	84.6	75.8	87.0	73.9	15.4
Sri Lanka	77.4	90.4	75.6	93.3	83.0	11.3

Annexure 6 : Indicators of child care service provision: infant registration, field visits and vitamin A supplementa-

RDHS/ Health Area	% of infants registered by PHM out of estimated births	% of registered infants received at least one field visit after 42 days	Average number of home visits per infant	Average number of weighing per infant	% of estimated infants supplied with vitamin A mega dose at 6 months	% of estimated children supplied with vitamin A mega dose at	
						18 m	3 y
Colombo	80.9	75.1	5.8	9.7	61.6	63.1	70.9
Colombo M.C	77.5	37.2	4.5	6.3	73.5	70.2	75.3
Gampaha	96.5	69.3	6.1	10.3	86.6	85.4	90.2
Kalutara	91.1	86.3	7.0	10.7	92.1	98.9	99.2
N.I.H.S	110.8	75.4	5.6	10.2	105.4	106.3	111.6
Kandy	80.4	75.8	8.4	10.4	77.0	78.2	82.6
Matale	86.9	77.0	7.0	10.9	87.0	89.1	94.7
NuwaraEliya	115.4	80.0	8.0	11.1	72.3	71.3	85.1
Galle	88.5	79.9	7.1	10.6	81.4	78.5	84.6
Matara	91.1	83.0	7.2	10.8	89.5	87.3	89.3
Hambantota	83.0	85.0	7.0	11.0	74.9	74.1	77.2
Jaffna	99.2	82.6	12.5	11.9	75.8	75.2	89.7
Kilinochchi	58.5	88.8	8.9	10.8	70.9	69.8	92.4
Mannar	97.6	79.2	23.3	11.6	100.4	105.4	110.7
Vavuniya	68.4	69.3	10.8	10.2	67.2	74.7	88.9
Mullaitivu	207.3	84.4	10.1	11.0	80.7	95.5	116.9
Batticaloa	83.8	79.7	6.7	11.0	89.0	94.0	102.6
Ampara	76.6	91.8	4.9	11.5	80.1	78.8	81.0
Kalmunai	83.7	81.2	8.0	10.8	91.9	88.1	91.8
Trincomalee	91.5	84.2	6.6	10.1	82.7	81.9	82.4
Kurunegala	93.0	84.3	6.5	12.1	92.3	91.8	97.9
Puttalam	77.8	84.8	6.6	10.9	83.4	83.5	89.9
Anuradhapura	91.5	81.4	6.7	10.8	94.5	95.0	103.9
Polonnaruwa	98.0	86.8	5.1	10.6	95.3	90.6	98.0
Badulla	93.7	84.7	8.8	11.1	82.8	81.7	86.5
Monaragala	98.8	85.7	8.0	11.8	92.1	95.1	97.4
Ratnapura	82.9	77.8	6.9	10.8	77.7	79.7	84.0
Kegalle	94.2	76.6	8.5	10.6	87.7	84.7	94.7
Sri Lanka	89.4	79.0	7.2	10.7	82.9	83.0	89.0

Annexure 7 : Weighing coverage of children under 5 years 2010 – 2016 | Nutrition Month

RDHS/ Health Area	2010	2011	2012	2013	2014	2015	2016
Colombo	77.8	79	70.5	76.1	75.4	79.4	78.7
Gampaha	89.3	91.4	89.3	90.4	89.6	90.8	92.3
Kalutara	92.2	90.4	93.5	90.6	91.9	91.4	93
NIHS	92.7	97	97.3	95.8	96	93.8	96.5
Anuradhapura	87.5	89.2	90	91.5	91.2	91.9	93.4
Polonnaruwa	87.7	88.3	88.4	91.5	91.7	97.8	96.8
Badulla	94	94.8	96.2	96.7	96.2	96.6	97.3
Monaragala	94.6	99.7	96.6	99.4	88.9	98.1	98.9
Galle	90	83.8	87.7	87.6	90.2	91	94.1
Matara	94.1	94.2	95.2	94.5	96.7	96.5	96.9
Hambantota	93.8	95.8	95.8	95.8	96.2	96.4	97.3
Kandy	91.1	92.5	92	90.4	91.5	91.7	93.2
Matale	90.7	90.7	91.7	94.1	95.7	96.2	97
Nuwara Eliya	92	86.8	93	90.7	91.2	92.8	94.3
Kegalle	95.2	96.1	94.4	96.2	96.4	97.6	97.3
Rathnapura	91.5	93.2	95	95.7	97.4	97.5	97.4
Kurunagala	87.6	88.5	89	93.5	94.3	94.9	94.4
Puttalam	90.1	94.7	93.1	94.6	95.5	96.3	96.5
Ampara	92	93.5	94.8	96.4	98	97.9	99
Batticaloa	87.9	88.8	89.5	95.2	96.8	96.5	98.2
Kalmunai	84.7	90.5	95.2	91.5	93.6	94.7	95.7
Trincomalee	90.1	88.3	86.8	89.6	92.4	92.8	98.4
Jaffna	99.3	96.2	99.2	99.4	99.4	99.6	99.6
Kilinochchi	-	90.4	90	97.7	99.6	99.1	99.2
Vavuniya	72.4	45	64.8	93.8	91.4	96.8	96.5
Mullaitivu	-	80.4	90	75.1	94.2	96.1	98.1
Mannar	-	92.4	94.8	95.2	97.1	98.9	94.5
Sri Lanka	90	98.3	90.2	91.3	92.6	93.2	94

