THE BASIC PACKAGE OF HEALTH AND NUTRITION SERVICES IN PRIMARY HEALTH CARE

SOUTH SUDAN UPDATE

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MINISTRY OF HEALTH

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ABBREVIATIONS

ABC	Abstinence, Be faithful, Condom use
ACT	Artemisinin-based Combination Treatment
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ASAQ	Artesunate and Amodiaquine
ASRH	Adolescent Sexual and Reproductive Health
ARI	Acute Respiratory Infection
ARV	Anti Retroviral therapy (against HIV)
BCC	Behavioral Change and Communication
BEMONC	Basic Emergency Obstetrics and Neonatal Care
BPHS	Basic Package of Health Services
CEMONC	Comprehensive Emergency Obstetrics and Neonatal Care
CBD	Community Based Distribution
CBHC	Community Based Health Care
CH	County Hospital
CHD	County Health Department
CHMT	County Health Management Team
CHW	Community Health Worker
CMO(H)	County Medical Officer (of Health)
CMW	Community Midwifes
CO	Clinical Officer
CPR	Contraceptive Prevalence Rate
CPT	Cotrimoxazole Prophylactic Treatment
CS	Caesarean Section
DOTS	Directly Observed Treatment – short course
DPT	Diphtheria, Polio, Measles
EmONC	Emergency Obstetric and Neonatal Care
EOC	Essential Obstetric Care
EWARN	Early Warning Alert and Response Network
FBO	Faith Based Organization
GAM	Global Acute Malnutrition
GM	Growth Monitoring
GOSS	Government of Southern Sudan
HF	Health Facility
HIV	Human Immunodeficiency Virus
HMIS	Health Management and Information System
HR(H)	Human Resources (for Health)
HSDP	Health Sector Development Plan 2011-2015
IDP	Internally Displaced People
IEC	Information, Education and Communication
IECHC	Integrated Essential Child Health Care
IMCI	Integrated Management of Childhood Illnesses
IPT	Intermittent Preventative Treatment
IRS	Indoor Residual Spraying
ITN	Insecticide Treated Net
IPT	Intermittent Preventive Treatment (of malaria)
LLIN	Long-Lasting Insecticide-Treated Nets
MCH	Mother and Child Health
MCHW	Maternal and Child Health Workers
MDA	Mass Drug Administration
MDG	Millennium Development Goal
M&E	Monitoring and Evaluation
MISP	Minimum Initial Service Package
MMR	Maternal Mortality Ratio
MoH	Ministry of Health (GOSS)
MRHS	Men's Reproductive Health Services
MVA	Manual Vacuum Aspiration
NGO	Non-Governmental Organisation
NID	National Immunisation Day
NPD	Neuropsychiatric disorders
NTDs	Neglected Tropical Diseases
ORS	Oral Rehydration Solution
PAC	Post Abortion Care
PHCC	Primary Health Care Centre
PHCU	Primary Health Care Unit
PITC	Provider Initiated Counselling and Testing
PMTCT	Prevention of Mother to Child Transmission (of HIV)
RH	Reproductive Health (
SBA	Skilled Birth Attendants
SDG	Sudanese Pounds
SHHS	Sudan Household Health Survey
SMSTI	Syndromic Management of STI
SBA	Skilled Birth Attendant
SMoH	State Ministry of Health
SMSTI	Syndromic Management of STI
SRH	State Referral Hospital
SSHHS	Southern Sudan Household Health Survey
STI	Sexually Transmitted Infection
TB	Tuberculosis
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
VCT	Voluntary Counselling and Testing
VHC	Village Health Committess
VL	Visceral Leishmaniasis
WHO	World Health Organisation

TABLE OF CONTENT

1 INTRODUCTION

1.1 DEVELOPMENT OF THE BASIC PACKAGE OF HEALTH SERVICES

The term Basic Package of Health Services (BPHS) is used to refer to the primary and secondary component of health services, the prioritised package of care continuum in South Sudan. It is synonymous to essential health service package (EHSP) or minimum packages of health services (MPHS). The BPHS is linked to the referral health services and to activities of other sectors that are relevant for preventative and promotive health services such as agriculture, education, environmental management, gender, social welfare, culture and religious affairs. They contribute directly to health outcomes, thereby creating opportunities for collaboration in planning and service delivery to mutually synergise and work towards establishing the condition for a healthy and progressing society of the new nation and towards the Millennium Development Goals.

