ESSENTIAL (HEALTH) SERVICES PACKAGE (ESP) FOR SRI LANKA

Justification, content and implementation arrangements

Version 2.2

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ACRONYMS

AMO	Assistant Medical Officer
AMP	Assistant Medical Practitioner
BH	Base Hospital
BoD	Burden of Disease
CVD	Cardiovascular disease
DALY	Disability-Adjusted Life Years
DDHS	Divisional Director of Health Services
DGHS	Director General of Health Services
DH	Division Hospital
DMO	Divisional Medical Officer
DS	Divisional Secretary
EHR	Electronic health record
ESP	Essential Service Package
ETU	Emergency Treatment Unit
FHW	Family Health Worker
GMP	Good manufacturing practice
GP	General Practitioner
HLC	Healthy Lifestyle Center
HRH	Human resources for health
HSDP	Health Systems Development Project
ICT	Information and communication technology
IHP	Institute for Health Policy
MCH	Maternal and child health
MIS	Management Information System
MLT	Medical Laboratory Tech
MO	Medical Officer
MOH	Medical Officer of Health
MoHNIM	Ministry of Health, Nutrition and Indigenous Medicine
MSD	Medical Supplies Division
NCD	Non-Communicable Diseases
NO	Nursing Officer
OOP	Out-of-pocket
OPD	Outpatient Department
PHC	Primary Health Care
PHI	Public Health Inspector
PHM	Primary Health Midwife
PHN	Primary Health Nurse
PMCI	Primary Medical Care Institutions (PMCU & DH)
PMCU	Primary Medical Care Unit
PMoH	Provincial Ministry of Health
RDHS	Regional Director of Health Services
RMNCAH	Reproductive, Maternal, Neonatal, Child and Adolescent Health
SARA	Service Availability and Readiness Assessment
SC	Sub-committee
SLESP	Sri Lanka Essential Health Service Package
THE	Total Health Expenditure
UHC	Universal Health Coverage
WHO	World Health Organization
WWC	Well Women Clinic

INTRODUCTION

Over decades, the Sri Lanka health system has achieved indicators of health status and service coverage well above its neighbouring countries. However, with the additional challenges brought in by the epidemiological and demographic transitions, characterized by steep increase in prevalence rates of Non-Communicable Diseases (NCD) and ageing population, the health system has to evolve in terms of health services that are offered to the population, as well as the way they are delivered.

Packages of Health Services, or Health Benefit Packages, have been recurrently used by Health Authorities or Health Management Institutions across the world for different purposes, including the setting of service standards by facility level, structuring referral systems, integration of vertical programmes, or as a tool for resource mobilization.

The Sri Lanka Ministry of Health, Nutrition and Indigenous Medicine (MOHNIM) is adopting the Sri Lanka Essential Service Package (SLESP) as a tool for achieving effective Universal Health Coverage. The SLESP here presented is to be understood as a statement of entitlement "all Sri Lankans are entitled to avail all the services of the SLESP" and used as a planning instrument to improve equity, efficiency and effectiveness.

This is the first Sri Lanka comprehensive ESP, integrating in a single package the existing explicit, well-known package of preventive services with a newly-defined set of curative interventions to be delivered by the Primary Medical Care Institutions (PMCI) and part of the secondary level of hospital care.

The development of the SLESP happens in the context of a restructuring of public health services, with emphasis on PHC, with the aims of improving and expanding the PHC preventive system, developing and structuring the PHC curative network and strengthening the referral system. The final shape of the SLESP will depend on the outcomes of the reform efforts and the resulting capacity of the health system to deliver the interventions.

Like most service packages, the SLESP focuses on interventions on personal care –from primordial prevention to palliate, end-of-life care. It does not include population-wide interventions –e.g., food supplementation, supply of clean water, or mass campaigns promoting healthier life styles—, and neither it replaces broader MOHNIM policies and plans.

Designing the SLESP is a process, in which this draft represents just one step. The first version of the document has been produced by assembling the proposals/priority interventions as stated by Departments, Programmes and Units. The resulting list of interventions is the beginning, not the end of the discussion. The document has been shared with all relevant stakeholders to convey their inputs and identify which areas require further exploring. Equally important are the next steps, which consist in a costing exercise of the financial requirements to deliver the complete SLESP, as well as a feasibility analysis exploring the systemic bottlenecks that may hamper the package implementation.

After this short introduction, the document is structured in several chapters. The first one describes Sri Lanka health status and its burden of disease. It is followed by a summary characterization of its health service, including network of facilities, human and other resources, as well as its output/outcome in terms of quantity of services delivered and coverage rates achieved. The ongoing reform process is then explained in its main features. The main chapter corresponds to the SLESP itself, composed of a brief description of its main components and a table listing interventions and delivery sites in more detail. Another chapter is devoted to expose the resources –personnel, medicines, etc.—that should be involved in the delivery of the package, and which is followed by another chapter illustrating some implementation arrangements and the challenges likely to be faced. The document ends with short chapters on the Monitoring and Evaluation framework that

should accompany the SLESP, the process to revise its contents, and the next steps until its final drafting and endorsement.

SRI LANKA BURDEN OF DISEASE

In the process of developing an ESP, one of the first steps is to identify which conditions cause the most disability and death, to include in the package the most adequate services to tackle them. Information about the Burden of Disease (BoD) is not always readily available and indirect data, from a variety of sources, is used to estimate it and its causes.

Decades of consistent investments on the reduction of maternal and child mortality and morbidity have resulted in the achievement of some of the best indicators in the region. According to the Sri Lanka Millennium Development Goals Report 2014, Maternal Mortality Ratio (MMR) declined from 92 per 100,000 live births in 1990 to 33 in 2010, while Infant and Under-5 Mortality Rates per 1,000 live births fell from 18 to 9 and 22 to 11 respectively.

According to the Demographic and Health Survey 2016, seventeen percent of children below 5 years of age are stunted (low height-for-age, also dubbed chronic malnutrition), while 15% are wasted (low weight-for-height or acute malnutrition). Three percent of the children suffered Severe Acute Malnutrition.

Health status improvements do not distribute equally across the population. Table 1 shows that some inequities still remain: Estate residents, households where the mother has no formal education and poor people show higher mortality rates and prevalence of malnutrition.

Table 1. Selected health status indicators by socio-economic characteristics

	Child Health							Women 15-49 (ever married)	
Socio-economic characteristics	**NNMR**	**IMR**	**U5MR**	**LBW (<2.5 kg)**	**Wasted (W/H <2SD)**	**Stunted (H/A <2SD)**	**ARI symptoms**	**BMI < 17 (mod/severily thin)**	**BMI>=25 (overweight)**
Residence									
Urban	7	10	11	12.7	12.9	14.7	1.8	2.6	55.8
Rural	7	10	12	15.7	15.6	17.0	2.6	3.6	44.2
Estate	8	13	15	25.4	13.4	31.7	2.6	9.3	23.4
Mother's Education									
None	9	13	14	31.8	17.9	17.5	6.3	5.7	31.0
GCE level	8	11	12	15.5	14.9	15.9	3.0	2.9	48.2
Degree and above	3	4	6	12.5	8.7	12.1	1.6	1.7	50.4
Wealth Quintile									
Lowest	10	15	17	21.3	17.3	25.2	2.8	7.3	33.0
Middle	6	8	10	15.6	15.0	15.9	2.5	2.9	44.8
Highest	6	8	9	9.1	10.0	11.7	2.0	1.5	57.1

NNMR: Neo-Natal Mortality Rate; IMR: Infant Mortality Rate; U5MR: Under 5 Mortality Rate; LBW: low birth weight; W/H: weight-for-height; SD: standard deviation; H/A: height for age; ARI: acute respiratory disease; BMI: Body-Mass Index

Source: Sri Lanka Demographic and Health Survey 2016

Sri Lanka has eliminated some previously highly prevalent communicable diseases, such as Malaria and Lymphatic Filariasis, while reducing the burden of Leprosy below public health relevance. HIV prevalence is very low (number of infected cases estimated at around 4,000, of which 2,400 have been identified). Dengue –over 180,000 cases and 320 deaths in 2017—and Tuberculosis remain the two leading communicable diseases in terms of morbidity and mortality, although the latter has been targeted for elimination.

Non-communicable diseases have become the leading causes of death and disability, partly due to the changes in the demographic pyramid –the proportion of population above 60 years of age has grown from 9% in 2001 to 12.5% in 2011, and is projected to reach 25% by 2041—and partly to the health system's success in tackling the traditional causes of ill health.

The STEPS survey conducted in 2015 revealed that 1/3 of the Sri Lankan males use tobacco on a daily basis, and 35% consume alcohol. One-fourth of the males and 38% of the females are not engaged in

sufficient physical activity. More than 26% of the adults 18-69 years of age either have high blood pressure or take medication for it (41% in the group 45-59 y.o and 57% between 60-69 y.o.). Raised blood sugar (or medication to fight it) was found in 7.4% of the adult population (12.4% among 45-59 y.o. and 14.4% among 60-69 y.o.). One-quarter of the adult population had raised serum cholesterol.

The MOHNIM's Annual Health Bulletin 2015 listed the main causes of hospital admission and hospital deaths in that year. The main causes of admission were injuries and respiratory diseases, while neoplasms were in the tenth position. However, the main cases of hospital deaths were Ischemic Heart Disease, Neoplasms, and other NCDs; Injuries were the tenth cause of hospital mortality.

The WHO-SEARO 2017 Health SDG Profile of Sri Lanka estimates that the probability of dying before the age of 70 by an NCD is 17.7%. Suicidal mortality rate is 15.26 per 100,000[1] and that due to road traffic injuries 17.4 per 100,000 people, while the mortality attributed to indoor or outdoor pollution exceeds 25 per 100,000 population.

The Sri Lanka Burden of Disease Country Profile published by the Institute for Health Metrics and Evaluation attributes most premature deaths to NCDs –ischemic heart disease, diabetes, cerebrovascular disease, etc.—, self-harm and road injuries. Disabilities are caused by chronic pain, skin diseases, mental health conditions and NCDs. The list of ten leading conditions causing death and disability combined is the following, by order of DALYs caused:

1. Ischemic Heart Disease
2. Diabetes
3. Low back & neck pain
4. Sense organ diseases
5. Cerebrovascular disease
6. Self-harm
7. Skin diseases
8. Chronic Obstructive Pulmonary Disease
9. Asthma
10. Road Injuries

All available sources of information are consistent in identifying NCDs, mental health and road injuries as the new priorities that should be addressed in the SLESP. However, it needs to be considered that the absence of maternal and child conditions, as well as communicable diseases, from the list of leading BoD conditions is due to the mentioned previous success in addressing them, and therefore they should remain in the package of priority services. Thus, services to tackle the priority conditions in terms of BoD should complement, but not replace, most services currently provided.

It is also relevant that a number of issues, such as chronic pain, skin diseases and others are cause of much disability and should be tackled in the package design, even if they appear as relatively minor when compared to the main –MCH, NCD—programmes.

The SLESP interventions should be structured covering the traditional Reproductive, Maternal, Neonatal, Child and Adolescent health issues, as well as the main Communicable Diseases. The aim should be to maintain the current range of services, expanded for specific issues when necessary. NCD-related services are probably the main additional focus of the SLESP; they should cover at least the main cardiovascular risk factors and diseases, diabetes and chronic pulmonary diseases, as well as selected cancers, mental health and the complex health care needs of ageing population, among others. Finally, common conditions and services –e.g., emergency care or trauma care—should be

[1] Police data from 2016 reduces this figure to 14.3 per 100,000.

addressed separately, in a component more focused on services than in specific conditions or programmes.

THE SRI LANKA HEALTH SYSTEM

Health services are delivered by a variety of providers, grouped in public and private sectors, and according to the levels of care they provide (Fig 1).

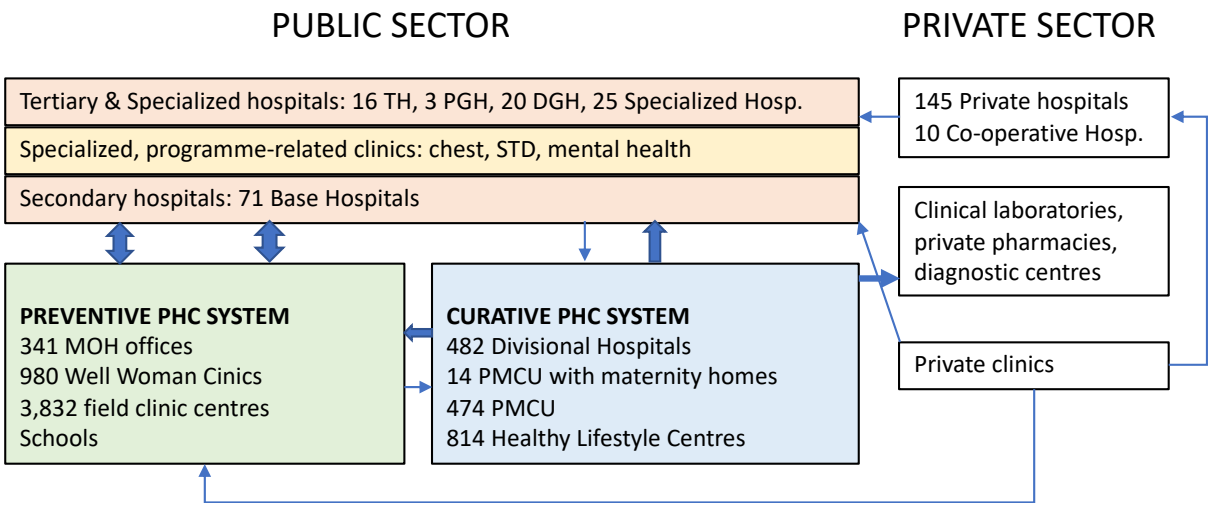

Figure 1. The Sri Lanka health care delivery system, and the referral links between components

Public providers

Public health care providers are classified in three sub-systems: preventive PHC providers, curative PHC providers and referral hospitals.

Preventive PHC providers

Preventive PHC services are structured in Medical Offices of Health (MOH), covering well-defined areas that coincide with the politico-administrative division of the country, at the level of Divisional Secretariat. Each MOH serves a population of approx 60,000-100,000 people. The MOH is headed by a Medical Officer (MO) and the core team is composed of Public Health Midwives (PHM) and Public Health Inspectors (PHI), complemented with Public Health Nursing Sisters and supervisors.

The MOH provide the whole range of reproductive, maternal, newborn, child and adolescent health services, in collaboration with the secondary hospital sector, where most deliveries happen and where patients are referred when necessary. The relationship between the two levels is fluid. In addition to the MOH office itself, services are provided using an extensive network of field clinics – often government or community facilities that are used for health care activities in an intermittent schedule—, as well as users' homes for selected services, including antenatal and postnatal care. Users of the different services (e.g., antenatal care) are required to register with the specific provider (e.g., a public health midwife) active in their area of residence.

This sub-system also delivers the school health programme and runs –so far limited—adolescent-friendly services. It also includes dental health services, delivered both at schools and clinics.

The MOH integrates Well Woman Clinics (WWC), used for health information and education, and for the screening of cervical and breast cancers, as well as for Hypertension, Diabetes, and other NCDs.

The MOH are in charge of coordinating and implementing public health interventions in the area, from vector control initiatives, to the tracking of contacts of new TB cases. They also register and report the cases of communicable diseases of compulsory notification of area residents, regardless of where the diagnostic has been made. Other tasks include environmental health, control of water safety, or health inspections to ensure food safety and reduction of occupational health hazards.

Curative PHC services

There is an extensive network of Primary Medical Care Institutions devoted to the provision of curative services. Two main types of facilities are recognizable:

> Primary Medical Care Units (PMCU), previously known as Central Dispensaries, are relatively basic facilities, devoted to outpatient care. Services provided include OPD consultations, dressings and injections, and drug dispensing. Some PMCUs have dental services and most do not have laboratory. PMCUs are staffed by Medical Officers (usually one or two) or Assistant Medical Officers (AMO), as well as drug dispensers. Nursing staff is rare at this level. Most PMCU host MOH field centres, where family planning, maternal care and immunization are provided by the facility team, with support from the PHM/MOH active in the area.
>
> Divisional Hospitals (DH) are, in essence, PMCUs with inpatient capacity. The number of MO is higher because they provide round-the-clock service, and usually have some nursing staff. Some may have laboratory, and even a Public Health Laboratory Technician able to perform microscopy examinations. Some special clinics are usually provided at this level, such as NCD or mental health clinics, in addition to act as field clinic for MCH and other activities.

PMCU and DH usually have Healthy Lifestyle Centres (HLC), functional (and sometimes physical) units for the screening of selected NCD (e.g. Hypertension and Diabetes), including health education. HLC have portable devices for the determination of blood sugar.

Differently from the preventive services, PMCU/DH do not cover specific territories, administrative divisions or population. Users can chose freely which provider of curative care –from PMCU to tertiary care facilities—they attend when sick.

Referral Facilities

There is a variety of referral facilities, from first-level referral hospitals to specialized units. Some facilities, such as STD clinics, do not include inpatient care, but the provision of specialized services linked to specific conditions or programmes.