Annexure 8 : Nutritional status of infants 2016 (Nutrition month)

District	Underweight %					Stunting %					Wasting%				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Colombo	8	8.9	9.5	9.1	7.7	6.2	5.9	7	5.5	4.1	6.8	8.3	7.8	6.6	4.4
Gampaha	6.4	7	6.4	6.3	7.4	3.8	4.7	4.1	4.2	4.2	10.4	5.7	5.5	5.6	6
Kalutara	7.4	8	7.8	8.1	8	5.7	6.3	5.9	4.6	4.7	7	7.3	6.4	6.2	5.9
NIHS	8	8.1	9.2	7.8	8.6	1.2	4.2	4.4	4	4.6	6.8	7.9	7.8	7.4	7.1
Anuradapura	9	9.1	9.1	8.9	8.5	7	8.2	6.6	6	4.9	10	9.7	8.6	8.6	9.2
Polonnaruwa	9.3	10.6	10.2	9.5	9.1	6.5	6.2	5.5	5.6	4.9	9.8	10.3	10.3	9.9	7.5
Badulla	11.8	11.6	12.4	10.9	10.6	10.3	9.4	9.4	8.8	7.4	10.9	9.2	11.6	10	9.1
Monaragala	7.6	8.8	9.2	7.9	6.9	4.4	5.4	5.1	4.4	4	8.5	9.4	8.6	7.2	5.5
Galle	8.6	8.1	8.6	8	8.1	7	6.2	6.1	4.9	4.6	8.4	8.6	7.9	7.1	6.7
Matara	8.8	9.2	8.9	9.2	8.3	7.4	6.6	6.2	5.8	4.2	15.1	9	8.2	8.7	8.6
Hambantota	7	7.5	7.8	7.3	7.5	5.2	5.3	5.1	4.1	4.5	7.3	7	7.9	7.1	6.3
Kandy	10.1	9.8	9.2	8.8	9	8.6	8	7.1	6.3	5.4	9.8	8.1	7.2	6.8	6.2
Matale	8.4	8.2	7.8	8.7	8.2	7.3	6.7	5.5	5.5	4.2	8.5	7.3	7.2	7.2	5.8
Nuwara Eliya	15	15.7	15	15.6	14.7	12.5	13.8	15.4	13.1	11.6	24	13.4	13.7	12.6	11.1
Kegalle	9.6	10.7	11.5	10	9.4	7.6	6.6	6.6	5.7	4.8	8.8	9.3	9.7	9.1	7.9
Ratnapura	9.7	9.1	9.1	9.2	9.1	8.4	7.3	6	5.8	5.6	12.5	10.6	13	7.3	6.9
Kurunagala	6.7	6.7	6.8	6.3	6.2	5.2	5.7	4.9	3.8	4.4	15.6	6.5	6.2	5.4	6
Puttalam	7.1	7.3	8.5	8.6	7.6	5.3	5.1	5.5	5.3	4.2	6.9	4.7	6.4	6.6	6.2
Ampara	11.1	11	10.6	10.1	9.9	6	7.4	6	5.2	5.7	8.6	8.8	7.6	8	7.3
Kalmunai	8.5	7.9	7	5.4	5.8	7	6.3	6.1	4.1	4.5	8.8	6.7	6.6	5.6	5.2
Batticaloa	8.3	7.1	7.4	7.3	6.3	6.3	6.1	5.7	4.7	4	7.4	6.2	5.6	5.4	4.5
Trincomalee	8.3	7.9	7.6	8.4	7.6	5.8	6.1	4.6	5.8	4.8	8.8	8	7.8	9.5	7.5
Jaffna	5.7	7.1	7.3	6.7	7.2	4.3	5.5	4.5	3.8	4	8.8	6.8	5.4	5.3	4.9
Killinochchi	6.4	6.4	5.9	5.8	4.6	7.5	5.6	4	3	2.7	6	6.2	2.8	2.6	2.2
Mulativue	6.8	5.7	7	7.8	6.1	6	5.9	6.2	5.4	4.2	4.6	3.1	3.3	5.1	2.8
Vavuniya	7.1	8.7	9.2	9.3	8.7	4.8	6.4	5.8	4.3	5.5	8.4	8.6	8.6	8.3	6.9
Mannar	6.1	5.3	5.2	4.9	5.9	4.6	2.9	2.2	3.2	3.1	5	3.3	3.1	2.3	3.8
Sri Lanka	8.5	8.7	8.8	8.4	8.2	6.6	6.6	6.3	5.5	4.9	8.6	8	7.9	7.2	6.6