The BPHS was first revised in January 2009 in a consultative process and again reviewed in December 2010. The Ministry of Health (MoH) opted for a further revision after a relatively short period because the policy and strategic framework grew and was adjusted. The BPHS contributes to this framework i) in its priorities and concise approach and ii) in its added and contributing role towards the national health policy and development plan, which iii) also clarifies the role and purpose of the individual policy and strategy formulating reference documents.

Therefore this revision of the BPHS is closely building upon the consultative process which led to the previous versions of the BPHS and takes much of the previously agreed elements.

While this document stipulates the primary care services, linkages are made to the secondary and tertiary levels. The services of these levels are elaborated in separate document.

1.2 POLICY FRAMEWORK

In general, a BPHS comprises a selection of interventions for disease prevention and health promotion, rehabilitation and selected curative services that address priority health problems integrated in such a way that makes it accessible at appropriate levels of care at affordable cost. In the context of South Sudan these priorities are identified in the Health Policy and the Health Sector Development Plan, which are currently in the process of being updated for the period 2011 - 2015. The Health Sector Development Plan is closely linked to the section on health in the social and human development pillar of the **South Sudan Development Plan** which specifies five programme areas for the period until 2013:

1. Increasing access to basic health services and health promotion
2. Strengthening human resources in the health sector
3. Expanding the pharmaceutical and medical equipment supply chains
4. Strengthening the health management system
5. Strengthening provision of HIV and AIDS services

The health sector in South Sudan requires substantial technical, programmatic, managerial and financial input and investments. It can be expected that progress and improvements will be steady, although over time-periods of numerous years of development. In building up the health sector, all WHO promulgated health system building blocks willevolve while facing tasking challenges. At the present stage of commencing a new, independent state arisen from a dilapidating and depleting period, rather robust and strongly focussed strategies, approaches and working tools are required which, at the same time, allow flexible adjustments. The **draft Health Sector Development Plan** focuses on the following programmatic top priorities:

1. Increasing access to basic maternal and child health services
2. A greater focus on health promotion and protection
3. Strengthening human resources in the health sector
4. Expanding the pharmaceutical and medical equipment management systems
5. Strengthening governance and the health management system
6. Strengthening provision of HIV/AIDS services

1.3 PURPOSE OF BPHS

The BPHS represents an integrated part of key national policy and strategic documents which give the direction for the health sector during the coming years. These national documents do not stand alone but have to be used complementary to each other.

BOX 1: KEY DOCUMENTS OF POLICY FRAMEWORK

POLICY FRAMEWORK

- **Health Policy: Health Policy; Government of Southern Sudan 2007 – 2011; National Health Policy 2011-; Draft 11 June 2011**
- **South Sudan Development Plan (Social and Human Development Pillar) 2011 - 2013**
- **Health Sector Development Plan (2011 – 2015 in process; draft May 2011**
- **Maternal and Reproductive Health Policy for Southern Sudan; Ministry of Health, Draft; November 2006**
- **Operational Plan (planned for second half 2011) and Annual Operational Plans**
- **Basic Package of Health Services**
- **Monitoring and evaluation system referring to 1 – 4 (in process)**
- **Essential Medicine List (Southern Sudan Essential Medicine List 2007)**
- **Prevention and Treatment Guidelines for Primary health Care Centres and Hospitals, Government of Southern Sudan, 2006**

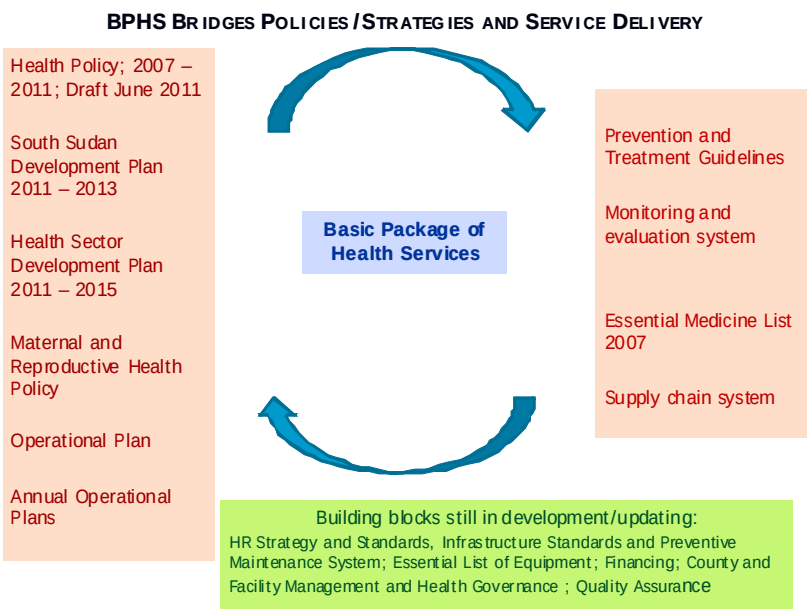
In this light the BPHS is neither duplicating the national strategy, formulated in Health Sector Development Plan and in the Social and Human Development Pillar of the South Sudan Development Plan, nor the treatment guidelines and protocols. The BPHS rather presents the operational translation of the strategy in order to improve maternal and child health, control communicable diseases, improve community nutrition, especially mothers and children and address the most common non communicable diseases. It is a guide that aims to enable