Secondary care hospitals

Base hospitals (BH) of different levels (A,B) are secondary level institutions that provide at least the four main specialties of Internal Medicine, Paediatrics, Obstetrics & Gynaecology, and Surgery, including theatre and blood bank, delivered by medical consultants with the assistance of medical officers. These hospitals may provide additional services, depending on resource availability. They also have support services, such as laboratory, radiology and pharmacy, among other services.

BH are the first level of referral for PHC institutions –both preventive and curative—. However, referred patients can still chose which hospital they will attend.

BH are funded and managed by provincial and district health authorities.

Tertiary care hospitals

Teaching Hospitals, Provincial General Hospitals and District General Hospitals provide secondary and tertiary care services, with ranges according to their location and availability of staff and equipment. All these hospitals are funded and managed centrally by the MOHNIM. These facilities are staffed by medical consultants, general medical officers, nursing personnel, and technicians of the different specialties (lab, radiology, pharmacy, etc.).

A few, highly specialized tertiary hospitals –e.g., Maharagama Cancer (Apeksha) Hospital, Lady Ridgeway or Sirimavo Bandaranaike paediatric hospitals, Castle Street Hospital for women, Eye hospital, mental hospital —play a role as centres of excellence.

In addition to the medical clinics for the attention of referred cases and managed by appointment, all secondary and tertiary hospitals run a PHC-level, walk-in OPD service. As mentioned previously, patients can choose their provider in every occasion they seek care.

Special clinics

Some public health programmes (e.g. Tuberculosis, STD/HIV/AIDS) run their own clinics, usually at district level. Staffed by trained or specialized MO, these clinics are involved in the final diagnosis of the relevant conditions (e.g., diagnostics of tuberculosis or sexually transmitted diseases are only final when assessed at a Chest or STD clinic) and the management and follow up of the patients.

Some of these programmes provide services intermittently at district or BH level, by deploying their consultants –and drugs and supplies—to these "branch clinics". This is the case for chest, STD and mental health clinics, for example.

Emergency care

The emergency care services cover both the management of emergency cases at the health facilities, and the coordination and management of massive emergencies –either man-made or natural—. Sri Lanka suffers from frequent natural hazards including floods, landslides, cyclones, droughts, wind storms, coastal erosion, and others. The MoHNIM has set up an Emergency Operations Centre, in charge of coordinating information sharing as well as the transfer of resources to emergency sites.

All hospitals, from Divisional Hospital up, are to provide emergency services of increasing level of complexity. Most secondary and tertiary hospitals, and some DH, operate Emergency Treatment Units (ETU), in many cases complemented with Preliminary Care Units (PCU) or triage units. Road injuries are the first cause of hospitalization in Sri Lanka, and their management requires well-structured teams and services. There are public and private ambulance services. The so-called "1990" publicly-managed ambulance (pre hospital) service is expected to cover the whole country in the short term.

Private providers

There are three main groups of providers in the private sector:

Hospitals, with profile and standards of quality of care comparable to those of the public system, although with large differences in terms of waiting time and hotel facilities.

Clinics, either solo or group practices, providing general or specialized care. Both clinics and hospitals rely heavily on MO and consultants working in the public sector and who are allowed dual practice. According to the Census of Private, Cooperative and Estate Hospitals 2013, there were at least 1,900 public sector doctors working part-time at private facilities. Although the main regular users of the private sector are the better off population, even poor people use these services because of convenient hours, lower waiting time, availability of diagnostic tests, and perceived quality.

An ensemble of private outlets providing diagnostic services (e.g. lab, radiology), as well as private pharmacies.

Indigenous Systems of Health Care

According to the MoHNIM Ayurveda Department, there are almost 20,000 Ayurveda physicians registered in the Ayurveda Medical Council, as well as 8,000 traditional Medical Practitioners. Ayurveda practitioners are part of both public and private health sectors. In the public sector there are more than 500 institutions, operating more than 2,000 beds.

Outdated information from 2010 reports substantial activity in the public Ayurveda sector, of over 3 million outpatient consultations and more than 40,000 hospital admissions. There is no information on the activity performed by the private Ayurveda sector.

Referral System

Although the public system is structured in a three-tiered model (primary, secondary and tertiary care), the actual referral paths do not necessarily follow its logic. Despite the referral system is unanimously described as faulty, some situations seem to appear:

MOH-Hospital: the relation is described as fluid and bi-directional, particularly for selected services, such as maternal health, which is provided in collaboration by both levels. Screening, diagnostic and follow up of certain communicable diseases (e.g. Tuberculosis) is also done in collaboration. Some clinics –e.g., mental health—deploy hospital-based specialists to the MOH level. Finally, information from hospitals is channelled to MOH offices via the notification system to conduct the necessary investigations and to take preventive measures at field level.

PMCU/DH-Secondary/Tertiary Hospital: the relation seems more unidirectional. Primary level institutions refer patients to hospitals but little sharing of their follow up is involved. Partly to blame is the absence of a stable PHC doctor who can relate with the hospital consultants on behalf of the patient.

MOH-PMCU/DH: MOH staff do not usually refer patients to the primary curative level. On the other hand, PMCU/DH refer patients to MOH for the specific services they provide (maternal care, immunization, screening of cervical cancer, etc.).

Public-Private: rather than actual referral, there probably is a transfer of patients from PMCU/DH or even hospitals to private facilities, in search of faster, higher quality services. It cannot be ruled out that patients leave the private sector for selective, high-quality services only provided at tertiary-level public hospitals. The result is that the overwhelming majority of inpatient care is provided at public hospitals.

On the other hand, users who perceive their condition as serious and not suitable for a PHC facility, refer themselves directly to higher-level hospitals.

Service Availability

According to the recent Service Availability and Readiness Assessment (SARA), conducted in 2017, the profile of the services provided by level can be summarized as follows (Table 2):

Tertiary hospitals provide most of the services to them attributed, although there are some significant exceptions. For example, only ¼ of these facilities perform the HbA1c test.

The gaps are wider at Base Hospital level: more than 25% do not provide comprehensive surgical services, one-third does not offer EMOC, 20% cannot assess chronic complications of diabetes and ¼ do not have physiotherapy among their range of services.

Divisional Hospitals and PMCU show a similar profile (although most DH offer delivery services, those are rarely used), focusing on outpatient curative care, which however is limited in its capacity to screen, diagnose and manage.

As expected, MOH shows consistency in the provision of preventive and MCH services.

In general, private hospitals (there is no information on the characteristics of private PHC services) show high variability in the range of services they provide.

Table 2. Availability of selected services, by level of care

Service/Device/Test	Tertiary Hospital	Base Hospital	Divisional Hospital	PMCU	MOH	Private Hospital
Diagnostic						
Full Blood Count	98%	93%	11%			72%
Ultrasound	95%	90%				75%
HbA1c	24%					
Glucometer	78%	81%	75%	61%	75%	79%
Surgical services						
Suturing	97%	93%				78%
Abscess incision	100%	90%				77%
Dilation & Curettage	79%	67%				62%
Hernia repair (elective)	87%	73%				68%
Closed repair of fracture	85%	60%				54%
Reproductive, Maternal, Newborn, Child and Adolescent Health						
FP-IUD insertion	100%	87%	52%*	18%*	97%	53%
Antenatal Care	100%	89%	90%*	65%*	100%	65%
Delivery Care	100%	100%	82%			56%
Corticosteroids in pre-term	100%	85%	26%			38%
BEmONC	100%	67%				34%
CEmONC	100%	62%				33%
Routine Immunization	72%	68%	66%*	46%*	100%	24%
Sick Child	100%	100%	89%	83%	100%	73%
Malnutrition Diag & Mngt	100%	97%	79%*	76%*	100%	59%
Adolescent health service	58%	62%	38%*	35%*	82%	29%
Communicable diseases						
TB diagnostic (microscope)	91%	92%	25%	1%		48%
Dengue lab diag (FBC)	91%	70%	12%			
Non-Communicable Diseases						
Diabetes screening	100%	100%	91%	91%		96%
Screening retinopathy	94%	80%	41%	16%		48%
CardioVasc Risk Assesst.	56%	60%	63%	68%		7%
CVD management	100%	99%	56%			39%
COPD diagnostic & mangt	100%	99%	90%	80%		81%
Clinical oral examination	97%	92%	69%	43%	53%	55%
Clinical Breast exam.	100%	87%	63%*	62%*	96%	69%
Cervical Cancer screening	97%	63%		23%*	100%	54%
Mental Health (OPD)	97%	95%	70%			64%
Physiotherapy	100%	74%				64%

* services provided as MOH field clinic

Source: Service Availability and Readiness Assessment Sri Lanka 2017

Human Resources

According to the Annual Health Bulletin 2015, there were 140,000 workers in the public health sector at the end of that year. Forty-one percent of the workforce was composed of support personnel. Just above half of all staff worked at MOHNIM-managed institutions, mostly tertiary care hospitals.

Although staff is classified in a myriad of categories, some of which with skills limited to a specific task (e.g., dispensers, ECG or EEG recordists, etc.), the core is composed of Medical Officers, Nurses,

Midwives and Public Health Inspectors, as well as Dental Surgeons, with the addition of staff specialised in support services (e.g.; Medical Lab Technologists, pharmacists, etc.). Table 3 presents the distribution by main categories by December 2015, as well as their usual workplace, by level.

Table 3. Distribution of main staff categories, and usual workplace, by level. 2015

Category	Number	Most common workplace		
		Hospitals	PMCU/DH	MOH
Medical Officers	18,243	✓	✓	✓
Assistant Medical Officers	936		✓	
Nurses	42,420	✓		
PH Nursing Sisters	290			✓
Public Health Inspectors	1,604			✓
Supervising PHI	224			✓
Public Health Midwives	6,041			✓
Supervising PHM	330			✓
Hospital Midwives	2,765	✓		
Pharmacists	1,504	✓		
Dispensers	1,177		✓	
Medical Laboratory Tech.	1,554	✓		
Microscopists (PHLT)	245		✓	
Radiographers	588	✓		
Physiotherapists	519	✓		
Occupational Therapists	90	✓		
Dental Surgeons	1,340	✓	✓	
School Dental Therapists	349			✓
Dental Tech	50	✓		
Ophthalmology Tech.	178	✓		
Food & Drug Inspectors	55			✓
ECG recordists	298	✓		
EEG recordists	66	✓		
PH Field Officers	403			✓
Others	746	✓	✓	✓
Skilled personnel	***82,015***			
Attendants	9,070	✓	✓	✓
Support	49,120	✓	✓	✓
Total	**140,205**			

Source: adapted from Annual Health Bulletin 2015

These figures translate in an availability of 87 MO, 202 Nurses and 42 Midwives per 100,000 people. Most MO (12,000 out of the 18,000) work in hospitals, 1,800 are specialists and 1,450 are intern MOs, while 636 work as MOH or AMOH.

Coverage and utilization

The substantial network of facilities described above has achieved remarkable results in terms of service utilization and coverage. According to the DHS 2016, coverage of antenatal care, delivery by skilled birth assistant at a health institution, and immunization is close to 100%. Ninety-four percent of all deliveries happen at public institutions –although the figure drops to 75% for the richest quintile and when the woman is highly educated—.

Sixty-five percent of currently married women use a Family Planning method (54% if only modern methods are considered), while there is an unmet need of 7.5% of the women. Most (94%) FP services are availed in the public sector. Only 21% of women 15-49 y.o. had ever had a PAP smear, although this figure exceeds 30% in women 35 years and above.

Although coverage of preventive services is almost uniformly high across the population layers, differences appear when looking at the qualifications of the attending personnel (Table 4). Thus, highly educated and richer women are more likely to be attended –both for ANC and during the delivery—by a specialist. Undergoing a PAP smear is less probable for estate residents, as well as for uneducated and poor women.

Table 4. Coverage of selected services, by socio-economic characteristics

Socio-economic characteristics	PAP test	Delivery by specialist	ANC by obstetrician
Residence			
Urban	18.3	32	68.5
Rural	22.4	27	65.5
Estate	9.2	19	51.1
Mother's Education			
None	9.0	20	44.9
GCE level	22.3	24	61.3
Degree and above	21.6	45	83.7
Wealth Quintile			
Lowest	12.1	21	50.3
Middle	22.3	24	66.8
Highest	27.6	47	81.2

Source: Sri Lanka Demographic and Health Survey 2016

Around 9,500 cases of Tuberculosis –of which 9,000 new ones—were reported in 2015, with a case detection rated of 64% and a treatment success rate of 83%. Multi-Drug Resistant Tuberculosis (MDR-TB) is limited to 0.13% of the cases. Just above 2,000 cases of Leprosy (around 10 cases per 100,000 population) were detected in the same year.

Cumulatively, 2,308 cases of HIV+ have been recorded since 1987. In 2015, 235 new cases were reported (and 285 in 2017), out of more than one million tests –including blood donations and antenatal care testing. Almost one thousand people are under care and 803 were on ART in 2015, and almost 1,300 received this treatment in 2017.

The public sector curative system attended 54 million OPD consultations (or 2.6 consultations per capita) in 2015, as well as admitted more than 6 million patients to government hospitals, resulting in a service utilization of 30 hospital admissions per 100 people, among the highest in the world. It is estimated that the private sector would add more than 400,000 admissions (or 6% of total hospital activity) and that it attended a comparable number of OPD cases, resulting overall in a service consumption around 5 OPD consultations per capita per year, evenly split between public and private sectors. Bed Occupancy Rate (BOR) is variable, but in general secondary and tertiary hospitals show high BOR, while DH record extremely low BOR.

There is no updated information on the level where OPD care is conducted, nor on the reasons for consultation, although it is believed that tertiary hospitals are overburdened with primary-level activities, while many PMCU/DH are underutilized. An *ad hoc* survey was conducted as part of the

SLESP design process obtaining data on one day of OPD activity from more than 80 institutions ranging from PMCU to teaching hospitals.

The total number of cases recorded exceeded 8,000 with an average attendance of 82 consultations per facility. Female patients make 60% of the total across the country, and the difference with male ones is greatest in the 19-65 age group. More than 53% of the patients are of working age and almost 20% are 60 years or above.

Lack of coding makes it difficult to analyse causes of consultation (the database records more than 1,000 different diagnostics). The most frequent diagnostic is Upper Respiratory Tract Infection (1,283 cases), followed by viral fever (605) and Lower Respiratory Infection (412). Among NCDs, asthma is recorded in 160 cases, Hypertension less than 100 and diabetes in fewer than 20. Most cases appear to be different combinations of little-defined symptoms and mild injuries, the most common being fever and influenza-like symptoms, followed by musculoskeletal pain. Although with some differences in proportion, the profile of the patients' complaints is similar at the OPD from primary to tertiary level of care.

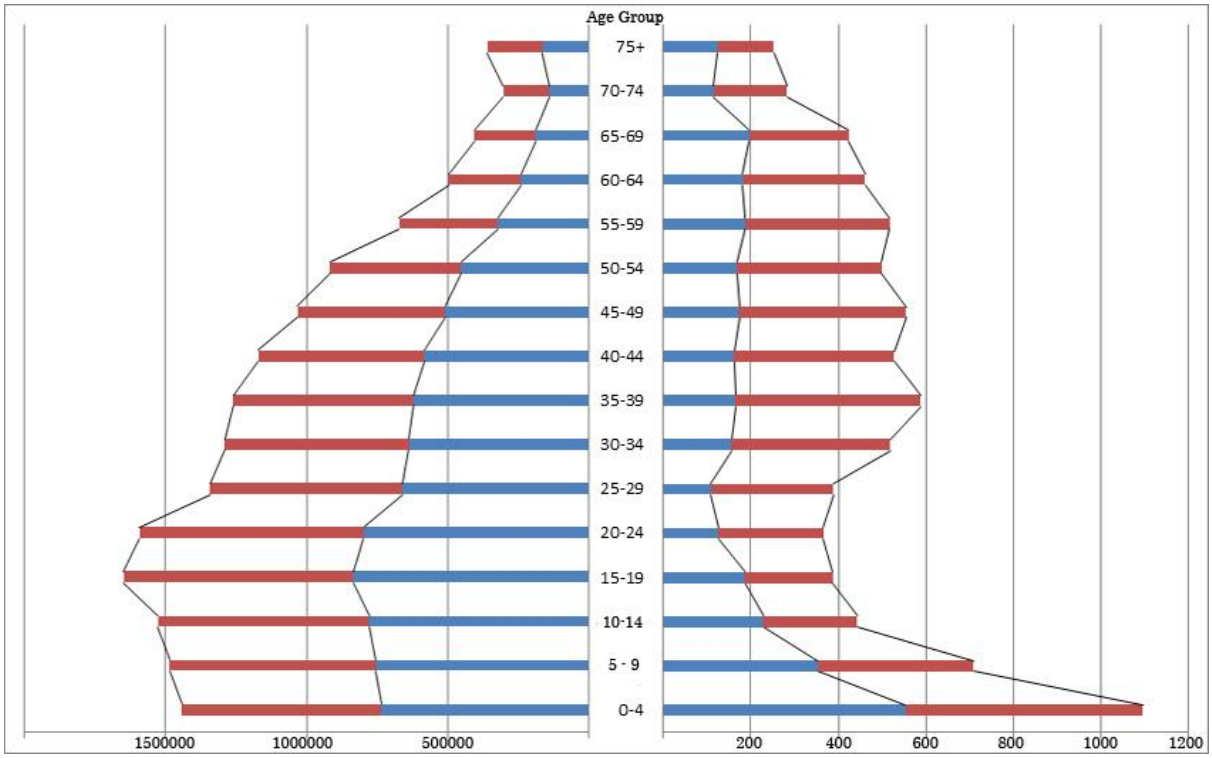

Figure 2. Distribution of patients by age group, compared to population structure of Sri Lanka (left). 2018 Rapid OPD survey

A recent assessment[2] of the NCD services at primary and secondary public facilities found insufficient facilities for laboratory investigations, with very limited access to tests such as HbA1c, as well as recurrent shortages of some essential NCD drugs. Almost 400,000 people were screened for NCDs in 2015, resulting in the detection of 16% hypertensives, 10% diabetics and 25% overweight, among others. Less than 0.5% had a CVD risk >= 30%.