Annexure 9 : Nutritional status of young children 2016 | Nutrition month

	Underweight %						Stunting %						Wasting%					
	2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017
Colombo	13	13.5	15	13.6	11.2	11	11	9.9	9.9	8.7	7.6	7.6	11.2	10.3	10.1	9.3	6.1	6.1
Gampaha	11.4	11.5	11.8	11.6	11.8	13.2	13.2	9	7.7	7.7	8.1	8.1	8.5	8.7	8.4	8.3	9	9
Kalutara	13.8	13.6	14.5	13.7	13.8	11.5	11.5	11.4	11.1	8.8	8.9	8.9	13	11.3	10.6	10.7	10.7	10.7
NIHS	11	13	12.7	12.6	12.6	5.7	5.7	8	8.3	7.5	7.8	7.8	9.6	9.4	10.7	10.9	10.3	10.3
Anuradapura	18.7	18.9	17.9	17.2	15.3	14.7	14.7	14.1	13.8	11.4	10.1	10.1	15.6	14.6	13.1	14.7	12.8	12.8
Polonnaruwa	17.7	15.9	19.2	18.2	16.5	14	14	13.2	11.3	11.8	10.2	10.2	15	15.4	15.4	14.5	12.9	12.9
Badulla	21.2	20.4	19.9	19.6	17.7	19	19	17.9	16.9	17	15.8	15.8	14.6	15.7	15.3	14.9	13.6	13.6
Monaragala	16.2	16.1	17.9	15.9	13	10.4	10.4	11.2	10.9	9.8	8.9	8.9	14.2	15	13.8	12.5	10.6	10.6
Galle	15.5	14.9	16.2	15.1	13.7	12.5	12.5	11.3	12.1	10.1	8.8	8.8	13.2	12.4	13.1	11.5	11.4	11.4
Matara	16.5	17.3	18.3	17.5	15.9	14.1	14.1	13.5	13.3	12.5	10.1	10.1	14.4	14	20	13.9	13	13
Hambantota	16.4	16	15.5	14.7	13.1	11	11	10.7	9.9	9.5	8	8	13.4	14.8	13.1	13	11.3	11.3
Kandy	18.5	17.5	16.2	15.5	15.2	16.3	16.3	15.6	13.6	13.1	11.7	11.7	16.2	13.3	10.9	11	6.9	6.9
Matale	18	16.4	15.8	15.5	13.5	14.3	14.3	13.8	13.4	10.7	9.4	9.4	15	12.6	11.3	11.4	11.2	11.2
Nuwara Eliya	25.1	25.2	22.4	24.1	21.9	22.6	22.6	24.3	21.4	23.7	22.2	22.2	19.5	23.2	18.7	16	15.3	15.3
Kegalle	18.3	17.5	19.6	17.2	16.4	14	14	13.1	12.3	10.9	10.5	10.5	13.5	13.1	13.3	13.3	11.8	11.8
Ratnapura	17.6	16.6	15.9	16.1	15.6	15.1	15.1	13.8	12	11.6	11.3	11.3	16.8	13.8	12.8	11.9	11	11
Kurunagala	14.8	14.9	14.5	13.1	13	10.8	10.8	10.1	10.9	10.4	8.2	8.2	11.4	11.5	11	10.3	10.4	10.4
Puttalam	13.8	14.4	15.5	15	13.9	10.5	10.5	10.1	9.3	10.4	8.7	8.7	11.2	10.6	11.6	10.6	9.8	9.8
Ampara	22	20.5	19.2	17.9	17	14.5	14.5	13.7	10.9	13.3	10.4	10.4	14.1	15.1	13.3	12.8	13.6	13.6
Kalmunai	15.6	16.2	15.8	11.5	10.5	13.5	13.5	13.2	12.2	10.3	8.7	8.7	11	9.9	9.6	7.8	8.2	8.2
Batticaloa	20.6	14.5	13.2	15	12.6	13.8	13.8	11.4	10.7	10.5	10	10	10	9.5	9.8	9.6	7.8	7.8
Trincomalee	19.8	24.6	16.4	17.2	18.3	9.2	9.2	14.4	9.7	13.7	12.3	12.3	12.2	16.7	13.3	14.6	13.6	13.6
Jaffna	14.1	13.7	13.8	13.4	13.5	10.6	10.6	10.7	8.8	8.7	9.1	9.1	13.7	12.4	10	10.4	10.2	10.2
Killinochchi	20.2	14.7	14.6	14.5	12.9	18.3	18.3	14.3	8.7	11.6	8.9	8.9	12.2	10.9	8.2	8.2	8.7	8.7
Mulativue	17.2	17	17.1	17.9	14.9	13.8	13.8	12.7	12.5	13.6	10.1	10.1	10.4	9.3	8.7	9.6	8	8
Vavuniya	16	17.7	16.6	16.4	16.4	11.3	11.3	11.6	13.4	12.7	11.6	11.6	14	14.7	15.3	13.3	12.3	12.3
Mannar	13	14	12.8	12.6	12.9	8.6	8.6	10	9.4	9	9	9	10	9.6	6.5	7.2	6.6	6.6
Sri Lanka	16.3	16.1	15.5	15.3	14.3	13.5	13.5	12.6	11.7	11	10.1	10.1	13.2	12.7	12.1	11.5	10.3	10.3