- providers to plan integrated and prioritised health services from the community level and link the first layers of the primary care to a rational hierarchical referral system.;
- the steady development of a comprehensive continuum of preventative and curative health care on primary and secondary care levels;
- national offices to plan and establish over the coming four years health (management) systems, in particular in respect to human resources, supply chain and finance;
- health managers, facility managers and individual professionals to assess their own capabilities against the service norms and standards for each level of care and the competency required to deliver them effectively as well as to identify skill and knowledge requirements and gaps to develop more effective oversight, support and training curricula to update the capabilities of health staffs.

Hereby the BPHS functions also as a reference for focused capacity building, contracting and authorising, monitoring and evaluating NGOs and other implementers. The BPHS, while taking into account the vast existing constraints, contributes to developing the health sector and deciding on short and medium term strategic planning of resource allocation and investments

(human, financial, equipment/infrastructure). Hereby it also serves a reference for costing the services which in turn provides evidences for advocacy purposes towards national and state governments and donors to increase their contribution. Hence the BPHS bridges national policies and service delivery without replacing guiding documents on either level.

FIGURE 1: BPHS BRIDGES POLICIES/STRATEGIES WITH SERVICE DELIVERY



It is important to note, that, at the time of this BPHS revision, the MoH Human Resource (HR) Directorate is in process to harmonise, standardise and simplify the multiple terms and cadres of health workforce currently in use by various offices and implementers. **In order not to pre-empt the outcome of this process the BPHS uses generic terms of health cadres and aims to feed into the definition of the envisioned health cadres.** Also, professional midwives will be educated as "skilled birth attendants". The focus will not be on training more Traditional Birth Attendants (TBAs). It is acknowledged that the training of sufficient (community) midwives will take time and therefore in the short term, TBAs will be guided in selected simple reproductive health care interventions until there are a sufficient number of trained community midwives to completely phase out TBAs.

1.4 APPROACH IN PHASES AND TIME FRAMES OF THE BPHS

In view of the BPHS as the operational translation of the health strategy and considering the present depleted status of the health sector in South Sudan and the expected progresses during the coming years, the **BPHS will be developed in phases, aligned with the Health Sector Development Plan,** focussing on being highly focussed, user friendly, robust and easy to be adjusted.

Therefore the BPHS can be of immediate effect for the various groups of users; it can be concise and brief to serve as a working tool for health facilities, implementers and managers as a relatively easily adjustable working tool.

Being aligned with periods of the Health Sector Development Plan, a mechanism for annual update is built in and after the initial four years a more substantial revision is planned in preparation of the next phase of the BPHS, again aligned with the next period of the Health Sector Development Plan.

Except for Juba the constraints in the health sector in the States are, as far as documented and known, in a similar deplorable status. The second phase would allow possibly a regionalisation of components of the BPHS. At the same time, the BPHS allows for easy expansion. In cases a State or a county can show substantial improvements in performance of the health services provided, an evaluation by the MoH can substantiate the progress and the State can be given the space to expand at an earlier state, based on State specific epidemiological and demographic evidence, underlining both the needs and the capacity to carry out additional services.

2 HEALTH SERVICE DELIVERY

State Ministries of Health (SMoHs) and County Health Departments (CHDs) are responsible for secondary and primary health care services respectively. The 10 SMoHs provide leadership for health service delivery and management in their respective States. The responsibility for funding and recruitment for most government provided health services resides with the States and Counties. The CHDs manage the delivery of PHC services, while Payam Health Departments and Boma Health Committees are operational at the community level.