[2] Weerasinghe MC, Weliange SdS, Basnayake S, Bopage G and Karunathilake MW 2017. As assessment of the major Noncommunicable Disease (NCD) Programme in secondary and Primary Health-Care institutions, Sri Lanka. Health System Research Unit. Department of Community Medicine. University of Colombo

More than 28,000 new cancer patients were registered in 2015. The most common cancers among females were breast, cervix, ovaries and thyroid. Among males, oral cancers, followed by trachea, bronchus and lungs are the most prevalent. Reportedly, cancers related to infection and poor socio-economic status (e.g., cervix, stomach, oesophagus) are falling, but they are being counterweighed by the increase of other cancers.

UHC POLICY AND RESTRUCTURING PHC TO PREPARE FOR THE FUTURE

A “Policy on Healthcare Delivery for Universal Health Coverage” was approved by the Cabinet of Ministers in April 2018, with the goal of ensuring UHC for all citizens, relevant to the disease burden experienced in the country through a well-integrated, comprehensive and efficient health service.

The main strategic directions are the following:

Reorganization of health care delivery by establishing an appropriate PHC model for Sri Lanka (the recommended model for PHC is referred to as "shared care clusters")

Strengthening Human resource at Primary level curative institutions, including the creation of a health workforce that considers among others the figure of a family doctor (projected as one doctor per 5,000 individuals), community nurses, community psychiatric nurses and others.

Providing access to all essential medicines, laboratory tests, at primary care level and other levels of care as appropriate

Providing basic emergency care at primary care level

Creating an environment within the primary care hospitals which will improve its utilization by the people and also retain healthcare personnel, especially in rural areas.

Other strategies include the setting up of an appropriate level of specialization in all clusters, strengthening management procedures, introduction of performance incentives, recognition and regulation of private providers (who can eventually become contracted by the public system), citizen engagement and empowerment, strengthening of the community health services, and reinforcement of other system components, such as the Health Information System, supply chain management, or the use of the international classification of diseases in primary care coding.

The PHC reorganization model has evolved over a considerable period with extensive stakeholder involvement. Key development partners that have committed to the agenda have also contributed in designing the model. An improved model of PHC service delivery is designed (Fig 3) with the following characteristics:

The main objectives and strategies are:

The PHC preventive system (MOH areas and field clinics) will remain unchanged. It will be strengthened with staff and equipment according to the population to serve and actual workload.

Coordination between MOH and PMCU/DH will be strengthened, and specific responsibilities (e.g., for the prevention, screening, diagnostic and management of NCDFs) will be defined. The MOH areas will remain as present , only linked to PMCU/ DH services functionally. The reorganized “cluster” will provide a package of clearly-defined services to the population living in the area of influence.

A new local health system for the provision of health care will be structured by clustering PMCU/DH services with an Apex hospital (level of Base hospital or above) able to provide first-referral for the PHC institutions. PMCU and DH are considered in the same level, although DH (to be renamed PMCU with beds) can provide support services to smaller PMCUs.

Every potential user will be assigned to a specific, PMCU/DH -based medical officer (initially 5,000 people for trained MO), and every patient will have a clinical record with a unique identification number in his/her assigned facility. Comprehensive services will be provided by the primary care team applying the family practice principles.

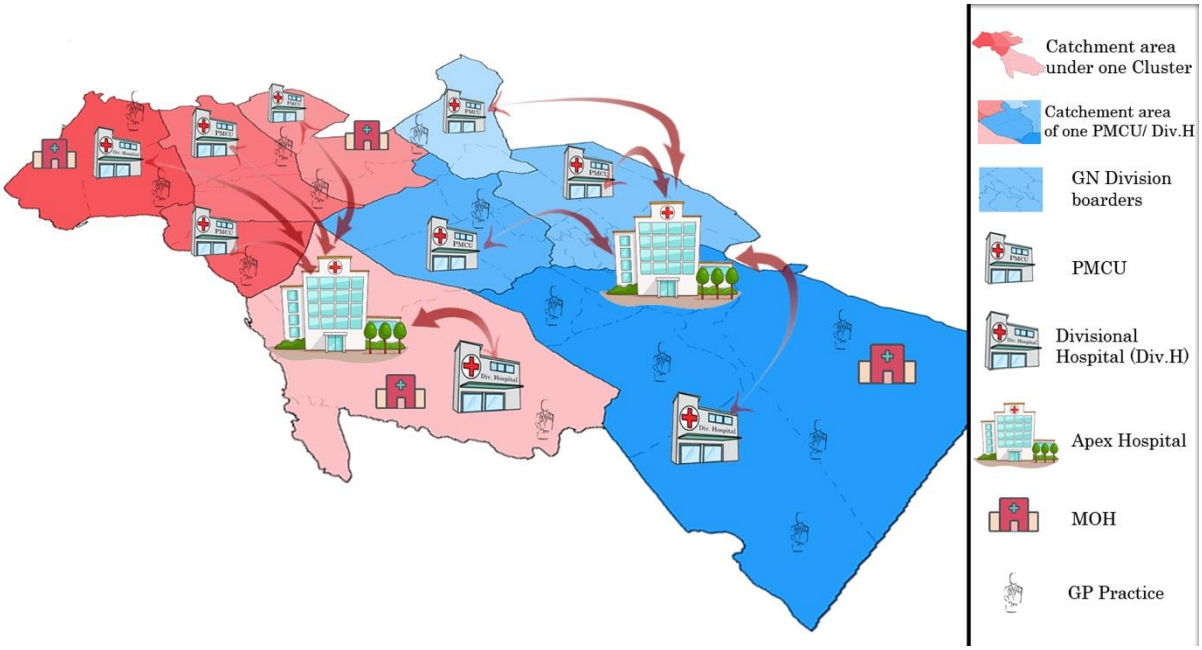

Figure 3. Proposed shared care cluster model for PHC service delivery (MoHNIM)

A proper referral system will be designed and implemented, giving due priority to patients referred from PHC institutions over self-referred patients. Adequate appointment systems will be designed and enforced.

Specialized clinics may be conducted at PHC level by hospital-based consultants with the aim of improving access and facilitating in-service training of PHC staff.

The cluster approach is called to become the basic organization of health service delivery in Sri Lanka. Therefore, the SLESP should be composed of the services to be provided by this system.

The cluster forms a unit of management. In each cluster, services –clinical (both facility-based and outreach) laboratory, support— may be combined differently to obtain comparable results in terms of utilization and coverage. Targets should be set across cluster institutions, so each is aware of its own responsibility in the achievement of health care coverage. Resources should be mobilized for the whole cluster, and distributed and used in the best way to obtain the best return, which will require innovative approaches in resource allocation and management.

THE SRI LANKA ESSENTIAL SERVICE PACKAGE (SLESP)

The SLESP consists of a list of interventions on personal care, covering health promotion, as well as primordial, primary and secondary prevention, screening, diagnostic and management of priority conditions.

Although most services are recognizable in the existing MOHNIM organization (e.g., most services linked to the life course fall under the responsibility of the Family Health Bureau), departments, units and programmes are not necessarily reflected in the SLESP structure. Thus, for example, occupational health issues are included as part of the NCD-respiratory diseases component, or in the dermatology interventions to be provided as part of the OPD services, but not as a specific service.

Objectives of the SLESP

The SLESP has some complementary objectives:

The main objective is to become a statement of entitlement: all people of Sri Lanka are entitled to avail the complete range of services included in the package, and the government will ensure that these services are provided in all areas of residence –urban, rural and estate settings—and to all population groups, particularly the most vulnerable ones, including migrant workers and their families, and urban deprived populations, among others. The SLESP is to be provided in routine as well as in emergency situations.

The SLESP should be a tool for the structuring of the newly adopted approach to provide primary care services, by defining the services to be provided at each level of care.

Similarly, the SLESP should contribute to the organization of a functional referral system, both within the PHC cluster and beyond.

Once the whole design process –including costing and feasibility analysis—is finished, the SLESP should become a tool for planning, resource allocation and monitoring of health system performance.

The SLESP should facilitate integration of vertical programs and approaches to service delivery, and eventually assist in the incorporation of private providers to the overall strategy.

Design process

The production of the SLESP is coordinated by the MoHNIM's Management, Development and Planning Unit. A high-level committee will be created to review and endorse the SLESP at the end of the design process.

Rather than taking the formal but protracted approach of analysing the cost-effectiveness of every intervention proposed for their inclusion in the package, the methodological option was to adopt the list of services currently provided, which have proved their effectiveness in the country context, and which can obviously be delivered by the Sri Lanka health system. Relatively new services are extracted from approved strategies and plans, and compared to the international literature to assess their cost-effectiveness.

Broad, introductory meetings with all relevant stakeholders were held to agree on the approach and clarify the scope of the exercise. Attendants included all MoHNIM departments, professional associations, frontline staff, academics and development partners.

Individual encounters with departments, units and programmes involved in service delivery followed, aiming at the identification of the interventions recommended by the relevant managers for their inclusion in the ESP. Documents –policies and plans, strategies and guidelines—supporting the selection of services were collected in the process.

This first draft of the SLESP contains the list of proposed interventions/services by the level at which they should be delivered, as suggested by the respective managers/experts. Not all are equally implementable in the short/medium term, and their integration in the definitive SLESP will depend on the discussions still to be held, as well as on the result of the costing and feasibility analysis exercises to be conducted in the next weeks.

The SLESP here proposed is limited to the services that can be provided by the "cluster health system" during a period of five years from the moment of its adoption by the relevant authorities.

ESP structure: one cross-cutting intervention, four components, and five main delivery sites

Following the analysis of the Sri Lanka Burden of Disease, the SLESP is structured in four main components:

Services linked to the **life course**, which includes interventions on Reproductive, Maternal, Neonatal, Child and Adolescent health, as well as Elderly care.

Communicable Diseases, with special focus on control and prevention of all communicable diseases with possible impact on public health.

Non-Communicable Diseases, which include interventions on the most common NCDs – Cardiovascular risk factors and diseases, diabetes and chronic pulmonary diseases—, selected cancers, and mental health.

Services and platforms groups services which are not linked to specific conditions, and include Emergency care, Outpatient and Inpatient Care, Surgery and Trauma, Dental care, Rehabilitation and Palliative Care. This component also includes support services: Laboratory, Radiology and other diagnostic means, and Pharmacy.

In addition to disease-specific interventions that focus on diagnostic and management, all services should integrate health promotion, with strong health communication and education components aiming at strengthening people's capacity to decide on their own health.

The SLESP is to be delivered at five main delivery sites. While the description of the sites represents the standard for the level, there may be facilities with very different characteristics, particularly in Estate and Urban settings. In the preparation for implementing the SLESP, adaptation, improving and upgrading of many facilities may be necessary.

Users/patients home and community, where health promotion and primordial prevention are conducted. Some preventive and curative services can be delivered at this level.

Medical Offices of Health and field clinics provide most services linked to the life course, in collaboration with hospitals and curative PMCU/DH. Satellite clinics should include all PMCI in the area. This delivery site includes Well Woman Clinics for the screening and referral of selected NCDs. Some of the field clinics could deliver health promotion activities on a continuous basis.

Primary Medical Care Units focus on the provision of basic preventive and curative services related to NCDs, as well as the management of common conditions. PMCUs (including DH) should have a HLC, whose role may require some revision.

Divisional Hospitals add more comprehensive services to that of a regular PMCU. In addition to limited inpatient care, DH can house support and specialized services for the population attended by several PMCUs in the area, such as laboratory, day care for mental and other cases, physiotherapy, or palliative care teams.

Apex hospitals (Base hospitals or other facility able to provide the complete range of secondary care services) should focus on the provision of referral services –inpatient care,

investigations, medical clinics, deliveries, management of obstetric emergencies, trauma and surgical care, etc.—. If the hospital has a general OPD service, it should be managed in the same way self-standing PMCI are (e.g., covering a defined geographical area).

Summary of services by component and sub-component

Behaviour change communication, health education and raising awareness about the users' own health may not compose a specific service but must be part of all. At every opportunity, health staff should highlight and reinforce the patients' capacity and responsibility to make decisions on their own health, as well as the environmental and behavioural factors that may contribute to improve or impair their health status. Utilization of the extensive network of MOH field clinics to provide structured health promotion activities can be explored, for example for the organization of activities that empower users while giving them focus on their behaviour change, such as aerobic exercise, healthy cooking, smoking reduction or life-skills awareness.

Services linked to the life course: reproductive, maternal, neonatal, child and adolescent health

Maternal Health services begin with ***pre-conception care***, when newly married couples are identified and registered by the relevant PHM, and counselling is adequately administered. ***Antenatal care*** includes the initial assessment by PHM and MOH, as well as referral to the chosen hospital, to be evaluated by a O&G consultant and where routine ultrasounds are performed. Normal pregnancies are followed by PHM and MOH and complications are referred to the relevant hospital. In principle, ***delivery*** should be planned to happen at a hospital (usually with surgical capacity); complications should be identified and the patient referred. Post-natal care is provided at the place of delivery, as well as at home and MOH clinics.

Newborn care is divided between *immediate*, when essential newborn care components –including resuscitation, BCG application and screening for congenital hypothyroidism—are delivered, at the place of child birth a hospital) *early* and *late*, when complications (e.g. jaundice, omphalitis, sepsis) are identified and solved or referred (at home and MOH clinics).

Child immunizations are delivered routinely according to the following national schedule, mainly in the three settings of MOH clinics, school and hospital.

Table 5. National immunization schedule 2017

Age	Vaccine	Delivery site
Birth	BCG	Hospital
2 months	OPV & Pentavalent-1; fIPV-1	MOH & clinics
4 months	OPV & Pentavalent-2; fIPV-2	MOH & clinics
6 months	OPV & Pentavalent-3	MOH & clinics
9 months	MMR-1	MOH & clinics
12 months	Live JE	MOH & clinics
18 months	OPV & DPT-4	MOH & clinics
3 years	MMR-2	MOH & clinics
5 years	OPV & DT-5	School
10 years (females)	HPV-1 & HPV-2 (at 6 months interval)	School
11 years	aTd	School
15-44 years (females)	Rubella-containing vaccine (MMR) for those who have not been vaccinated earlier)	MOH & clinics

Other **child health** issues include ***nutrition***, with the implementation of the Infant and Young Children Feeding practices, growth monitoring and the identification and management of cases of moderate (usually by the MOH system) and severe acute malnutrition (in hospital, with the supervision of a paediatrician) and the identification and management of ***development*** failures and management of ***sick children***. Child health care is one of the areas where the need for collaboration between the three system sub-components –PHC preventive, PHC curative and referral hospital—is more evident.

School health includes counselling on issues that mark the transition from childhood to adolescence, administration of immunizations and screening for selected conditions. **Adolescent health care** is closely related with school health, starts at school premises and continues later by abounding on the same topics. Physical activity and healthy diets are essential components of these services.

Family Planning is in general delivered by PHM, under supervision of MOH whose presence is required when the chosen method is either IUD or hormonal implants. Permanent methods are provided at secondary or tertiary level hospitals

Education is an important element to prevent **Gender-Based Violence.** Health providers at all levels should be able to identify potential GBV situations and to deliver appropriate care to GBV victims.

In terms of **Elderly care**, the main challenge is to set up the criteria to identify which individuals require medical care, differentiating between lonely from frail elderly people, and social from medical cases. To the extent possible, care should be provided as close to the patient's home as possible, and day-care-providing teams can be set up based at DH level.

Communicable Diseases

In general, the role of the PHC system regarding the priority communicable diseases encompasses clinical suspicion, proper early management, rational referral, and notification to public health authorities. Actual management usually happens at hospital level, and often proper diagnosis (if indicated) requires techniques only available at higher level hospitals and national level (i.e. Medical Research Institute).

The vast majority of communicable diseases, in the form of acute cases of respiratory infections, diarrhoea or fever, are managed (without etiologic diagnostic) at PMCU/DHs, within the management of common acute conditions.