Annexure 10: Nutritional status of pre-school children 2016 (Nutrition month) 2-5 years

District	Underweight %						Stunting %						Wasting %					
	2012	2013	2014	2015	2016		2012	2013	2014	2015	2016		2012	2013	2014	2015	2016	
Colombo	15.9	15.9	15.8	15.6	13.5		12.4	9.5	11.4	8.4	7.2		12.4	11.7	10.5	10.9	9.5	
Gampaha	13.4	13.5	13.1	12.7	14		7.4	7.9	6.9	6.7	7.1		9.8	9.8	8.9	9.9	10.8	
Kalutara	16.6	16.2	15.7	16.3	15.7		9.8	10.5	8.8	8.9	8.2		13.2	13.4	12.2	12.4	11.8	
NIHS	13.8	14.5	14.7	14.9	15.2		10.2	8.3	7.9	7.9	7.5		10.2	10.6	11.6	12.3	12.3	
Anuradapura	24.6	23.2	21.5	21.4	20.5		14.6	13.6	12.1	11	10.4		24.4	16.9	15.3	15.6	16.1	
Polonnaruwa	22	25.1	22.9	22.8	20.1		13.6	13	10.1	11.3	10.5		19.1	19.2	15.3	17	16.2	
Badulla	26.2	27	24.9	26.1	23.7		17.6	17.4	16.8	14.7	14.8		17.6	18.5	18.2	18.8	17.6	
Monaragala	22.6	24.9	23.5	20	18.1		12	12	11.1	9.9	9		17.4	18.2	16.8	14.5	13.2	
Galle	21.4	20.1	19.8	18.8	18.1		13.3	11.7	10.6	9.3	9		16.2	17.1	14.6	13.5	14.1	
Matara	23.1	21.5	21.4	21.5	20.3		14.7	12.4	17.5	11.7	10.4		17.7	18.3	17.5	17.5	16.4	
Hambantota	20.4	22.9	19.4	18.3	18.3		10.4	11.2	9.6	8.9	9		13.4	16.7	14.1	13.9	13.6	
Kandy	23.6	22.2	19.1	20.4	19		16.2	14.4	12.4	12.4	11.8		18.1	14.6	12.5	12.5	11.7	
Matale	23	20.1	19.5	17.7	19.1		16.5	13.7	12.7	11.1	10.6		18	14.2	13.6	12.8	12.2	
Nuwara Eliya	25.2	27.5	24.9	27	25.9		21.8	23.6	20.2	19.1	21.8		22.2	22.5	18.7	17.1	16.5	
Kegalle	24.1	22.8	24.6	22.3	21.1		13.5	12.4	13.3	11.1	10.3		17.1	15.8	18	16.9	15.2	
Ratnapura	25.1	22.7	21.7	21.9	21		15.5	13.7	11.8	11.4	12		19.5	17	15.9	15.1	14.7	
Kurunagala	19.6	18.2	17.5	16.9	16.7		11.3	10.4	9.5	8.8	8.1		14	13.7	13.2	12.9	12.8	
Puttalam	17.9	17.8	17.8	18.1	17.6		11.8	10.6	10.8	10.5	9.3		12.2	12.1	12.2	12	12.1	
Ampara	28.3	25.8	23.8	23.5	22		19.1	13.7	11.2	11.3	10.8		19.1	19.5	17	17.4	15.9	
Kalmunai	20.6	18.6	17.6	15	13		11.7	13.1	10.4	10.1	8.2		11.7	10.7	9.8	9.5	7.7	
Batticaloa	19.1	18.3	15.8	16.7	21		13	10.3	10.9	10.3	10.5		11.4	9.7	10.1	9.8	8.8	
Trincomalee	18	23.3	20.8	21.1	23		10.4	13.7	12.7	13	13.8		12	17.3	15.3	15.2	15.6	
Jaffna	19.7	22	17.3	17.2	17.1		12	12.3	10	9.4	9.9		14	14.3	12.3	12.2	12.2	
Killinochchi	28.7	26.3	23.9	21.1	19.4		17.4	18.1	15.3	13.6	13		17.4	19.4	13.6	12	10.9	
Mulativue	26.1	23.9	22	22.8	21.5		16.6	15.1	14.2	14.7	14.2		12.6	13.4	12	12.5	11.5	
Vavuniya	20.6	23.5	24.5	21.4	21		16.3	14.6	12.8	11.2	12.4		16.3	17.8	17.9	16.1	14.3	
Mannar	17.4	16.3	18	15.6	16.6		10.4	11.9	11.9	10.8	10.9		10.4	9.1	9.5	7.2	8.6	
Sri Lanka	20.8	20.4	19.3	19	18.5		13.2	12.4	11.6	10.5	10.3		15.6	14.9	13.7	13.5	13.1	