2.1 HEALTH SERVICE DELIVERY FACILITIES PROVIDING PRIMARY CARE

Health services are delivered through a three-tier system composed of Country Hospitals (CH), (Payam) Primary Health Care Centres (PHCCs) and (Boma) Primary Health Care Units (PHCUs), in close collaboration with village committees and other community-based networks.

2.1.1 Community Organisation for Health and Boma Primary Health Unit (PHCU)

At the village level, care is provided by a set of community volunteers led by **Community Health Workers** (CHW) and **Community Midwives** (CMW) who are residents of the area they serve.

The **Village Health Committees** (VHC), consisting of elected community members, represent the entire community while maintaining a gender balance, and provide administrative oversight and support to CMWs and CHWs. They maintain liaison with the County Health Departments (CHD), the service provider and the community.

Boma Health Committees (BHCs) members are elected community members and provide administrative support and mentorship, while representing the entire community and maintaining a gender balance. The key functions are:

- Community engagement and involvement for community ownership in health issues
- Monthly work plans by health committees
- Planning and implementation of community health and outreach health activities
- Health education through health campaigns and awareness raising activities
- Enforcing the referral system and disease surveillance
- Monitoring and evaluation of health activities and of efficient and cost-effective use of resources

Boma Primary Health Care Units (PHCU) are the frontline health facilities staffed by two Community Health Workers and a Community Midwife. They provide basic preventive and curative services. While one facility-based CHW is responsible for curative activities, the other provides oversight to community-based activities implemented in their catchment area. On the long term, Clinical Officers (CO) (non-physician clinician cadre) will head PHCUs while public health officers will provide oversight to community based activities. There should be averagely one PHCU for every 15 000 people.

The main purpose lies on disease prevention and promotion of health through education on and promotion of nutrition, health seeking behaviour, vaccination, use of mosquito nets and of water and sanitation. The CHWs are not trained nurses, but can perform diagnosis and treatment of a few common problems, such as malaria, diarrhoea and ARI. Also, they cannot conduct maternal care such as deliveries or antenatal clinics, but rather promote family planning and distribute pills and condoms. Vaccinations and therapeutic nutrition programmes are carried out as part of the outreach services by nurses from PPHC and are assisted by CHWs, while CHWs also routinely

screen under-fives and pregnant women for malnutrition. CHWs are responsible to record their activities at this first level of the HMIS. No fees are charged at PHUs.

2.1.2 Payam Primary Health Care Centre (PHCC) offering Basic Emergency Obstetric and Neonatal Care

Primary Health Care Centres are the first referral health facilities that offer a wider range of diagnostic and curative services than a PHCU, notably laboratory diagnostics, and an indoor care observation ward. It provides treatment of simple cases and offer Basic Emergency Obstetric and Neonatal Care (BEMONC).

The PHCC has qualified health professionals, with COs, fully trained nurse/midwives, CHWs, vaccinator, laboratory and pharmacy technician, public health technicians, cleaners and watchmen. The PHCC dispenses a wider range of drugs than PHCUs, including parenteral treatment and minor surgical procedures. In obstetrics, they provide life saving procedures like manual vacuum aspiration (MVA) and post abortion care (PAC). There should be at least one PHCC for every 25 000 women of child bearing age, which translates to, in average, 4 PHCUs per PHCC. These facilities will provide mentorship to PHCU and ensure efficient reporting to and use of the Health Management Information System (HMIS) for their catchment areas, which includes documentation relating to administrative, maintenance activities as well as outreach health activities.

Provision of Comprehensive EmONC

Comprehensive EmONC (CEMONC) is usually provided in hospitals which are equipped with physicians, operation theatres and blood transfusion. However, given the setting in South Sudan with low population density over a large area entailing long distances between health facilities it is envisioned to pilot comprehensive EmONC in certain extremely well performing PHCCs. In addition to all the services provided at the PHCCs, the delivery of Comprehensive EmONC will entail surgical obstetrics with the capacity to carry out caesarean sections, management of severe uterine bleeding/damage and safe blood transfusion. There should ideally be one Comprehensive EmONC facility for every 50,000 women of child bearing age, with health professionals skilled in deliveries, anaesthetists and laboratory technicians trained in blood transfusion. The facility should have at least two fully functional and equipped operating theatres for standby arrangement to enable safe surgical obstetric interventions on a sustainable basis.