District-based Chest clinics play the main role in the diagnostic and management of **Tuberculosis** patients. The PHC system's contribution focuses on identifying and referring potential cases, and participating in the DOTS approach. Some DH may provide lab services useful for follow-up of patients and for setting a branch clinic linked to the district facility.

The priority in the diagnostic and management of **Dengue** is to make available the presumptive diagnosis (consisting of a Full-Blood Count performed in the third day of fever) at PMCU/DH and to deploy capacity to identify leakage as early as possible. High-risk patients (children, pregnant women, chronic diseases) are to be referred to hospital level, and those with Dengue Haemorrhagic Fever should be managed in a High Dependency Unit at the referral facility.

Although **Malaria** has been eradicated from Sri Lanka, there are imported cases and the system must maintain the capacity to identify them. Treatment is to be provided at hospital level, while follow-up will be PHC responsibility. The primary level can incorporate screening with RDT in the future.

The PHC system role in the prevention and management of **STD/HIV/AIDS** consists of counselling on safe sexual practices and reduction of other risk factors, facilitating testing (e.g. pregnant women) and referring patients for their management at the district STD clinic.

All cases of **Leprosy** should be diagnosed and managed by a dermatologist. The role of the PHC services is to screen and refer suspected cases, and in the future may expand to participate on the follow up of patients in treatment.

Management of **Leptospirosis** patients requires the collaboration of the three subsystems: cases are suspected by the PMCU/DH, diagnosed and managed at DH/Apex hospital level (although patient with no organ involvement could be managed at PMCU level), and contacts and environment investigated by the MOH system (similarly to dengue).

The possibility of introducing post-exposure rabies vaccines, as well as anti-venom for snake bites, at PHC level should be assessed.

Non-Communicable Diseases

The "cluster health system" designed in the PHC reform should be able to deliver most interventions for the prevention, screening, diagnostic and management of all priority NCDs. In some cases (e.g., mental health clinics), this may imply the transfer of some responsibilities to the PHC teams.

All levels of service delivery should be involved in the primordial and primary prevention of **cardiovascular diseases**[3] (CVD) through the adoption of healthy lifestyle and the reduction of exposure to risk factors. Screening for CVD and total risk assessment should be done at every possible opportunity, not limited to the clinics –Well Woman Clinic and Healthy Lifestyle Centres— specifically set up for that purpose. Management of uncomplicated CVD cases should be conducted at PMCU/DH, while initial care for acute complications should be referred to apex hospital level. Identification of chronic complications (e.g., retinopathy or peripheral neurologic and vascular insufficiency) should gradually be assumed by PHC providers with the support of the relevant hospital teams.

Screening for **diabetes**, as well as diagnostic and characterization of many NCDs requires the PMCI to be able to request lab tests and investigations currently limited to hospital settings. Other than difficult-to-control insulin-requiring diabetes patients, most cases should be managed at PHC level.

Chronic respiratory diseases should be managed at primary level, only requiring hospital support for specific investigations (e.g., spirometry) and inpatient management of severe complications and exacerbations.

Active screening for **Chronic Kidney Disease** (CKD) should be implemented by MOH teams in selected sites of districts with high prevalence, with support from curative PHC institutions. Positive cases should be managed at hospital level under supervision of a nephrologist.

Identification of **mental health** issues requires the collaboration of staff of all service components, particularly reproductive and maternal care, as well as the school health programme. At present, these cases are systematically managed by specifically-trained Medical Officers. While they should remain involved in the accurate diagnostic of the conditions and the prescription of complex psychotropic drugs, management and follow-up of mild conditions should be handed over to PMCU/DH teams.

Screening for Breast and Cervical **Cancers** will remain responsibility of the MOH system. For oral cancer, all elements involved in the screening of risk factors and on the provision of dental care should collaborate to identify and refer potentially malignant disorders.

Two service delivery approaches, the Healthy Lifestyle Centres and the Well Women Clinics, are involved in the provision of mostly NCD preventive and screening activities. They are more a functional than a physical unit, grouping interventions on a range of conditions that are expected to improve effectiveness and efficiency.

[3] Primordial and primary prevention of NCDs starts with pre-pregnancy, pregnancy and child health programmes through prevention of low birth weight, breast feeding and proper complementary feeding

Although the conditions listed so far are the leading causes of death and disability, they may represent a minority of the cases that are handled by the facilities composing the "cluster system". General services devoted to providing care for common conditions –as well as those listed in the previous SLESP components— should be operationalized at the different levels.

All curative facilities should be ready to identify and stabilize –including basic resuscitation manoeuvres—**Emergency** cases, which can be transferred to higher-level institutions.

Outpatient and inpatient services should provide care for a comprehensive range of common conditions, within the capacity given by the profile of medicines and investigations available to the family health team and the hospital, respectively.

In terms of **surgery and trauma care**, suture of lacerations and drainage of superficial abscesses should be performed at all levels. Other interventions require hospital facilities. Hospitals located in areas prone to road accidents should include advanced trauma care.

Dental care should be provided at all DH and selected PMCU. It should focus on extractions, drainage of dental abscesses, fillings and others.

Some **Rehabilitation/Physiotherapy** services can be provided at selected DH. For more complex treatments, the hospital level is required.

Palliative care, with priority to pain relief as well as to the symptomatic management of respiratory, neurological and musculoskeletal situations among others, can be delivered by a combination of family health team for the ambulatory patients, and dedicated institutional and home-based palliative care teams positioned at selected DH.

Support Services include Laboratory, Radiology and other diagnostic tools, as well as Pharmacy.

> The priority in terms of **Laboratory** is to make available for PMCU/DH the range of tests that allow family health teams to identify and follow up NCDs, as well as the presumptive diagnostic of some priority conditions, such as Dengue. PMCUs should have the capacity to perform some tests (e.g., blood sugar) that do not require complex equipment and can be managed by nurses or lay personnel; for other tests, they can collect the samples to be tested elsewhere. At DH level, proper, if basic, labs can be set up, with the mission of serving their own patients as well as those of the PMCUs in the area. For specific tests (e.g. PAP smears), the referral hospital may serve the whole cluster area. Other options exist, which should be explored, including the utilization of mobile labs or the outsourcing to private outlets.
>
> **Radiology** should be available at hospital level, serving also primary medical teams (who should be able to request a limited range of tests without the need of confirmation by a consultant). Selected DH could manage ultrasound devices, if somebody with training is available. Spirometry should be performed at apex hospitals.
>
> The main issue with respect to **Pharmacy** services is the availability of medicines usually prescribed by consultants during special clinics, which may be distributed from primary care facilities in a continuous basis or only during the presence of the consulting team.

The detailed ESP

Table 6 shows the details of the SLESP in terms of the services' components, as well as the place (delivery site) where they are to be delivered. It should be noted that the meaning of "delivery site" refers to the specific services to be provided at that level. Thus, for example, immunization services

are to be delivered at MOH and field clinics (including schools), as well as referral hospitals (for BCG). PMCU/DH should deliver this service either as MOH field clinics or in their own right, as providers of comprehensive PHC services.

Also, delivering an intervention or service implies continuous, routine provision of the specific service, and not the occasional –opportunistic or unexpected—performing of an activity. Thus, for example, women at the second-third stage of labour may be attended at a PMCU or MOH clinic, but this does not mean that those facilities should deliver the service.

For some of the services, guidelines already exist and should govern the way the interventions are delivered. For others, proper guidelines or protocols have to be produced or updated.

Table 6. SLESP interventions by component and by service delivery site

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
CROSS-CUTTING SERVICES					
Health Promotion (health education and behaviour change communication)	√	√	√	√	√
Primordial prevention	√	√	√	√	√
Life skills	√	√	√	√	√
HEALTH SERVICES LINKED TO THE LIFE COURSE					
MATERNAL HEALTH					
PRE-CONCEPTION CARE: healthcare for newly wedded					
Identification of newly married couples	√	√			
Information and counselling on sexuality, pregnancy-related issues, nutrition, domestic violence, family planning, etc.	√	√	√	√	
Medical check-up, including risk factors, nutrition	√	√			
Manage or refer identified problems	√	√	√	√	
ANTENATAL CARE					
Information and counselling on self-care, nutrition, etc.	√	√	√	√	√
Birth Planning, danger signs and emergency preparedness	√	√	√	√	√
Support for woman living with HIV/AIDS	√	√	√	√	√
Assessment of signs of domestic violence	√	√	√	√	√
Confirmation of pregnancy	√	√			√
Monitoring progress of pregnancy, and assessment of maternal & foetal well-being	√	√	√	√	O&G
Tetanus immunization		√	√	√	
Anaemia screening, prevention and control (iron & folic acid,	√	√	√	√	√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Calcium supplementation, and deworming)					
Nutrition assessment and counselling	√	√	√	√	√
Syphilis and HIV testing and treatment of syphilis and HIV (woman & partner)	C	C	√	√	STD clinic
Management of mild-moderate pregnancy complications (anaemia, urinary tract infection, vaginal infection)	√	√	√	√	√
Post-abortion (miscarriage) care	√	√	√	√	√
Management of severe pregnancy complications (pre-eclampsia, eclampsia, bleeding, infection and complicated abortion)	Identify & Refer	Identify & Refer	Identify & Refer	Identify & Refer	√
Management of late pregnancy complications (premature rupture of membranes, preterm labour, mal-presentations)	Identify & Refer	Identify & Refer	Identify & Refer	Identify & Refer	√
DELIVERY CARE					
Support for transport to reach chosen delivery facility	√	√			
Diagnosis of labour	Identify & Refer	Identify & Refer	Identify & Refer	Selected	√
Monitoring progress of labour with partograph					√
Infection prevention	√	√	√	√	√
Detection and management of complications (mal-presentations, prolonged or obstructed labour, hypertension, bleeding and infection)	Identify & Refer	Identify & Refer	Identify & Refer	Identify & Refer	√
Delivery				Selected	√
Induction of labour					√
Active management of third stage of labour				Selected	√
Prevention of mother-to-child transmission of HIV					√
Management of complications, including assisted delivery and caesarean section, blood transfusion and hysterectomy					√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
POSTNATAL CARE					
Immediate postnatal care (at the place of delivery)					
Monitoring and assessment of maternal well-being	√			Selected	√
Detection and management of complications (genital tears, retention of placenta, retention of membranes, uterus atony, bleeding)	Prevent, identify and refer	Prevent, identify and refer	Prevent, identify and refer	Prevent, identify , basic management and refer	Management
Postpartum care (from delivery to 6 weeks later)					
Support and counselling for exclusive breastfeeding	√	√	√	√	√
Counselling on healthy lifestyle, nutrition and safe disposal/washing of pads	√	√	√	√	√
Assessment of maternal wellbeing including nutrition	√	√	√	√	√
Prevention, identification and management of complications (infection, bleeding, anaemia, UTI, wound infections, mastitis, other breastfeeding problems)	√	√			Referred
Prevention, identification and management of blues/depression	√	√ MH clinics	√	√	√
Identification of signs of domestic violence	√	√	√	√	√
Management of women with HIV/AIDS, including ART					STD clinic
Vit. A mega-dose suplementation	√	√		Selected	√
NEWBORN CARE					
Immediate newborn care					
Newborn examination	√				√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Identification & management of breathing problems (digital stimulation, bag & mask resuscitation)				Selected	√
Delayed cord clamping				Selected	√
Hygienic cord care	√			Selected	√
Prevention and management of hypothermia -Drying & wrapping -skin-to-skin contact -Delayed bathing (after 72 h)	√			Selected	√
Breastfeeding within one hour after delivery				Selected	√
Prevention of newborn conjunctivitis	√			Selected	√
BCG within 24 hours of birth		√	√	Selected	√
Screening for Congenital Hypothyroidism				Selected	√
Screening for congenital heart diseases					√
Newborn hearing screening					√
Newborn examination before discharge				Selected	
Newborn care after delivery (early and late care)					
Counselling about breastfeeding, nutrition, immunization, etc.	√	√	√	√	√
Birth registration		√	√	√	√
Promotion and support for Exclusive Breastfeeding	√	√	√	√	√
Weighing, temperature management & cord care	√	√		Selected	√
Identification and management of sepsis	Identify & Refer	Identify & Refer	Identify & Refer	Identify & Refer	√
Identification and management of omphalitis	Identify & Refer	√	√	√	√
Identification and management of preterm/LBW babies (skin-to-skin)	(refer < 1,800)	√	√	√	√
Identification and management of neonatal jaundice	Identify & Refer	Identify & Refer	√	√	√
Identification and management of breastfeeding problems	√	√	√	√	√
Newborn immunizations (BCG)		√		Selected	√
Preventive ART if HIV(+) mother					√
Screening for congenital problems	√	√		Selected	√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Prevention of indoor air pollution	√	√			
Vitamin K supplementation				Selected	√
CHILD CARE					
IMMUNIZATION					
Immunization as per national schedule		√	MOH team	MOH team	√
Some vaccines are administered by School Health Programme (aTd, HPV)	Schools				
NUTRITION					
Promotion of child nutrition (Infant and Young Children Feeding (IYCF) practices)					
Exclusive breastfeeding for the first 6 months	√	√	√	√	√
Introduction of appropriate complementary food at 6 months	√	√	√	√	√
Continued breastfeeding for at least 2 years	√	√	√	√	√
Growth Monitoring and correction of nutritional problems					
Growth monitoring		√	√	√	√
Nutrition supplementation	√	√			√
Micro-nutrient supplementation	√	√			
Identification and management of MAM	√	√	√	√	√
Identification and management of SAM	I&R	I&R	I&R	I&R	√
Disease-related malnutrition	I&R	I&R	I&R	Selected	√
DEVELOPMENT CARE					
Promotion of child Development	√	√	√	√	√
Screening at 9, 18, 24, 36 months and school year 1	√	√			
Early interventions and referral to specialist	I&R	√	√	√	√
MANAGEMENT OF SICK CHILDREN					
Prevent/identify child abuse	√	√	√	√	√
Management of moderate and severe cases of fever, asthma and respiratory infections, diarrhoea, etc.			Mild/moderate	Mild/moderate	Severe

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
SCHOOL HEALTH					
Counselling and identification of -healthy diet -substance abuse, including tobacco and alcohol -lack of physical exercise -reproductive health issues, including prevention of teenage pregnancies -psycho-social issues		School			
Immunization with OPV & DT vaccines at 5 y.o.		School	√	√	
Immunization with HPV to girls 10-11 y.o. (6th grade)		School	√	√	
Immunization with aTd vaccine at 12 years of age		School	√	√	
Annual School Health Inspection with the following components -medical examination -weighing, BMI -screening for vision and hearing -dental examination -immunization -deworming -folic acid &iron supplementation -behavioural analysis		School			
Promotion of healthy eating through canteen and school mid day meal program		school			
Promotion of physical activity		school			
ADOLESCENT AND YOUTH HEALTH					
Immunization with Rubella-containing vaccine to females above 15 y.o. if not immunized before		√	√	√	√
Same as in school health regarding counselling		√			