Annexure 11: Children Under the age of 5 years 2016 | Nutrition month

		Underweight % (weight for age < - 2SD)					Stunting % (height for age < -2SD)					Wasting % (weight for height < - 2SD)				
Province	District	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
WP	COLOMBO	13.7	13.7	14.1	13.1	11.7	10.3	8.7	10	7.8	6.6	11	10.6	9.8	9.6	7.7
	GAMPAHA	11.5	11.6	11.3	10.6	12.2	5.1	7.4	6.4	6.4	6.7	8.6	8.7	8.1	8.6	9.4
	KALUTARA	14.2	13.9	13.8	13.6	13.8	8.8	9.7	8.7	8	7.6	12	11.6	10.6	10.7	10.4
	NIHS	16.4	12.8	13.1	12.6	13.4	6	7.4	7.2	7.1	7	9.4	9.7	10.6	11	10.9
NCP	A' PURA	20	19.4	18.2	17.4	17.1	12.6	12.6	11.3	10.1	9.3	19.5	14.9	13.5	14	14.1
	POLONNARUWA	18.5	20.2	19.6	18.6	17.2	12.2	11.7	9.4	10.3	9.3	16.3	16.6	14.3	15.1	13.8
Uva	BADULLA	22.2	22.4	21.2	20.9	19.8	16.3	15.8	15.2	14	13.5	15.6	15.9	16.2	16.2	15.1
	MONARAGALA	18.2	18.4	19.3	16.2	14.9	10.1	10.5	9.8	8.8	8	15	15.7	14.5	12.6	11.2
	GALLE	17.5	16.4	16.6	15.3	15.2	11.8	10.4	9.9	8.6	8.1	14	14.2	12.8	11.8	12.1
	MATARA	18.9	18.1	18.2	17.7	17.1	13.1	11.5	14.3	10.7	9.1	15.3	15.5	16.1	15	14.2
CP	HAMBANTOTA	16.9	18	16.2	14.9	15.2	9.5	9.9	8.7	8.1	7.9	12.2	14.4	12.6	12.4	11.7
	KANDY	19.8	18.6	16.3	16.4	16.2	13.7	13.3	11.5	11.3	10.5	16	12.9	11	11	9.4
	MATALE	18.8	16.7	16.4	15	15.9	14	12.2	11.4	9.9	9.2	15.3	12.4	11.8	11.4	10.8
	Nuwara Eliya	23.1	24.5	22.2	23.2	23	18.8	21.7	19.5	18.9	20	20	20.7	17.7	16	15.3
SP	KEGALLE	17.9	19.2	20.9	18.4	18	12.4	11.4	11.7	10	9.3	14.7	13.9	15.3	14.7	13.2
	RATHNAPURA	20.4	18.6	17.9	17.8	17.6	14	12.4	10.7	10.4	10.6	17.5	15	14.7	12.9	12.5
NWP	KURUNAGALA	15.8	15.1	14.7	13.5	13.8	9.8	9.5	8.5	7.8	7.4	12	11.7	11.3	10.9	11
	PUTTALAM	14.8	14.8	15.3	15	14.8	10.2	9.3	9.7	9.4	8.2	10.8	10.2	10.8	10.6	10.5
EP	AMPARA	23.2	21.9	20.3	19.2	18.7	11	12.5	10.2	10.5	9.8	16	16.6	14.4	14.7	13.8
	KALMUNAI	17.4	16.1	15.1	12	11	13.6	11.8	9.9	8.9	7.6	11	9.8	9.2	8.4	7.3
NP	BATTICALOA	16.7	14.9	13.5	13.9	15.8	10.3	9.8	9.8	9.3	9.2	9.9	9	9.2	9	7.8
	TRINCOMALEE	15.8	20.5	17.2	17.2	19	9.2	12.4	10.4	11.7	11.7	11.4	15.4	13.5	13.9	13.6
	JAFFNA	15.3	16.7	14.5	14.1	14.6	10.1	10.6	8.6	8.2	8.7	13.4	12.4	10.4	10.6	10.5
	KILLINOCHCHI	22.8	20.3	18.9	17	15.7	17.5	15.1	12.8	11.6	10.6	14.2	15.3	10.6	9.8	9
	MULATIVUE	20.8	18.9	18	18.4	17.6	14.2	12.7	12.4	12.8	11.7	10.7	10.5	9.6	10.5	9.3
	VAVUNIYA	16.1	18.6	19.5	17.5	17.8	11.4	11.9	11	10.2	11	13.8	14.9	15.3	14	12.6
	MANNAR	14.1	13.5	14.4	12.6	13.8	9.5	9.6	9.5	9	9	9.2	8	7.6	6.3	7.3
	Sri Lanka	17.3	17	16.4	15.6	15.6	11.3	11.2	10.5	9.6	9.2	13.6	13	12.2	12.2	11.3

Annexure 12: Nutritional status of infants and children - (H 509) 2016

RDHS/Health Area	% LBW	% of infant weighing	% of 1-2 years weighing	% of 2-5 years weighing	% moderately underweight infants	% severely underweight infants	% moderately underweight young children (2nd year)	% severely underweight young children (2nd year)	% moderately underweight pre schoolers (3rd to 5th year)	% severely underweight pre schoolers (3rd to 5th year)
Colombo	10.5	80.6	58.2	58.2	4.4	1.0	9.1	5.8	12.3	2.8
Colombo M.C	10.5	52.9	43.2	39.0	6.7	1.7	12.4	2.4	16.5	3.3
Gampaha	11.0	86.1	77.1	66.0	4.1	0.7	10.0	2.0	12.6	2.8
Kalutara	11.9	88.8	79.2	72.0	4.7	1.0	10.4	1.6	15.4	2.6
N.I.H.S	8.1	85.1	65.4	63.0	4.8	0.9	10.4	1.4	15.4	2.1
Kandy	10.8	86.8	75.2	78.8	5.8	1.2	13.0	2.6	17.4	3.6
Matale	12.1	91.1	89.9	88.5	5.3	1.1	11.4	2.1	17.9	3.0
NuwaraEliya	18.2	92.3	85.9	104.3	9.7	2.7	16.9	4.5	21.4	5.1
Galle	10.2	88.4	78.8	78.0	5.1	0.9	11.7	1.9	18.0	2.9
Matara	10.5	90.1	85.3	82.6	5.2	1.0	13.0	1.8	18.7	3.1
Hambantota	9.3	91.7	86.0	83.8	5.0	1.0	11.3	1.7	19.0	2.9
Jaffna	9.3	99.1	99.6	72.3	5.5	0.6	11.2	1.5	18.2	2.4
Kilinochchi	8.5	89.8	94.8	80.3	3.0	0.6	10.4	1.0	27.5	3.6
Mannar	8.5	96.5	90.0	133.7	3.9	1.1	10.2	2.0	12.7	2.3
Vavuniya	11.6	85.0	79.9	85.4	5.5	1.1	13.3	2.0	21.2	3.3
Mullaitivu	8.6	91.6	87.8	110.1	4.3	1.0	13.1	2.4	18.4	3.5
Batticaloa	11.4	91.9	88.6	85.1	4.3	1.0	9.8	2.2	17.8	3.3
Ampara	14.5	95.9	90.2	106.5	5.6	1.3	12.7	2.6	20.1	3.6
Kalmunai	9.9	90.2	89.5	66.8	4.1	1.1	8.3	1.9	15.2	3.2
Trincomalee	11.5	84.1	77.7	87.1	5.7	1.3	15.3	3.2	21.7	4.2
Kurunegala	11.2	100.5	92.5	102.0	4.6	0.9	10.4	1.8	15.6	2.8
Puttalam	10.0	91.2	84.0	74.2	4.8	1.1	11.4	2.3	17.0	3.7
Anuradhapura	11.9	90.1	80.4	88.8	5.7	1.0	13.5	2.0	20.2	3.1
Polonnaruwa	12.8	87.9	85.7	87.9	6.2	1.2	15.1	2.2	21.4	3.4
Badulla	14.4	92.3	84.1	90.1	7.4	1.8	14.3	2.8	22.1	4.4
Monaragala	12.1	98.6	90.1	80.9	4.8	1.0	11.4	1.6	21.7	2.8
Ratnapura	13.9	89.8	83.7	93.3	6.0	1.2	13.0	1.9	20.8	3.3
Kegalle	11.8	88.7	87.3	88.4	6.4	1.3	13.6	2.0	21.2	3.1
Sri Lanka	11.5	89.2	80.8	81.2	5.4	1.1	11.9	2.4	18.0	3.2