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Common complaints to be managed by curative side			√	√	√
School dropouts to be assessed to rule out health reason	√	√			
Sexual and Reproductive Health services to adolescents	√	√	√	√	√
FAMILY PLANNING					
Counselling on FP and its methods, particularly at some periods -Pre-conception -Post-partum -Post-abortion -Adolescent	√	√	√	√	√
Determine medical eligibility for the chosen method	√	√	√	√	√
IUD insertion and removal		√	√	√	√
DMPA		√	√	√	√
Hormonal implants		√	√	√	√
Combined Oral Contraceptive	√	√	√	√	√
Condoms	√	√	√	√	√
Emergency contraception	√	√	√	√	√
Female sterilization					√
Male sterilization					√
Management of adverse effects of FP methods		√	√	√	√
GENDER-BASED VIOLENCE					
Prevention and identification of gender-based violence	√	√	√	√	√
Post-GBV care (prevention of STD and HIV, emergency contraception, and support and counselling)		√	√	√	√
ELDERLY CARE					
Prevention and identification of common issues (ADL, CVD, cognitive problems, nutrition, pulmonary, rheumatology, cancer, psychiatry, hip fracture, osteoarthrosis or cataract	√	√	√	√	√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
(prevention of blindness), Hearing aid					
Geriatric ward (acute and intermediate care)					√
Geriatric step down care (long term care)				√	
Identification of Dementia requiring care (Home/Institution)	√	√	√	√	√
Counselling for active life	√	√	√	√	√
Identification of elderly requiring care (home or institution)	√	√	√	√	√
Delivery of home health care	√			Selected	
Day care	√		Selected	Selected	√
Respite care				√	
HEALTH SERVICES RELATED TO THE PREVENTION AND MANAGEMENT OF COMMUNICABLE DISEASES					
VACCINE-PREVENTABLE DISEASES					
Included in Maternal and Child Health, School Health and Adolescent and Young Health	√	√	√	√	√
TUBERCULOSIS					
Presumptive/suspicion diagnosis	√	√	√	√	√
Laboratory diagnostic			Selected	Selected	√
Diagnostic confirmation and inclusion in protocol					Chest Clinic
Drug distribution, including DOTS	√	√	√	√	√
Follow up, clinical				Selected	Chest Clinic
Follow up, laboratory				Selected	Chest Clinic
Screening of contacts			√	√	√
Tracing of contacts	PHI	PHI			
Management of MDRTB					Nat. Centre
DENGUE					
Presumptive diagnosis (CBC on 1st day of fever)			√	√	√
Laboratory diagnostic (NS 1 Ag/IgM, RDT)					√
Ultrasounds for early detection of leakage					√
Management of Dengue Fever (uncomplicated)			√	√	√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Management of high-risk cases (infants, pregnant women and chronic illnesses)					√
Management of Dengue Haemorrhagic Fever					√
Notification	√	√	√	√	√
MALARIA					
Presumptive diagnosis (fever + potential exposure)	√	√	√	√	√
Diagnosis: blood smear			Selected	Selected	√
Diagnosis: RDT			Selected	√	√
Management of uncomplicated cases			√	√	√
Management of complicated cases					√
STD/HIV/AIDS					
Counselling on safe sexual practices and other risk factors	√	√	√	√	√
Distribution of condoms	√	√	√	√	√
STD suspicion and referral	√	√	√	√	√
STD diagnosis and management					STD Clinic
HIV testing: RDT (selected areas) Western Blot			√	√	√ STD/Mobile Clinics
Prevention of Mother-to-Child Transmission					√
Anti-Retroviral therapy					STD Clinic
Management of Opportunistic Infections					√
LEPROSY (selected MOH areas)					
Screening	√	√	√	√	√
Contact tracing	√				
Diagnostic					Dermatologist
Case management					Dermatologist
Management of complications (rehabilitation services)					√
Monitoring, including EHF score for complications					Dermatologist
LEPTOSPIROSIS					
Suspicion (fever, history of exposure and/or evidence of organ involvement) and referral for diagnosis, treatment and			√	√	√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
notification					
Management in OPD or high dependency unit					√
Investigation of contacts and environment	√	√			
OTHER DISEASES (e.g., Rabies, hepatitis) as per guidelines					
NON-COMMUNICABLE DISEASES					
CARDIOVASCULAR DISEASES					
Primordial prevention of risk factors	√	√	√	√	√
Primary prevention, including -reduction of indoor air pollution -tobacco cessation -avoiding harmful alcohol consumption -increasing physical activity -adopting a healthy diet	√	√	√	√	√
Screening for risk factors, including indoor and outdoor air pollution	√	√	√	√	√
Total Risk Assessment (TRA) for CVD	√	√	√	√	√
Lab test (FBS, cholesterol, renal function)		√	√	√	√
ECG			√	√	√
Clinical management and follow up according to TRA score and BP levels			√	√	√
Secondary prevention: counselling and support for lifestyle modifications (including air pollution) Support to stop smoking and alcohol dependence	√	√	√	√	√
Screening/examination for chronic complications					
-retinopathy (ophthalmoscopy)			Referral	Referral	Clinics
-renal function			√	√	√
Identification, stabilization and referral of acute complications (ischemic heart disease, cerebrovascular accident)			√	√	√
-management of ischemic heart disease, stroke			Long-term management	Long-term management	Management of acute

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
			with aspirin, statins and BP agents	with aspirin, statins and BP agents	coronary events (heparin, thrombolytics)
-management of heart failure			Long-term medical management	Long-term medical management	Management of acute episodes
Long term stroke management in stroke units					√
Prevention of Rheumatic heart disease			√	√	√
DIABETES MELLITUS					
Screening (Fasting or Random Blood Sugar)	√	√	√	√	√
Diagnostic (FBS/HbA1c)			√	√	√
Management of DM-I					√
Management of DM-II			√	√	√
Management of DM-II requiring Insulin			Selected	Selected	√
Counselling & support for lifestyle changes	√	√	√	√	√
Screening/examination for chronic complications					
-retinopathy (ophthalmoscopy)			Referral	Referral	Clinics?
-renal function (albuminuria)			√	√	√
-neurological and vascular: diabetic foot			√	√	√
Management of chronic complications			√	√	√
Lab follow-up:					
-FBS			√	√	√
-Cholesterol			√	√	√
-HbA1c			√	√	√
Identification & stabilization of acute complications according to guidelines (hypoglycaemia, hyperglycaemia, diabetic ketoacidosis)					
-hypoglycaemia			I,S&R	I,S&R	√
-hyperglycaemia			I,S&R	I,S&R	√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
-diabetic ketoacidosis			I,S&R	I,S&R	√
CHRONIC RESPIRATORY DISEASES					
Primordial prevention of exposure to risk factors (allergens, smoking, indoor and outdoor pollution, occupational risks)	√	√	√	√	√
Primary prevention, including smoke cessation, air pollution and exposure to occupational risks	√	√	√	√	√
Screening for risk factors	√	√	√	√	
Diagnostic and characterization					
--clinical history, examination & peak flow meter			√	√	√
--spirometry					√
Management of mild/moderate cases			√	√	√
Management of exacerbations			I,S&R	I,S&R	√
Management of complicated cases (e.g. status asthmaticus) requiring monitoring and admission			I,S&R	I,S&R	√
Counselling and support on lifestyle change	√	√	√	√	√
CHRONIC KIDNEY DISEASE (CKD)					
Information on CKD and CKDu, risk factors, consequences and management options	√	√	√	√	√
Screening in selected sites -Serum creatinine -estimated Glomerular Filtration Rate (eGFR) -Urine Albumin Creatinine Ratio (UACR)		Collection	Collection	Collection	Lab tests
Diagnostic and assessment of additional risk factors for CVD			√	√	√
Management of hypertension, anaemia and others					√
Dialysis					Selected
MENTAL HEALTH					

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Identification of mental health issues –in collaboration with school health, maternal health, etc.— including	√	√	√	√	√
--substance abuse	√	√	√	√	√
--depression	√	√	√	√	√
--behavioural issues in adolescents and youth	√	√	√	√	√
--determinants of deliberate self-harm	√	√	√	√	√
Referral to Mental Health Clinics (MO/MH, MO-Diploma)	√	√	√	√	
Diagnostic and prescription of psychotropics				Selected (MH clinic)	MH clinic
Management and follow-up of mild conditions			√	√	√
Day care				Selected	√
Rehabilitation/intermediate care				Selected	√
Admission in acute inpatient wards					√
Community support (Community Support Centre)	√	√			
CANCER					
Counselling and support for healthier lifestyle, avoiding risk factors	√	√	√	√	√
CERVICAL CANCER					
Immunization with HPV vaccine at 10-11 y.o.	School	√	√	√	
PAP smear (once, between 32-49 y.o.)		√	√	√	
Management of positive cases					√
BREAST CANCER					
Clinical examination	√	√			
Teaching of self-examination		√			
Referral to $2^{ary}/3^{ary}$ level	√	√	√	√	
Mammography & management of cases					Selected
Management w/o mammography if high suspicion					√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
ORAL CANCER					
Counselling for avoidance of risk factors (betel chewing, smoking, snuff dipping, areca nut chewing, alcohol) and oral hygiene	√	√	√	√	√
Identification and referral of people with risk factor to Dental Surgeon	√	√	√	√	√
Screening for Oral Potentially Malignant Disorders in individuals with high risk score			Selected (DS)	√	√
Referral of suspicious cases to Oral and Maxillo-Facial Unit			√	√	√
Diagnostic and management					√
OTHER CANCERS					
Colorectal cancer					
Screening by occult blood in stool test			√	√	√
Thyroid cancer					
Neck examination		√			
SERVICES AND PLATFORMS					
EMERGENCY CARE					
Identification and stabilization of emergency cases			√	√	√
Resuscitation with basic life support measures		√	√	√	√
Referral: communication and transportation		√	√	√	√
Management of minor emergencies			√	√	√
Management of complicated and multiple-casualty emergencies					√
Post-exposure rabies vaccine			√	√	√
Anti-venom for snake bites			√	√	√
OUTPATIENT CARE					

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Management of common conditions –including medical, surgical, O&G, paediatrics, ophthalmology, ENT, etc.) with the support of Essential Medicines for the level			√	√	√
Specialized medical clinics on IM, O&G, Paed, Surgery				Selected	√
Referral to higher level			√	√	√
INPATIENT CARE					
Management of common conditions requiring hospital admission, within the limits of the EML for the level				√	√
Short-term admissions				√	√
Acute inpatient care					√
Long-term inpatient care				Selected	
SURGERY AND TRAUMA CARE					
Drainage of superficial abscesses			√	√	√
Suture of lacerations			√	√	√
Abdominal surgery, including repair of perforations, appendectomy, gallbladder diseases, hernia, hydrocele or urinary obstruction, among others					√
Thoracotomy					√
Trauma laparotomy, fracture reduction, external fixators, traction, fasciotomy, etc.					√
Amputations					√
Skin grafting					√
Burn management					Selected
DENTAL CARE					
Screening for Dental Caries, Periodontal disease, OPMD and Oral cancer , Malocclusions, Oral manifestation of systemic diseases, Risk factor Identification for oral health problems	√	√	√	√	√
Health promotion and habit intervention	√	√	√	√	√

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Fluoride application		√	√		
Oral Urgent Treatment (Management of Oral pain, Infection and Trauma)		√	√	√	√
Early management of dental caries Simple restorations (Emergency surgical dressings, GIC, Light cure composite restorations)		√	√	√	√
Early management of periodontal disease Scaling (with ultrasonic scalar)		√	√	√	√
Providing Oral Hygiene Instructions	√	√	√	√	√
REHABILITATION					
Assessment of rehabilitation requirements			√	√	√
Community Rehabilitation - Outpatient				Selected	
Physiotherapy				Selected	√
Occupational Therapy					√
Speech and Language Therapy					√
Referral to Rehabilitation Departments/Hospitals			√	√	√
PALLIATIVE CARE					
Information and counselling on the role of families in the provision of palliative care	√	√	√	√	√
Support to self-help groups	√	√	√	√	
Control of acute and chronic pain			√	√	√
Delivery of acute palliative care					√
Delivery of palliative care at intermediate units				Selected	
Delivery of palliative care at PMCU/DH			√	√	
Delivery of home-based palliative care			√	Selected	
SUPPORT SERVICES					
LABORATORY					

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
Chemical pathology		BS, Chol, U.Alb. Collection UFR	BS, Chol, U.Alb. Collection UFR, lipid profile, Hb A1c	BS, Chol, U.Alb, SE, Troponin I, UFR, Collection SGOT/SGPT, TSH, HbA1c, S Bilirrubin, S Alkaline Phosphatase, lipid profile, CRP, Creat	BS, Chol, U.Alb, PT, SE, Troponin I, UFR, SGOT/SGPT, TSH, T4/T3, Neo TSH, HbA1c, S Bilirrubin, S Alkaline Phosphatase, lipid profile, CRP, Creat, Blood Gas Analysis
Haematology		Collection BG	Collection BG, FBC, ESR	BG, FBC, ESR	BG, FBC, ESR, PT/INR
Histology and cytology		Collection PAP smear	Collection PAP smear	Collection PAP smear	Body fluids, PAP smear
Microbiology		Collection VDRL, Sputum AFB	Sputum AFB selected HIV Rapid Test Malaria RDT and microscopy (selected) Collection VDRL, Sputum AFB	Dengue NS 1 Sputum AFB selected HIV Rapid Test Malaria RDT and microscopy (selected) Collection VDRL, Sputum	Dengue NS 1, HIV Rapid Test, Malaria RDT & microscopy, TB Rapid Test, VDRL, Sputum AFB, Culture of urine, blood, sputum, CSF and wound

Service/Intervention	Community/ Home	MOH & clinics	PMCU	Divisional Hospital	Apex (Base & above) H
				AFB, Urine Culture, Wound Swab culture	swab
Blood Bank services					√
BG: blood grouping; BS: blood sugar; Chol: serum cholesterol; CRP: C-reactive protein; ESR: erythrocyte sedimentation rate; AFB: acid-fast bacilli (TB); PT: pregnancy test; FBC: full blood count; SE: serum electrolytes; PT/INR: prothrombin time; Creat: serum creatinine; UFR: urine full report					
RADIOLOGY & OTHER DIAGNOSTIC TOOLS					
Simple Radiology				Selected	√
Obstetric Ultrasounds					√
Other ultrasounds				Selected	√
ECG		√	√	√	√
Spirometry				Selected	√
PHARMACY					
Dispensing of medicines for OPD		√	√	√	√
Dispensing medicines for inpatients				√	√
Dispensing medicines for special clinics (mental health, STI, TB, other consultants)				Selected	√

CRITICAL RESOURCES INVOLVED IN THE DELIVERY OF THE SLESP

This chapter describes some of the resources that are necessary for the delivery of the SLESP, with focus on the facilities and delivery sites and their characteristics, personnel and medicines.

Summary of services by facility level and service delivery site

Table 7 summarizes the range of services to be provided by type of facility. All have the relevant MCH/Preventive services at the base, on which other services are added according to the profile.

From the detailed SLESP above, it results that the profile of the MOH and its field clinics does not substantially change, remaining focused on interventions of public health and those related with the life-cycle. To improve the performance of the MOH system, the availability of deployed staff should be adequate to the population and current and expected workload. Promotion of wellness and Health promotion activities should be enhanced, making good utilization of available MOH field clinics through innovative approaches that improve wellness seeking behaviour, and these services could be expanded to include the private sector (e.g., health promotion at large supermarkets through mechanisms of encouraging social responsibility).

PMCI –PMCUs and DHs—are the facilities that change more substantially their profile, as shown in Table 7 (where DH and Base Hospital incorporate the range of services provided at the lower level and add some specific ones).

> PMCUS remain basic facilities, for the management of curative conditions, but their role in identifying and referring cases of priority conditions is enhanced. Above all, the facility and its family health team become responsible for diagnosing and managing the vast majority of NCDs, as well as other common conditions. For that, access will be guaranteed to a range of investigations that the MO can request directly.
>
> The role of the Divisional Hospital is enhanced. In addition to assuming the same functions as the PMCU, selected DH will host some relevant support services, such as laboratory, and it may be the base for teams –e.g., palliative care, physiotherapy, etc.—serving the facility as well as the closest PMCUs. DH should provide 24/24 hours emergency and inpatient care. However, the DH can only be considered a referral facility for these support services; for the routine clinical operations, the DH attends its own catchment population, not shared with the PMCUs.

Base hospitals (or other Apex hospitals) should focus on providing referral services. Access to medical clinics should be modulated through an appointment system, giving priority to patients referred by family doctors, regardless of the distance to the hospital. All apex hospitals should provide at least emergency surgery, including the management of obstetric emergencies. Selected hospitals should provide advanced trauma care. Some of the hospital services –laboratory, radiology, other investigations—should also be provided upon direct request from family doctors within the area covered by the cluster system.

Table 7. Main SLESP services to be provided by facility type

Home and Community	MOH & Clinics	PMCU	DH	Base Hospital

Home and Community	MOH & Clinics	PMCU	DH	Base Hospital
-DOTS for TB -Screening for contacts of selected communicable diseases -Limited RMNAC (e.g. ANC, PNC, newborn) -Health Promotion & Education	-I&R mental health issues -Screening for Cervical & Breast cancer -Screening for CVD risk factors, TRA -NCD prevention -Screening for Leprosy -STD/HIV counselling -TB DOTS -Screening for contacts of selected communicable diseases -Gender-based Violence -Family Planning -Adolescent & young health -School health -Growth monitoring, MAM management -IYC Feeding practices -Immunization -Late newborn care -Pre-conception, antenatal & postnatal care -Health Promotion & Education	-Limited lab test capacity -OPD palliative care -OPD for common conditions -Emergency care: stabilization & referral -OPD management of elderly care -Management of mild Mental H. conditions -I&R mental health issues -Screening for Oral cancer -Clinical management of NCD -Screening for CVD risk factors, TRA -NCD prevention -Screening for Leprosy -STD/HIV counselling -Malaria diagnosis -Management of mild Dengue -Presumptive Diagnosis of Dengue -TB DOTS -Gender-based violence -Management of sick children -I&R of SAM cases -RMNCA care by PMCI/MOH teams -Health Promotion & Education	-Ultrasound (selected) -Basic laboratory -Institutional and home-based palliative care -Physiotherapy (selected) -Short-term admissions -24/24 h emergency care -OPD for common conditions -Emergency care: stabilization & referral -Elderly care: day and long-term care -Management of mild Mental H. conditions -I&R mental health issues -Screening for Oral cancer -Clinical management of NCD -Screening for CVD risk factors, TRA -NCD prevention -Screening for Leprosy -STD/HIV counselling -Malaria diagnosis -Management of mild Dengue -Dengue: identification of DHF -TB follow-up (selected) -Health Promotion & Education	-Radiology & ultrasounds -Laboratory -Acute palliative care -Physiotherapy & Rehabilitation -Surgery & trauma care -Inpatient care -Referral/Specialized OPD -24/24 h emergency care -Management of Mental H. conditions -Diagnostic & management of Oral cancer -Management of cervical and breast cancers -Management of NCD complications -Leprosy diagnostic & management -STD/HIV diagnostic & management (branch clinic) -Malaria diagnostic & management -DHF diagnostic & management -TB follow-up and management (branch clinic) -SAM management -Obstetric and neonatal emergencies -Delivery care -Antenatal care - referral & US -Health Promotion & Education

Human Resources

Table 8 lists the main staff categories involved in the provision of the SLESP. Two cadres –Assistant MO and Health Education officer— are no longer trained, the later to be replaced by so-far non-existing Health Promotion Officers.