Annexure 13: Family Planning Performance 2016

RDHS/Health Area	Current FP user rate for modern methods	Current FP user rate for all methods	% Unmet need for family planning	Current users of IUD		Current users of Injectable	
				No	%	No	%
Colombo	56.8	67.9	6.3	38758	13.2	18600	6.3
Colombo M.C	43.8	55.5	10.6	5100	7.0	3745	5.1
Gampaha	52.5	64.9	7.8	44104	10.9	27089	6.7
Kalutara	56.5	66.7	6.7	19847	12.0	13481	8.1
N.I.H.S	52.9	66.4	4.2	4236	8.0	2919	5.5
Kandy	56.8	65.3	6.5	25063	10.0	20653	8.3
Matale	60.2	67.3	4.5	12158	12.9	10124	10.7
NuwaraEliya	68.4	73.1	6.8	12292	9.2	8650	6.5
Galle	58.8	69.0	6.0	24719	13.3	17474	9.4
Matara	60.1	68.8	6.1	18991	13.6	12648	9.0
Hambantota	60.2	68.4	6.6	20652	18.1	9656	8.5
Jaffna	52.6	61.1	5.1	3515	3.8	5732	6.2
Kilinochchi	67.1	70.8	2.0	3021	14.5	2154	10.3
Mannar	52.3	70.8	6.1	566	2.9	2011	10.2
Vavuniya	51.0	64.2	9.7	786	2.7	2751	9.5
Mullaitivu	60.6	63.9	6.3	1587	7.9	3172	15.8
Batticaloa	44.9	52.8	6.5	3975	3.9	15800	15.6
Ampara	68.1	72.7	3.3	6139	11.7	10540	20.1
Kalmunai	46.8	57.9	7.0	2729	3.5	11103	14.3
Trincomalee	53.2	62.8	5.5	2089	2.8	16278	21.5
Kurunegala	59.9	70.0	5.9	44379	15.6	26510	9.3
Puttalam	57.6	68.4	7.1	13510	8.9	22151	14.6
Anuradhapura	61.1	68.3	5.1	23557	12.8	32729	17.8
Polonnaruwa	63.6	68.7	4.3	9592	10.5	19439	21.3
Badulla	64.6	69.7	6.1	20372	13.2	14118	9.2
Monaragala	64.3	72.8	4.5	16332	16.9	13332	13.8
Ratnapura	58.3	71.6	7.0	22269	11.1	22758	11.3
Kegalle	57.8	67.8	5.5	14446	9.8	17506	11.9
Sri Lanka	57.6	67.1	6.3	414784	11.2	383123	10.3

Annexure 14: Infant child mortality and WWC performance 2016

RDHS/Health Area	NNMR based on PHM reporting	IMR based on PHMs reporting	Under 5 mortality rate based on PHM reporting	No. of functioning Well Woman Clinics	% of 35 year women screened for cervical carcinoma
Colombo	4.8	6.6	7.8	105	58.2
Colombo M.C	6.2	9.3	9.4	9	21.5
Gampaha	5.4	7.5	8.4	0	54.3
Kalutara	6.8	8.8	10.0	41	57.6
N.I.H.S	6.6	9.6	10.5	23	56.4
Kandy	5.6	8.1	9.3	66	47.2
Matale	6.1	9.0	9.5	0	79.8
NuwaraEliya	10.0	14.2	15.9	40	60.8
Galle	4.9	7.0	7.5	42	49.5
Matara	5.0	7.2	8.5	32	48.2
Hambantota	5.5	8.3	9.5	18	66.1
Jaffna	7.4	12.3	14.7	112	31.7
Kilinochchi	5.7	8.3	12.1	7	12.6
Mannar	5.0	7.4	9.3	1	61.9
Vavuniya	9.7	13.2	16.3	9	19.9
Mullaitivu	6.7	11.5	15.5	3	45.5
Batticaloa	5.5	9.1	10.4	19	36.9
Ampara	7.5	9.5	10.7	17	77.9
Kalmunai	5.8	8.5	8.9	22	53.9
Trincomalee	5.5	7.8	9.0	11	38.9
Kurunegala	7.3	9.5	10.3	89	38.9
Puttalam	5.0	7.5	8.8	43	39.6
Anuradhapura	5.2	7.4	9.3	25	69.5
Polonnaruwa	5.9	8.0	9.3	7	66.6
Badulla	6.8	9.0	9.7	46	49.0
Monaragala	7.7	10.7	11.3	23	76.4
Ratnapura	7.7	9.9	11.3	35	56.4
Kegalle	5.7	9.7	10.9	28	73.6
Sri Lanka	5.8	8.2	9.3	873	52.8

Annexure 15 : School Health Performances 2016

RDHS/Health Area	SMI coverage (Schools)	% of schools in which Sanitary Survey Completed	% of children with defects	% of defects detected (out of children examined)			% Underweight				% Stunting		% Overweight			
				Visual defects	Heart diseases	Pallor	G-1	G-4	G-7	G-10	G-1	G-4	G-1	G-4	G-7	G-10
Colombo	94.8	95.5	27.7	3.9	1.2	1.2	15.1	19.8	15.5	13.8	5.4	4.2	3.4	5.2	8.1	6.2
Colombo M.C	80.7	0.0	43.0	7.7	1.9	0.0	16.3	21.2	16.8	0.0	1.9	1.6	7.7	12.9	15.3	0.0
Gampaha	88.1	95.1	21.9	4.4	1.0	0.5	12.0	16.1	15.4	12.2	7.0	4.3	3.0	5.2	6.9	6.6
Kalutara	100.0	108.6	30.8	3.6	2.2	0.6	13.0	18.7	19.0	13.9	6.8	4.3	2.6	3.2	4.6	5.4
N.I.H.S	100.0	100.0	29.5	2.8	1.0	0.0	11.1	14.9	11.8	8.4	2.9	3.7	4.3	5.6	8.1	7.6
Kandy	96.0	98.7	37.4	3.2	2.3	0.9	12.4	18.2	20.4	15.1	7.8	6.4	2.2	3.9	6.6	6.1
Matale	85.8	91.9	20.0	2.9	1.7	0.6	15.8	22.2	21.0	16.7	8.8	7.5	2.8	3.7	5.5	6.0
NuwaraEliya	72.9	96.5	39.2	2.1	2.8	1.3	17.0	22.0	21.2	20.2	15.1	13.3	1.3	1.3	2.1	2.3
Galle	93.4	98.3	30.9	2.6	1.1	0.4	12.8	19.1	18.4	14.9	7.2	4.8	1.5	3.0	4.6	4.2
Matara	97.9	96.8	26.2	2.8	1.6	1.0	17.5	23.0	22.5	18.0	8.9	6.7	1.8	3.1	4.7	3.7
Hambantota	99.4	100.0	47.5	2.4	1.6	0.5	20.8	28.5	28.8	25.0	7.2	5.5	1.4	3.2	4.8	4.9
Jaffna	100.0	109.4	46.1	4.1	1.2	4.1	16.3	26.4	24.0	21.0	14.1	9.5	1.7	3.5	4.5	4.6
Kilinochchi	100.0	100.0	44.8	1.0	2.1	1.2	16.0	19.7	17.5	18.6	13.6	12.2	3.0	1.6	1.0	2.2
Mannar	100.0	100.0	38.4	2.1	1.4	2.5	13.7	19.2	19.7	14.0	10.6	7.6	0.5	1.1	2.8	3.4
Vavuniya	84.4	100.0	32.5	2.5	1.1	0.4	14.4	21.4	21.2	20.7	14.2	9.9	1.4	1.3	1.8	2.8
Mullaitivu	83.3	92.4	50.3	2.6	2.4	3.4	19.7	30.2	33.4	23.1	14.5	13.1	0.9	1.0	1.8	4.1
Batticaloa	57.5	99.2	31.3	2.2	0.6	3.6	12.9	12.8	13.0	9.5	7.0	6.7	2.6	2.7	5.3	5.3
Ampara	96.7	99.5	51.4	3.2	1.8	1.8	20.3	30.2	25.1	17.2	10.7	8.5	2.1	4.2	7.3	5.6
Kalmunai	96.5	87.5	44.8	2.1	1.0	3.5	15.2	18.8	20.0	16.1	9.6	7.5	2.1	3.0	4.4	4.8
Trincomalee	91.3	96.9	32.9	2.9	1.6	3.0	15.3	19.8	19.7	17.0	11.9	8.9	1.2	2.7	3.5	3.6
Kurunegala	100.0	99.9	23.6	2.2	2.2	0.4	14.3	20.8	19.7	15.3	8.5	7.3	2.1	4.0	6.1	5.5
Puttalam	86.4	94.9	24.8	3.0	1.5	0.4	16.2	20.1	19.3	15.8	9.7	6.3	2.3	5.5	7.7	7.6
Anuradhapura	84.3	86.2	36.7	2.6	1.6	1.0	13.5	19.3	19.2	16.1	17.3	5.9	3.6	4.5	6.0	5.4
Polonnaruwa	94.6	100.0	39.7	2.0	2.3	0.5	16.7	23.5	25.8	15.7	9.6	6.3	1.2	3.3	6.6	6.3
Badulla	97.8	94.5	39.5	4.1	1.3	0.6	14.2	20.4	20.0	17.6	12.6	10.1	1.6	6.9	3.5	4.4
Monaragala	94.3	100.0	50.5	4.4	1.8	2.1	13.7	21.3	23.0	18.2	7.0	5.4	2.3	3.3	4.7	4.1
Ratnapura	82.2	90.3	42.7	3.7	2.8	0.3	17.5	25.5	28.9	21.1	11.9	9.3	1.6	2.7	4.6	4.3
Kegalle	94.3	82.2	45.5	1.9	1.1	1.2	16.2	23.5	19.4	17.1	8.2	6.0	1.4	3.5	4.7	4.9
Sri Lanka	91.2	95.0	34.9	3.1	1.7	1.1	15.0	20.8	20.1	16.4	9.2	6.7	2.3	4.2	5.8	5.2

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