The tendency exists in the different programmes and units to identify service implementation with the deployment of a specific cadre exclusively linked to that particular programme. This approach is at odds with the stated policy of appointing Family Doctors (general practitioners with specific training in PHC and the family practice approach) to be in charge of all health issues of a number of well-defined individuals and families.

Table 8. Main staff categories involved in the provision of the SLESP

Category	Initial (graduate) training		Specialized (PG) training	
	Institution	Years	Institution	Years/Months
Medical Consultant	Faculties of Medicine	5-6	PGIM	varies per course
Medical Officer	Faculties of Medicine	5-6		
Medical Officer of Health	Faculties of Medicine	5-6	NIHS	13 weeks
MO/NCD	Faculties of Medicine	5-6		
MO/MH (district)	Faculties of Medicine	5-6	NIMH and field	1 1/2months each
MO/MCH	Faculties of Medicine	5-6		
MO/MH(DH and above)	Faculties of Medicine	5-6	NIMH and field	1 1/2months each
MO/Psychiatry	Faculties of Medicine	5-6	PGIM	1 year
RMO/AMO	Training discontinued			
Dental Surgeon	U. of Peradeniya	5	PGIM	varies per course
School Dental Therapist (SDT)	IOH	2		
Matron	NTS	3	PBCN – NHSL	1 1/2 years
Public Health Nursing Sister	NIHS	1	PBCN -NHSL	1 1/2 years
Nursing Sister	NTS	3	PBCN -NHSL	1 1/2 years
Nursing Officer (NO)	NTS	3		
Public Health Midwife (PHM)	NTS - first year, next 6 months at NIHS & RTC	1 1/2		
Public Health Inspector (PHI)	NIHS and RTC	1 1/2		
Public Health Field Officer	NIHS and RTC	1 1/4		
Pharmacist	NHSL and NIHS	2		
Dispenser	RTC	1 1/4		
Medical Lab Technologist	MRI, NIHS, Peradeniya TH	3		
PHLT	NIHS	1 1/2		
Radiographer	NHSL	2		
Physiotherapist	NHSL	2		
Occupational Therapist	NHSL	2		

Ophthalmic Technologist **Health Education Officer** **Psychiatric Social Worker**	NEH 2 Qualification as PHI, PHM, SDT or NO NISD 3	PG qualification in H.Education

Lowly-trained staff, able to execute simple tasks, may solve acute availability problems, but in the long-term may be source of additional concerns, when no proper career path can be offered, and when the situation changes and availability of more skilled workers implies that they are no longer required. Working with few multi-purpose cadres able to take on additional tasks with relatively short training may be a better option where the number of specific tasks may not justify the presence of relatively specialized cadres.

A possible structure is shown in Fig 4. In the current context of Sri Lanka, the core PHC team would be composed of two complementary teams, the existing MOH team (composed of MO, PHM and PHI) and a new one in the curative side, constituted by the mentioned family doctors and nursing officers (or the newly created, PHC-specific Public Health Nursing Officer). Dental surgeons, who have direct contact with users without the need of a referral, can also be added. Coordination between both teams should be strengthened, taking into account that they cater for different services needs for the same population. Core teams can be reinforced with other categories, as long as they are involved in the provision of a variety of services and not limited to a specific intervention.

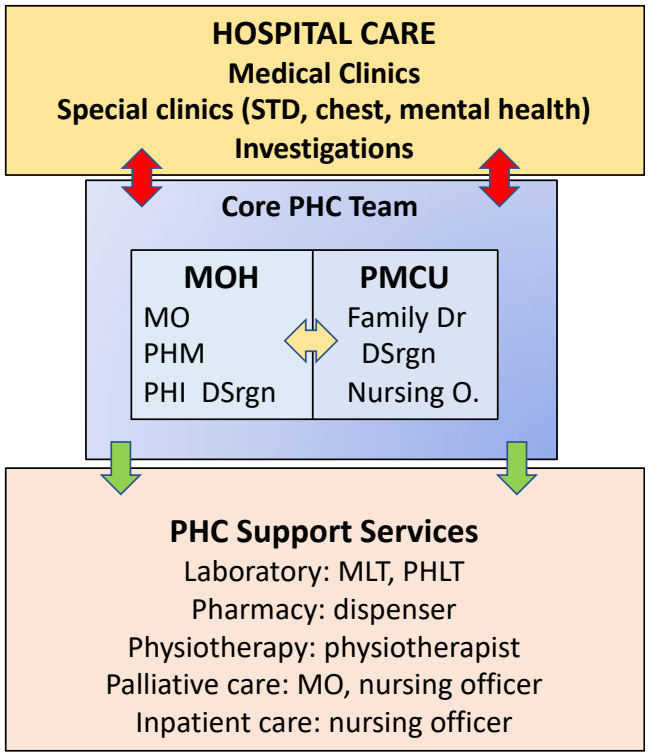

Figure 4. Core PHC teams and their role in modulating access to other services

In addition to managing most common health issues of the catchment population –including most activity of screening, diagnosing and managing NCDs and others—, the core PHC team should also assume the task of coordinating all other care provided to that population. Thus, access to PHC support services –often provided at the same facility or in nearby DH—should be modulated by requests issued by the core team. Similarly, access to hospital care should be ensured by issuing referrals and facilitating the obtaining of an appointment with the relevant service.

Medicines and medical supplies

Availability of adequate medicines is essential to ensure the capacity to deliver the SLESP interventions. A list was obtained from the Medical Supplies Division with the essential medicines as well as the level at which they are theoretically available (Annex 1).

Medicines indicated for supply to PMCU level include 138 active principles in 230 presentations. Included in the list are the 16 NCD drugs recommended by the MOHNIM NCD Unit (Table 9), as well as 7 of the 15 essential Mental Health drugs. Absent from the list are morphine derivatives for the management of pain resistant to common analgesics. However, these drugs, as well as other psychotropic items and broader-spectrum antibiotics are included in the list of 145 additional items available at DH level.

For the purposes of SLESP implementation, it is possible to reduce the list to match the recommendations of the different programmes. However, this exercise should only be attempted if there are restrictions to the availability of medicines because of financial constraints or if the variety of medicines is deemed excessive to be mastered by family doctors. It should also be considered that the prescription of some medicines (e.g., psychotropics) is probably restricted to consultants or specifically-trained doctors, regardless of their availability at peripheral facilities.

Table 9. List of essential NCD drugs

Adrenaline	Gliclazide
Aspirin	Glyceryl trinitrate
Atenolol	Hydrochlorothiazide
Atorvastatin	Hydrocortisone
Beclomethasone	Losartan
Dry powder capsule for breath induced device	Metformin
Chlorpheniramine	Nifedipine
Enalapril	Salbutamol
Fluoxetine	Theophylline
Frusemide	Risperidone

The MoHNIM has also produced a list of essential medicines to be distributed to teams facing acute emergencies. The list is composed of 72 items, and includes eight antibiotics/anti-parasitic drugs and ten of the recommended NCD drugs, thus allowing for the continuous management of NCD in emergency situation.

Due consideration should be made to medicines that are more relevant for prescribing to elderly patients.

DELIVERING THE ESP. SOME CHALLENGES

Delivering the complete ESP for the whole Sri Lankan population (willing to use the public sector) has many challenges. The most obvious are the need for additional resources, for example to deploy a network of laboratory outlets at PMC Institutions. Implementing the SLESP will also require additional staff at the PHC level, whose recruitment, training and deployment should be planned and funded.

Implementing the organizational changes where the SLESP is inserted is likely to arise resistances, if only because improving the public PHC sector may have as a consequence a reduction in the utilization of the private sector. Since many private sector frontline workers are also public sector employees, there is an evident conflict of interests.

Other challenges may be less recognisable, but addressing them will be instrumental for increasing the chances of the SLESP being implemented. Some are discussed below. Additional ones will no doubt be identified during the costing and feasibility analysis exercises.

The cluster, a new service delivery model

The newly designed local health system, the cluster, replicated the classic WHO District Health System composed of PHC facilities and a referral hospital, with the specificities of the Sri Lanka health system (e.g., split between preventive and curative institutions). However, this model does not exist at present[4] and, since it does not correspond with any politico-administrative division of the country, every cluster has to be "created".

Three functional linkages have to be considered in the process of defining a cluster. On the one hand, the limits of the MOH areas correspond with divisional secretariats. PMCU/DH do not have territories or even population assigned for their operations. Since users are allowed to choose their preferred provider of curative care, and the referral system is not operational, hospitals also do not have an assigned territory. Harmonizing functionally the three components will require the dynamic assessment of options, and can be facilitated by the creation of electronic clinical records and the assignment of a unique health ID number.

The Apex hospital defines geographically the cluster because it covers all its area. For a hospital providing the SLESP interventions to be efficient, the assigned population should be between 150,000-250,000 (depending on the characteristics of the area), which exceeds an average MOH area. So, a "typical cluster" would be composed of an apex hospital and 2-3 MOH areas, as well as a number of PMCUs and DH.

There are around 70 Base Hospitals in the country, or an average of 300,000 people per hospital. Some hospitals may be upgraded to cover the needs of this population, but providing the SLESP hospital services to the whole population through a cluster health system may require the upgrading of selected Divisional Hospitals to Base Hospital level. More often, however, a higher-level hospital (district or provincial general hospital) may act as apex hospital for the immediate population, while providing third-level services to a larger geographical area and the network of facilities operating in it.

If the components of the cluster health system are to share the objectives of providing essential health services to a common population, they should also share management tools and procedures. The figure of a Deputy Regional Director of Health Services has been

[4] That is, while the institutions –PHC facilities, referral hospitals—exist, the interactions between them and the population are missing or inadequate.

proposed to lead the management team[5] (accountable to the RDHS), which may need to include professionals with complementary skills (epidemiology and statistics, HRH and financial management, supply chain management, planning and monitoring, etc.). Some options to these practical challenges can be tested during the pilot exercises, before making a decisions on which approach is the best.

At present, the smallest planning and monitoring unit for curative care is the district, and the divisional secretariat (MOH area) for the preventive/public health system. The Health Information System should be adapted to identify all data generated at and referred to the individual cluster systems, to allow managers to monitor performance and set targets for service providers.

The Family Practice approach and its nuances

The introduction of the Family Practice approach as the PHC delivery model has some implications:

Family Practice is about teams. Team composition depends on the range of services to be provided and the number of population and the consumption of services that the team has to serve. PHC is characterized by the execution of a large number of simple tasks, which can be mastered and implemented by a relatively small team. Other services are more specialized (e.g., laboratory, physiotherapy), but the workload may be so low as to justify their operations only when shared by several basic teams. The two essential elements to compose the core Family Health Team are medical officers and nurses. Both can execute multiple tasks, and can be trained additionally to assume new responsibilities. Together, they should be able to manage all the components of patient care at a PMCU, including the operation of HLC and other clinics.

Family Medicine Specialists (FMS) are in short supply and their deployment cannot cover all PHC medical institutions. Existing MO will be trained on the essential components of the Family Practice approach and will form the core of the HRH teams. In clinical terms, perhaps the most useful role for FMS is to run and manage “Family Practice Centres of Excellence”, regular PMCI where the combination of FMS skills and adequate supply of resources can show what the aimed system would look like. Also, FMS must be instrumental in the design and implementation of the training activities and support the cluster management with regards to the improvement of family medicine competencies , performance assessments of family practice care within the cluster system.

Family health teams are expected to establish long-term relationships with the majority of their catchment populations. The same population will also use –habitually for defined periods such as childhood or pregnancy—the other PHC sub-system. Serving the same population requires increased coordination; this need is enhanced when the long-term management of chronic conditions such as NCDs involves the participation of staff members from MOH and PMCUs. In addition to physical interaction, coordination may improve with the adoption of modern information systems, including the development of electronic clinical records, individual for each patient, and accessible to all health workers involved in their care.

To improve coordination between curative and preventive services –which are delivered to the same population by different teams—, it has been proposed that PHC (curative) teams should establish close interaction with the PHM active in the areas of their catchment

[5] It has also been suggested that Family Medicine specialists should be appointed for this position.

populations, which would allow to identify and collect relevant data without creating additional divisions[6].

The current PHC curative system has been used to identify priority conditions, which are then referred to consultants or specifically-trained medical officers (e.g. MO/NCD, MO/Mental Health, etc.), who are those who actually manage the patients. The introduction of the Family Practice approach is likely to change this model. Family health teams will assume additional responsibilities over a larger range of conditions, and are also expected to modulate access to specialized services under a completely different premise: patients "belong" to the family health team, who requests specific assistance –when and if necessary—which is inherently transitory, after which the patient is devolved to the team. It is possible to foresee a future when special clinics (STD, Mental Health) and part of the hospital-based consultants modify their profile to one where their responsibility is to collaborate with and support family doctors and to assume a smaller number of patients selected by the complexity of their management.

The characteristics of a proper Referral System

One of the stated aims of the proposed PHC reorganization is to reduce pressure of primary care activities at hospital level. It is expected that PHC improvements will increase the number of people attending PMCIs and ease the overcrowded hospital general OPD services.

While improving PHC service delivery is a pre-condition to stimulate higher frequentation, it is probably not enough to reduce hospital attendance. Access to hospital services should be regulated, although approaches that can be regarded as limiting patients choice should be avoided.

One way of modulating access to hospital services is the introduction of demand management tools, the most common of which is the Appointment System. The adopted appointment system should be implemented gradually and it should have two characteristics:

It should limit the patients granted access at a given time to those referred by their PHC doctors (patients with no referral should not be allowed in routine specialized services) and in numbers compatible with good quality care.

It should provide equal opportunities to all the patients, regardless of the distance between the PHC and the hospital service. Other than clearly justified emergency cases, appointments should be given according to the time of referral (if possible fitting the patient's convenience). PMCU/DH should facilitate or secure the referral through proper communication mechanisms.

When developing a referral system, actual Hospital capacity to deliver the expected services is one of the top priorities. The SARA survey has shown that not all base hospitals provide the complete range of services attributed to them in the SLESP. When structuring a new "cluster system", verifying the hospital characteristics, and upgrading it the profile if necessary, should be one of the first steps.

Granting timely and adequate referral implies availability of proper communications and transportation tools and procedures. Ambulance services are probably best managed outside the health system, or they can be coordinated from selected hubs (divisional hospitals?) rather than being available at each PHC facility.

A referral system involves much more than transferring patients for their management at a different level. Common protocols and guidelines should be agreed for what often is the management of chronic patients and their exacerbations. Also, hospitals should be used as training premises for continuous education, because they offer sufficient quantity of cases and supervision by skilled

[6] Service delivery data are collected by field clinic and by PHM, making it possible to assemble information relevant to the catchment population of both systems.

professionals. Part of the cluster management team is to create, develop and feed the relationship between the referral hospital and the PHC teams in its area of influence.

New services and their potential users

The SLESP includes proposals for new services, or for interventions that currently are provided to a minority of the population. Before their final inclusion in the package, their projected worth, as well as the system's delivery capacity, should be assessed. Some are discussed below.

Laboratory Services should be gradually expanded at PHC level, starting with DH where some lab services are already provided. The existence of trained staff is essential for the development of this service; the presence of a PHLT is an asset, as long as the technician can be upgraded to assume the management of a basic lab.

Integrating Physiotherapy services in a DH will probably require physical interventions on the facility, as well as the recruitment and deployment of the scarce physiotherapists available. It is unlikely that this service can be offered in more than a handful of PHC facilities during the five years of implementation of this SLESP version.

Given the novelty of this service, there are no projection of the needs for Palliative Care[7]. In principle, palliative care is the responsibility of the family health team and dedicated teams should only be used if the complexity and/or frequency of care exceeds the family doctor's capacity, or when the patient requires admission. Guidelines to characterize the patients in need of palliative care should be developed soon, as well as criteria for their inclusion in the service.

Elderly care also is the responsibility of the family health team. Patients in need may be attended as normal OPD cases, at home or as inpatients. The already high and increasing number of elderly people has the potential for rocketing demand for this service. A clear definition of who is eligible for this type of care should be developed. Initially, criteria should probably be restricted, to avoid the assumption of cases for which medical and nursing services are not an effective option, and who require general (social) care instead.

[7] A relatively recent paper by Murtagh et al (2014) estimates that over 60% of all deaths globally require palliative care

MONITORING ESP IMPLEMENTATION

The SLESP is called to become the main sets of essential health services to be delivered by the public health system, and adequate provision rates will define the performance of that system. To properly monitor ESP implementation, three sources of information will be required:

> Information on actual service availability by level. Through a combination of facility surveys and routine information, actual provision of the ESP should be established, by checking whether essential resources –trained staff, equipment, medicines, guidelines—are deployed and services can be availed by users.
>
> The routine HMIS is an essential tool to determine the output of each selected service by facility, cluster or administrative division. It also allows to estimate outcomes (e.g., coverage rates) and make management decisions (e.g., on redistribution of resources) on a timely basis.
>
> The shortcomings of the routine HMIS, which may result in unreliable calculations, can be overcome by using Population-based surveys, where coverage rates are calculated based on users' recalls rather than administrative reports.

A National Health Performance Framework (NHPF) has been recently produced, with a comprehensive list of indicators covering most relevant aspects of health care, and encompassing Effectiveness –including health impact, service outcome (including utilization and coverage, and risk factor reduction), availability and quality—as well as Efficiency and Equity measurements.

When the majority of the NHPF indicators are produced, monitoring the SLESP implementation will be relatively easy. Meanwhile, a selection of indicators that may closely reflect services included in the SLESP can be used for sub-national (even sub-district) monitoring. As it has been mentioned earlier, one of the challenges will be collecting data and calculating indicators referred to the specific SLESP service delivery unit, the newly designed shared care cluster.

The proposed selection of indicators, to be discussed once the SLESP is formally adopted, is the following:

1.Effectiveness Indicators

1.1.Impact

1.1.1.Health Status

Mortality between 30 and 70 years of age from chronic NCDs

Suicide Mortality Rate

Incidence of congenital rubella syndrome

Incidence of common preventable cancers

Amputations due to diabetic foot disease

1.1.2.Patient Experience

Institutions' responsiveness

1.1.3.Financial risk protection

Out-of-pocket expenditure on health

1.2.Outcome

1.2.1.Utilization/Coverage

OPD visits to primary level hospitals

Annual per capita medical clinic visits

Hypertension treatment coverage

Diabetes treatment coverage

Immunization coverage

1.2.2.Risk factor reduction

Overweight and obesity in persons aged 18-69 years

1.3.Process/Structure

1.3.1.Availability

Health workforce (average teams by facility level)

Availability of doctors at primary level hospitals

Hospitals with access to morphine for pain management in patients with cancer

Estate hospitals providing basic primary care services (as per SLESP)

1.3.2.Governance

Hospitals with functional Quality Improvement plans and activities

Hospitals monitoring Healthcare Associated Infections (HAI)

1.3.3.Service Quality

Surgical site infection rate

Serious Adverse Events Following Immunization (AEFI) rate

Caesarean Section rate (due to failed inductions)

2.Efficiency Indicators

In-patient hospital utilization indicators

Utilization of annual financial allocation

Percentage of drug expenditure on antibiotics

3.Equity Indicators

Comparison of the previous indicators across residence, geographical areas and socioeconomic groups.

Specific **targets** should be set for each of the clusters involved in SLESP implementation (ultimately all the clusters in the system). Those targets should be used for planning and monitoring.

REVISING THE ESP CONTENT

As it has been mentioned, this version of the SLESP has been drafted without looking at the details of the cost-effectiveness of the proposed interventions, or to the arguments for or against including a specific service. Services have been included as proposed, and the SLESP represents the range of services that are, or better, should be provided by the public system.

The stated validity of this package is five years, which implies that all services contained in the SLESP should be delivered to close to the whole target population by the end of this period (which may correspond to selected sites rather than to the whole country, if implementation is territorially

phased). Shortly before, the package should be reviewed and additions and removals decided. For that exercise, the implications –in terms of health, of service delivery capacity and of funding needs—should be carefully assessed before a new service is added.

Similarly, the adopted package should be thoroughly reviewed to identify services that have been delivered below the expected levels, and the reasons for that. If it is decided that delivering a specific service presents unsurmountable challenges, the best decision may be to remove it from the package, making room for other priority services.

NEXT STEPS

This first version of the SLESP is just the beginning of the process that will end with the endorsement of the definitive package to be included in implementation pilots and plans.

This document will be shared with all stakeholders for their comments and contributions, after which a version will be produced worth going to the protracted costing and feasibility analysis exercises. Since those will help assess the affordability and the actual implementation capacity, a new version should be drafted including the limitations found and their effect over the package content.

The final version should be endorsed by the MoHNIM and its partners, after which some sites should be selected for pilot implementation. The importance of the pilots is that they will confirm or adjust the cost estimates and the real delivery capability. The pilots may result in identifying the need to modify the package content, or even of some of the PHC structuring approaches that form the core of this overall policy.

Once the MoHNIM is confident that the package has all the required characteristics –effective, acceptable, affordable, implementable and monitorable—, its roll out should be integrated in the routine annual plans at the different levels.

Some of the services included in the SLESP are already delivered with adequate coverage, while implementing others will require additional resources. Some services are only listed, and lack adequate descriptions and development. Standardising service delivery will require developing criteria, guidelines and protocols for the newest among the services, a task that demands the involvement of technical experts and front-line clinical workers, and whose scope –technical and temporal—goes far beyond the production of the summary SLESP.

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ANNEX 1. List of Essential Medicines available by level of care

ITEM	UNIT	VEN	PMCU	DH	Base H
Amoxicillin Cap 250mg	CAP	E	✓	✓	✓
Amoxicillin cap. 500mg	CAP	E	✓	✓	✓
Amoxicillin Tab (soluble)125mg	TAB	E	✓	✓	✓
Amoxicillin Syr125mg/5ml,100ml	BOT	E	✓	✓	✓
Phenoxymethyl penicillin Tab.125mg	TAB	N	✓	✓	✓
Phenoxymethyl penicillin Tab.250mg	TAB	E	✓	✓	✓
Phenoxymethyl penici Syr.125mg/5ml	BOT	E	✓	✓	✓
Phenoxymethyl Penicillin tab.500mg	TAB	E	✓	✓	✓
Cloxacillin capsule 250mg	CAP	N	✓	✓	✓
Cloxacillin capsule 500mg	CAP	N	✓	✓	✓
Cloxacillin Syr.125mg/5ml,100ml	BOT	N	✓	✓	✓
Flucloxacillin capsule 500mg	CAP	E	✓	✓	✓
Flucloxacillin Syr.125mg/5ml100ml	BOT	E	✓	✓	✓
Flucloxacillin capsule 250mg	CAP	E	✓	✓	✓
Cefalexin Capsule 250mg	CAP	E	✓	✓	✓
Cefalexin Syr. 125mg/5ml,100ml	BOT	E	✓	✓	✓
Cefalexin dispersible tablet125mg	TAB	N	✓	✓	✓
Cephalexin Capsule 500mg	CAP	N	✓	✓	✓
Doxycycline hydrochlorideCap. 100mg	CAP	E	✓	✓	✓
Tetracycline hydrochlorideCap.250mg	CAP	N	✓	✓	✓
Erythromycin Tab. 250mg	TAB	N	✓	✓	✓
Erythromycin Tab. 500mg	TAB	N	✓	✓	✓
Erythromycin Syr. 125 mg/5ml,100ml	BOT	N	✓	✓	✓
Clarithromycin Tab. 250mg	TAB	E	✓	✓	✓
Clarithromycin IV. Infu. 500mg	VIAL	E	✓	✓	✓
Trimethoprim Tab. 100mg	TAB	E	✓	✓	✓
TrimthoprimSyr.50mg/5ml,100ml Bot	BOT	E	✓	✓	✓
Trimethoprim Tab. 200mg	TAB	E	✓	✓	✓
MDT-MB Adult	PACK	E	✓	✓	✓
MDT-PB Paediatric	PACK	E	✓	✓	✓
MDT-PB Adult	PACK	E	✓	✓	✓
Metronidazole Tab.200mg	TAB	E	✓	✓	✓
Metronidazole Tab.400 mg	TAB	E	✓	✓	✓
Metronidazole Syr200mg/5ml ,100ml	BOT	E	✓	✓	✓
Furazolidone Tab. 100mg	TAB	N	✓	✓	✓
Furazolidone Syr.25mg/5ml,100ml	BOT	N	✓	✓	✓
Nalidixic acid Tab. 250mg	TAB	N	✓	✓	✓
Nalidixic acid Tab.500mg	TAB	E	✓	✓	✓
Nitrofurantoin Tab. 50mg	TAB	E	✓	✓	✓
Nitrofurantoin Syr.25mg/5ml,300ml	BOT	E	✓	✓	✓
Chloroquine phosphateTab.250mg	TAB	E	✓	✓	✓
Primaquine tablets 7.5 mg	TAB	E	✓	✓	✓
Mebendazole Tab. 100mg	TAB	E	✓	✓	✓
Mebendazole Tab. 500mg	TAB	N	✓	✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Diethylcarbamazine citratetablet 50mg	TAB	E	✓	✓	✓
Diethylcarbamazine citratetablet 100mg	TAB	N	✓	✓	✓
Albendazole tablets 400mg	TAB	N	✓	✓	✓
Albendazole syrup 200mg/5ml,30ml bottle	BOT	N	✓	✓	✓
Digoxin Tab 0.25 mg	TAB	E	✓	✓	✓
Hydrochlorothiazide Tab. 25mg	TAB	E	✓	✓	✓
Furosemide (Frusemide) Tab40mg	TAB	E	✓	✓	✓
Furosemide (Frusemide) Inj.20mg/2ml	AMP	E	✓	✓	✓
Spironolactone Tab. 25 mg	TAB	E	✓	✓	✓
Atenolol Tab. 50 mg	TAB	N	✓	✓	✓
Propranolol Tab. 10 mg	TAB	N	✓	✓	✓
Propranolol Tab. 40 mg	TAB	N	✓	✓	✓
Methyldopa Tab. 250 mg	TAB	E	✓	✓	✓
Prazosin HCl Tab. 1mg	TAB	E	✓	✓	✓
Enalapril maleate Tab. 5mg	TAB	E	✓	✓	✓
Captopril Tab. 25mg	TAB	N	✓	✓	✓
Captopril tablets 12.5 mg	TAB	N	✓	✓	✓
Losartan Potassium Tab. 50mg	TAB	E	✓	✓	✓
Glyceryl Trinitrate Tab 0.5mg	TAB	V	✓	✓	✓
Isosorbide Mononitrate Tab.20mg	TAB	N	✓	✓	✓
Isosorbide Mononitrate Tab60mg SR	TAB	E	✓	✓	✓
Isosorbide Mononitrate SRtablet 30mg	TAB	E	✓	✓	✓
Amlodipine Besylate Tab. 5mg	TAB	E	✓	✓	✓
Amlodipine Besylate tablet2.5mg	TAB	E	✓	✓	✓
Diltiazem Tab. 30mg	TAB	E	✓	✓	✓
Nifedipine Tab.20mg S.R.	TAB	N	✓	✓	✓
Verapamil HCl Tab.40mg	TAB	E	✓	✓	✓
Aspirin enteric coated tab150mg	TAB	N	✓	✓	✓
Aspirin enteric coated tablet75mg	TAB	E	✓	✓	✓
Atorvastatin Tab.10mg	TAB	E	✓	✓	✓
Tab. Atorvastatin calcium 20mg	TAB	E	✓	✓	✓
Diazepam Tab. 5mg	TAB	E	✓	✓	✓
Diazepam rectal solution5mg/2.5ml	TUBE	E	✓	✓	✓
Diazepam rectal solution10mg in 2.5ml Tube	TUBE	N	✓	✓	✓
Chlordiazepoxide Tab. 10mg	TAB	N	✓	✓	✓
Haloperidol Tab. 1.5mg	TAB	E	✓	✓	✓
Haloperidol Inj. 5mg/1ml	AMP	E	✓	✓	✓
Prochlorperazine Tab 5mg	TAB	E	✓	✓	✓
Trifluoperazine Tab. 5mg	TAB	E	✓	✓	✓
Olanzapine Tab.5mg	TAB	E	✓	✓	✓
Olanzapine Tab.10mg	TAB	E	✓	✓	✓
Risperidone Tab.2mg	TAB	E	✓	✓	✓
Amitriptyline Tab. 25mg	TAB	E	✓	✓	✓
Imipramine Tab. 25 mg	TAB	E	✓	✓	✓
Fluoxetine hydrochloride Cap.20mg	CAP	E	✓	✓	✓
Cinnarizine Tab. 25mg	TAB	N	✓	✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Aspirin Tab. 300mg	TAB	E	✓	✓	✓
Paracetamol Tab. 500mg	TAB	E	✓	✓	✓
Paracetamol syr.120mg/5ml,60ml bot	BOT	E	✓	✓	✓
Phenytoin sodium Tab. 100 mg	TAB	E	✓	✓	✓
Carbamazepine tablet 100mg	TAB	E	✓	✓	✓
Carbamazepine Tab. 200mg	TAB	E	✓	✓	✓
Carbamazepine modified releaseTablet 200mg	TAB	N	✓	✓	✓
Sodium valproate Tab. 100mg	TAB	E	✓	✓	✓
Sodium valproate Tab. 200mg	TAB	E	✓	✓	✓
Flunarizine hydrochlorideTab. 5mg	TAB	N	✓	✓	✓
Ferrous sulphate Tab. 200mg	TAB	E	✓	✓	✓
Ferrous Fumarate chewableTablet 100mg	TAB	N	✓	✓	✓
Ferrous Fumarate Tablet 210mg	TAB	E	✓	✓	✓
Iron Drops 100mg/5ml, in15ml dropper	BOT	N	✓	✓	✓
Iron Drops 50mg/ml,in 15ml dropper	BOT	E	✓	✓	✓
Iron syrup 50mg/5ml,100ml bottle	BOT	E	✓	✓	✓
Ferrous Fumarate+Folic Acidtablets	TAB	N	✓	✓	✓
Water for Injection 10ml	AMP	E	✓	✓	✓
Water for Injection 5ml Ampoule	AMP	E	✓	✓	✓
Potassium Chloride Tab. 600mg	TAB	E	✓	✓	✓
Oral rehydration powder.	SACH	E	✓	✓	✓
Oral rehydration powdersachets 200ml	SACH	E	✓	✓	✓
Sodium chloride for IV use,0.9% ,500ml	BOT	V	✓	✓	✓
0.9% Sodium Chloride 1000mlcollapsible bag	BAG	V	✓	✓	✓
Dextrose for IV use 5%, ,500ml	BOT	V	✓	✓	✓
Dextrose for IV use 25% , 25ml	VIAL	N	✓	✓	✓
Dextrose for IV use 50%, 50ml	VIAL	E	✓	✓	✓
Calcium lactate Tab. 300mg	TAB	E	✓	✓	✓
Vitamin A High dose Cap.	CAP	E	✓	✓	✓
Vitamin B complex Tab.	TAB	N	✓	✓	✓
Vitamin C Tab.100mg	TAB	N	✓	✓	✓
Folic Acid Tab. 1mg	TAB	E	✓	✓	✓
Multivitamin Drops 15ml	BOT	N	✓	✓	✓
Disposable, IV giving sets	SET	V	✓	✓	✓
Calcium 500mg+Vitamin D3250IU Tab	TAB	E	✓	✓	✓
Zinc sulfate Tab 10mg	TAB	N	✓	✓	✓
Zinc sulfate dispersible Tab.20mg	TAB	N	✓	✓	✓
Calcium polystyrene sulphonate300g	PACK	E	✓	✓	✓
Phosphate tablet 500 mg	TAB	E	✓	✓	✓
Multivitamin+ Zinc Syrup 200ml	BOT	N	✓	✓	✓
Salbutamol Tab 2mg	TAB	E	✓	✓	✓
Salbutamol D.P Caps 200mcg	CAP	E	✓	✓	✓
Salbutamol D.P Caps 400mcg	CAP	E	✓	✓	✓
SalbutamolInhal.100mcg/md,200 doses	INHA	E	✓	✓	✓
Salbutamol MDI200mcg/dos,200doses	INHA	E	✓	✓	✓
Salbutamol resp.solu.0.5%,15ml	VIAL	E	✓	✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Salbutamol Syrup 2mg/5ml,60mlBott	BOT	E	✓	✓	✓
Salmeterol+Fluticasone DPCaps 50/100mcg	CAP	E	✓	✓	✓
Salmeterol+Fluticasone DP Cap50/250mcg	CAP	E	✓	✓	✓
Salmeterol+Fluticasone DPCaps 50/500mcg	CAP	E	✓	✓	✓
Ipratropium Bromide DP caps40mcg	CAP	N	✓	✓	✓
Theophylline SR Tab 125mg	TAB	E	✓	✓	✓
Theophyllin Syrup 25mg /5ml,60ml bottle	BOT	E	✓	✓	✓
Beclomethasone DP Caps 100mcg	CAP	E	✓	✓	✓
Beclomethasone DP Caps 200mcg	CAP	E	✓	✓	✓
Beclomethasone DP Caps 400mcg	CAP	E	✓	✓	✓
Beclomethasone arosolInh.50mcg/MDI,200d	INHA	E	✓	✓	✓
Beclomethasone Inha.100mcg/md,200d	INHA	E	✓	✓	✓
Beclomethasone Inha.250mcg/md,200d	INHA	E	✓	✓	✓
Cetirizine hydrochloride Tab.10mg	TAB	E	✓	✓	✓
Cetirizine HCl Syr.5mg/5ml,60ml bot.	BOT	E	✓	✓	✓
Chlorpheniramine maleate Tab4mg	TAB	E	✓	✓	✓
Chlorpheniramine syr.2mg/5ml,60ml	BOT	E	✓	✓	✓
Promethazine HCl Tab.10mg	TAB	N	✓	✓	✓
Promethazine HCl Tab.25mg	TAB	N	✓	✓	✓
Promethazine HCl Syr5mg/5ml,60ml Bot	BOT	N	✓	✓	✓
Promethazine HCl Inj.25mg/1ml	AMP	N	✓	✓	✓
Adrenaline bitartrate Inj.1mg/1ml	AMP	V	✓	✓	✓
Adrenaline inj. (1:10,000),1 mg/10 ml, pre-filled syringe	PFSY	V	✓	✓	✓
Breath induced device ford.p. caps	INHA	E	✓	✓	✓
Spacer device for infants	DEV	E	✓	✓	✓
Tetanus toxoide vaccine0.5ml(SD) amp	AMP	E	✓	✓	✓
Anti Venom Serum Inj. 10ml	VIAL	V	✓	✓	✓
Glibenclamide tablet 5mg	TAB	N	✓	✓	✓
Gliclazide tablet 40mg	TAB	E	✓	✓	✓
Gliclazide tablet 80mg	TAB	E	✓	✓	✓
Gliclazide MR tablet 30mg	TAB	E	✓	✓	✓
Metformin tablet 500mg	TAB	E	✓	✓	✓
Metformin tablet S.R. 850mg	TAB	N	✓	✓	✓
Metformin SR tablet 500mg	TAB	N	✓	✓	✓
Thyroxine tablet 50mcg	TAB	E	✓	✓	✓
Thyroxin sodium tablet 100mcg	TAB	E	✓	✓	✓
Thyroxine tablet 25mcg	TAB	E	✓	✓	✓
Hydrocortisone hemisucci.inj. 100mg	VIAL	V	✓	✓	✓
Dexamethasone tablet 0.5 mg	TAB	E	✓	✓	✓
Prednisolone tablet 5mg	TAB	E	✓	✓	✓
Prednisolone Tablet 1mg	TAB	E	✓	✓	✓
Prednisolon Syr.5mg / 5ml ,60ml	BOT	E	✓	✓	✓
Medroxyprogesterone Inj150mg/1ml	VIAL	E	✓	✓	✓
Domperidone tablet 10mg	TAB	E	✓	✓	✓
Domperidone syr. 5mg/5ml,60ml bot	BOT	E	✓	✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Metoclopramide tablet 10mg	TAB	E	✓	✓	✓
Metoclopramide Inj.10mg/2ml	AMP	E	✓	✓	✓
Omeprazole cap. 20mg	CAP	E	✓	✓	✓
Sodium bicarbonate powder	KG	N	✓	✓	✓
Bisacodyl tablet 5mg	TAB	E	✓	✓	✓
Bisacodyl tablet 10mg	TAB	N	✓	✓	✓
Bisacodyl suppository 10mg	SUPP	N	✓	✓	✓
Lactulose syr.3.0-3.7mg/5ml,120ml bot	BOT	E	✓	✓	✓
Lactulose syr.3.0-3.7mg/5ml500ml bottle	BOT	E	✓	✓	✓
Ciprofloxacin Eye drops0.3%, 5ml vial	VIAL	E	✓	✓	✓
Tropicamide Eye Drops 1% ,5ml	VIAL	E	✓	✓	✓
Chloramphenicol Eye Oint..1%,3.5g Tube	TUBE	E	✓	✓	✓
Gentamicin Ear Drops 0.3%w/v, 10ml vial	VIAL	E	✓	✓	✓
0.2% Chlorhexidine Mouth Wash	BOT	E	✓	✓	✓
0.5% Fluoride Mouth Wash,60-100 ml bot	BOT	E	✓	✓	✓
Magnesium sulphate Crystal	KG	N	✓	✓	✓
Hydrocortisone Cream 1%,5gtube	TUBE	E	✓	✓	✓
Framycetin cream 1%, 20 g tube	TUBE	E	✓	✓	✓
Miconazole nitrate cream 2%,15g tube	TUBE	E	✓	✓	✓
Benzyl benzoate applicat. 25%500ml bot	BOT	E	✓	✓	✓
Permethrin cream 5%, 15g tube	TUBE	N	✓	✓	✓
Cetrimide powder 500g tin	TIN	E	✓	✓	✓
Chlorhexidine solution20%w/v,500ml bot	BOT	E	✓	✓	✓
Sodium chloride Crystals	G	E	✓	✓	✓
Hydrogen peroxide solution6%v/v 450ml	BOT	E	✓	✓	✓
Potassium permanganate crystal	G	E	✓	✓	✓
Spirit surgical	ML	E	✓	✓	✓
Povidone iodine solution10%,500ml bot.	BOT	E	✓	✓	✓
Povidone iodine cream 5%, 15gtube	TUBE	N	✓	✓	✓
Povidone Iodine ointment5%w/w,15g	TUBE	N	✓	✓	✓
Sulphur precipitated powder	G	N	✓	✓	✓
Creta gallica powder	KG	N	✓	✓	✓
Glycerin	ML	N	✓	✓	✓
Malathion lotion 0.5%50ml bottle	BOT	N	✓	✓	✓
Ergometrine maleate inj.250mcg/1ml amp	AMP	N	✓	✓	✓
Levngstrl0.15mg+Ethnylstrdiol0.03mg tab	TAB	E	✓	✓	✓
levonorgestrel 1.5 mg,tablets	TAB	E	✓	✓	✓
Methyl salicylate	ML	N	✓	✓	✓
Ibuprofen tablet 200mg	TAB	E	✓	✓	✓
Ibuprofen tab.400mg	TAB	E	✓	✓	✓
Diclofenac Sodium Tab. 50 mg	TAB	E	✓	✓	✓
Diclofenac Sodium Jel20g, tube	TUBE	E	✓	✓	✓
Atropine sulphate Inj.600mcg/1ml amp	AMP	V	✓	✓	✓
Atropine Sulphate inj.0.1mg/mlin 10ml pre-filled syringe	PFSY	V	✓	✓	✓
Lignocaine injection 2%, 5mlvial	VIAL	E	✓	✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Charcoal activated, 50g bottle	BOT	E	✓	✓	✓
Fuller's earth ,60g bottle	BOT	E	✓	✓	✓
Methionine tablet 500mg	TAB	E	✓	✓	✓
Morphine sulphate Tab 10mg	TAB	E		✓	✓
Morphine sulphate Tab. 15mg	TAB	E		✓	✓
Morphine Sulphate CR tab 10mg	TAB	E		✓	✓
Morphine Sulphate CR tab 30mg	TAB	E		✓	✓
Morphine sulphate CR tab 60mg	TAB	E		✓	✓
Morphine sulphate Inj. 15mg	AMP	E		✓	✓
Pethidine hydrochloride Inj.50mg	AMP	E		✓	✓
Pethidine hydrochloride Inj.75mg	AMP	E		✓	✓
Benzyl penicillin Inj. 1mu	VIAL	E		✓	✓
Benzathine penicillin 1.2muInjection	VIAL	E		✓	✓
Ampicillin Inj. 250mg vial	VIAL	E		✓	✓
Ampicillin Inj.500mg vial	VIAL	N		✓	✓
Ampicillin Inj, 1g vial	VIAL	E		✓	✓
Cloxacillin Injection 250 mgvial	VIAL	E		✓	✓
Cloxacillin Injection 500mgVial	VIAL	E		✓	✓
Flucloxacillin injection 500mg	VIAL	E		✓	✓
Flucloxacillin Inj, 1g vial	VIAL	E		✓	✓
Norfloxacin Tab. 400 mg	TAB	N		✓	✓
Aciclovir Tab. 200mg	TAB	E		✓	✓
Aciclovir Tab. 800mg	TAB	N		✓	✓
Aciclovir Syr.200mg/5ml,125ml	BOT	N		✓	✓
Adenosine Inj. 6mg/2ml	AMP	E		✓	✓
Amiodarone injection 150mg/3ml	AMP	E		✓	✓
Carvedilol Tab. 6.25mg	TAB	E		✓	✓
Carvedilol Tab. 12.5mg	TAB	E		✓	✓
Carvedilol tablet 3.125mg	TAB	E		✓	✓
Aspirin dispersibletablet 300mg	TAB	E		✓	✓
Clopidogrel Tab. 75mg	TAB	E		✓	✓
Tranexamic acid cap. 500mg	CAP	E		✓	✓
Tranexamic acid Inj.500mg	AMP	E		✓	✓
Diazepam inj. 10mg/2ml	AMP	E		✓	✓
Lorazepam Tab. 1mg	TAB	N		✓	✓
Chlorpromazine HCl Tab. 50mg	TAB	N		✓	✓
Fluphenazine decanoate Inj.25mg/1ml	AMP	N		✓	✓
Flupenthixol decanoate Inj.40mg/2ml	AMP	N		✓	✓
Resperidone tablet 1mg	TAB	E		✓	✓
Lithium carbonate Tab. 250mg	TAB	E		✓	✓
Clomipramine HCl Tab. 25mg	TAB	E		✓	✓
Clomipramine HCl Tab. 50mg	TAB	N		✓	✓
Doxepin HCl Cap. 50mg	CAP	N		✓	✓
Sertraline tablet 50mg	TAB	E		✓	✓
Venlafaxine HCl Cap. E.R.37.5mg	CAP	E		✓	✓
Venlafaxine HCl Cap. E.R. 75mg	CAP	E		✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Phenobarbitone Tab. 15mg	TAB	N		✓	✓
Phenobarbitone Tab. 30mg	TAB	N		✓	✓
Phenobarbitone Tab. 60mg	TAB	N		✓	✓
Phenytoin sodium Tab. 25mg	TAB	E		✓	✓
Phenytoin sodium Tab. 50mg	TAB	E		✓	✓
Clonazepam Tab. 0.5mg	TAB	E		✓	✓
Clonazepam Tab.2mg	TAB	E		✓	✓
Sodium valproat syrup200mg/5ml,100ml	BOT	E		✓	✓
Benzhexol HCl Tab. 2mg	TAB	E		✓	✓
Co-careldopa Tab. 25/100mg	TAB	E		✓	✓
Co-careldopa Tab. 25/250mg	TAB	E		✓	✓
Co-careldopa Modified Releasetablet 50mg/200mg	TAB	N		✓	✓
Benztropine Inj. 2mg/2ml	AMP	N		✓	✓
Disulfiram Tab. 200mg	TAB	E		✓	✓
Atomoxetine HCl capsule 10mg	CAP	N		✓	✓
Quatiapine tablet 25mg	TAB	E		✓	✓
Alprazolam tablet 0.25mg	TAB	N		✓	✓
Alprazolam tablet 0.5mg	TAB	N		✓	✓
Aripiprazole tablet 10mg	TAB	E		✓	✓
Midazolam Nasal Spray 0.5mg/md,50 dose unit	SPRY	N		✓	✓
Potassium Chloride 15%, Inj.10ml	AMP	E		✓	✓
Sodium bicarbonate tablet600mg	TAB	E		✓	✓
Sodium bicarbonate for IV use8.4% ,50ml	AMP	E		✓	✓
Sodium bicarbonate tablet500mg	TAB	N		✓	✓
Sodium chloride for IV use0.9% ,5ml	AMP	N		✓	✓
Dextrose for IV use 10% ,500ml	BOT	N		✓	✓
Sodi.chlo 0.45% & Dext 5%,Inj. 500ml	BOT	E		✓	✓
Compound sodium lactate Inj.500ml	BOT	E		✓	✓
Dextran 40,10%,in NaCl for IVuse 500ml	BOT	E		✓	✓
Tetrastarh solution for IV,500ml	BOT	N		✓	✓
Vitamin B1 Tab. 10mg	TAB	N		✓	✓
Pyridoxine Tab. 10mg	TAB	E		✓	✓
Pyridoxine HCl Tab. 25mg	TAB	E		✓	✓
Phytomenadione Injection1mg/0.5ml	AMP	E		✓	✓
Phytomenadione Injection10mg/1ml	AMP	E		✓	✓
Hydroxocobalamine Inj. 1mg/1ml	AMP	N		✓	✓
Desferrioxamine Inj. 500mg	VIAL	E		✓	✓
Histidine-tryptophan -ketoglutarate (HTK) solution	BAG	E		✓	✓
Gelatin IV infusion 4%,500ml collapsible bag/bottle	BAG	N		✓	✓
Fluticson+SalmetrolInha.125/25md,120 d	INHA	E		✓	✓
Fluticson+SalmetrolInha.250/25md,120d	INHA	E		✓	✓
Fluticasone + Salmeterolinha 50mcg /25mcg md,120d	INHA	E		✓	✓
Fluticasone MDI ,125mcg/dose120d	INHA	E		✓	✓
Ipratropium Br. Resp.sol0.25mg/1ml,2ml	VIAL	E		✓	✓
Ipratropium Br. Resp.sol0.25mg/1ml,15ml	VIAL	E		✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Chlorpheniramine maleateInj.10mg/1ml	AMP	E		✓	✓
Anti Rabies (TC)vaccine	VIAL	V		✓	✓
Antitetanus human immunoglob.250IU	PFSY	E		✓	✓
Mixed Gas-Gangren Antitox25,000 IU	VIAL	N		✓	✓
Tolbutamide tablet 500mg	TAB	N		✓	✓
Bipha.Isoph.Insulin(Human)inj.30/70	VIAL	E		✓	✓
InsulinIsophane(human)1,000IU/10ml	VIAL	E		✓	✓
Insulin soluble(Hu) Inj.1,000IU/10ml	VIAL	E		✓	✓
Carbimazole tablet 5mg	TAB	E		✓	✓
Carbimazole tablet 10mg	TAB	E		✓	✓
Dexamethasone Inj. 8mg/2ml	AMP	E		✓	✓
Potassium Iodide tablet 5 mg	TAB	N		✓	✓
Methimazole tablet 5mg	TAB	N		✓	✓
Hyoscine Butylbromide tablet10mg	TAB	N		✓	✓
Famotidine tablet 20mg	TAB	N		✓	✓
Omeprazole tablet 10mg	TAB	N		✓	✓
Omeprazole sodium Inj. 40mg	VIAL	E		✓	✓
Glycerin suppository 2g	SUPP	N		✓	✓
Paraffin, liquid	ML	E		✓	✓
Paraffin,yellow soft	G	E		✓	✓
Paraffin ,White Soft	G	E		✓	✓
Wax,emulsifying	KG	E		✓	✓
Starch Powder	KG	N		✓	✓
Calamine Powder	G	E		✓	✓
Bentonite	G	E		✓	✓
Hydrocortisone Ointment 1%,5g tube	TUBE	E		✓	✓
Betamethasone Ointment0.1%,15g tube	TUBE	E		✓	✓
Silversulphadiazine Cream1%,500g	JAR	E		✓	✓
Benzoic acid powder	G	N		✓	✓
Salicylic acid powder	G	E		✓	✓
Magenta crystals	G	N		✓	✓
Cetrimide cream 0.5%, 50g tube	TUBE	E		✓	✓
Zinc oxide powder	G	E		✓	✓
Fusidic acid2%+Hydrocort.1%,oint. 15mg	TUBE	N		✓	✓
Stilboestrol tablet 5mg	TAB	N		✓	✓
Ergometrine maleate inj.500mcg/1ml amp	AMP	E		✓	✓
Oxytocin injection 2 I.U./2ml amp	AMP	N		✓	✓
Oxytocin injection 5 I.U. /1ml amp	AMP	E		✓	✓
Levonorgestrel implants tworod	SET	E		✓	✓
Etonogestrel implant singlerod	SET	N		✓	✓
Clotrimazole pessaries 100mg	PESS	E		✓	✓
Clotrimazole pessaries 500mg	PESS	N		✓	✓
Ibuprofen Syr.100mg/5ml, 60mlbot	BOT	E		✓	✓
Diclofenac Sodium Tab. 25 mg	TAB	N		✓	✓
Thiopentone sodium Inj. 500mg	VIAL	E		✓	✓
Thiopentone sodium Inj. 1g	VIAL	N		✓	✓

ITEM	UNIT	VEN	PMCU	DH	Base H
Midazolam inj. 5mg/1ml amp	AMP	E		✓	✓
Atracurium besylate inj.25mg/2.5ml	AMP	E		✓	✓
Suxamethonium chloride inj.100mg/2ml	AMP	V		✓	✓
Suxamethonium chloride inj.20mg/ml,10ml pre filed syringe	PFSY	V		✓	✓
Neostigmine injection2.5mg/1ml amp	AMP	E		✓	✓
Flumazenil injection500mcg/5ml vial	VIAL	E		✓	✓
Naloxone inj. 400mcg/1ml amp	AMP	E		✓	✓
Lignocaine anhydrous gel 2%,30g tube	TUBE	E		✓	✓
Lignocaine 2% + Adrenalininj. 30ml vial	VIAL	E		✓	✓
Acetylcysteine injection2g/10ml amp	AMP	E		✓	✓
Pralidoxime chloride inj.1g/20ml	AMP	E		✓	✓