2.1.3 County Hospital

The Government of Southern Sudan (GOSS) plans for one hospital for each county. The most important role of these hospitals is the provision of CEMONC with the capacity for carrying out caesarean sections and blood transfusion, while all hospitals provide preventive, promotive, clinical, curative and in-patient health services, as well as surgery. The surgical facilities also allow tubal ligations to be carried out, as well as IUDs and implants to be fitted. County Hospitals are expected to serve 300 000 people, and General Hospitals serve a population of approximately 500 000.

The hospitals are expected to ensure 24 hour quality in-patient referral health care with qualified nurses, midwives and doctors permanently in the hospital. The hospital management is overseen by the hospital director and the CHD. Health Boards are responsible for mobilising funds also in the community, as from business enterprises, the diaspora and other sources. SMoH, MoH and municipal authorities also contribute to hospital capital and recurrent costs. State EPI depots provide regular vaccine supplies to the county while the EPI depot is located with the medical store separate from the hospital.

2.1.4 Facilities in Summary

In summary it is foreseen that in average one PHCU serves a population of 15 000, one PHCC 50 000 and one County Hospital 300 000. This amounts to 609 PHCUs, 204 PHCCs and 37 County Hospitals. Referral Hospital facilities are in accordance with the existing provision of three teaching hospitals (Juba, Wau, Malakal) and eight State Hospitals. The construction of five specialised hospitals is planned (Dr John Garang Memorial Hospital, Maternal & Neonatal Centre, Juba Diagnostic Health Care Centre, Maternal Centre in Malakal and the Children's Hospital in Malakal).

2.2 MANAGERIAL AND ADMINISTRATIVE ARRANGEMENTS

The Health Policy of the GoSS has established a **structure for governance** at all tiers of the health system from the central level up to the community level:

- The managerial and regulatory structures are in process to be formulated and their lines established for collaboration and reporting with the implementing partners and technical agencies in order to deliver the BPHS without any perplexity or uncertainty. Initially services are wholly or in part contracted to certain lead agencies (Non Governmental (NGOs), Faith Based and/or Civil Society Organisations (CSOs), that possess sufficient capacity to support the SMoHs and CHDs. Some lead agencies concurrently contribute to building the capacity of these institutions either by filling the gaps in managerial capabilities or by offering advice.
- At the same time exit strategies have to be designed for NGOs, FBOs and CSOs in tandem with strengthening the capacity of the public sector enabling it to shoulder its responsibilities with confidence and transparency. The aim is to establish sound functional strategies focusing on i) developing adequate human resource for planning, delivery, monitoring and evaluating the BPHS from the State through the County and Boma levels; ii) health promotion; iii) transparent, accountable, rational and cost effective use of resources; iv) efficient monitoring and evaluation all levels; v) short and medium term plans that contribute to the long term goals; vi) harnessing comparative strengths of NGOs in the management of collective activities focusing on short or medium term targets.
- In view of the strong capacity building need on all levels of the health system, the management structures aim to keep the oversight of functions and workers at PHCC, PHCU and village levels and provide continuous feedback to the peripheral tiers with a view to improve overall performance of the system.
- They will also be responsible for preparation of results based annual work plans for their geographical areas of work. These will be collated into annual County health plans to be forwarded to the State. The plans are expected to be developed following feedback, assessments and after reviewing the available health information and should be timely for incorporation into the State and MoH budgets.

For the package to be delivered along sound lines without any delays or interruptions, it is imperative to ensure that logistics such as medicines, vaccines, equipments, tools, vehicles and other supplies are appropriately selected, quantified, and reach the health facilities on time. For this a robust system of **supply chain management** backed up with the necessary resources needs to be put in place along sustainable lines.

Collection and interpretation of health service data is a vital component of health system strengthening, as it leads to informed and evidence based decision making. It is therefore critical that information from the village/PHCU/PHCC/CHD level is collected at the various levels and fed into the national **health management information system (HMIS)**. The community

based information will be first reviewed locally in discussion with Boma and village leaders, and then transmitted through weekly and monthly morbidity/mortality reports via the PHCC to the County, State and the Central HMIS for their respective compilation and utilisation.

2.3 HEALTH SERVICE COVERAGE AND UTILISATION

It is estimated that only around 44% of settlements lie within a 5 kilometres radius of a functional health facility (Health Facility Mapping 2011, based on 10 states)[1]. User rates are estimated to be as low as 0.2 contacts per person per year.

The infrastructure network of the health sector contains more than 792 PHCUs, 284 PHCCs, 37 hospitals, training institutions and MoH offices at Central, State and County levels. Of the 1147 functional HFs 347 (23.3%) require minor renovation, 274 (18.4%) need major renovation and 490 (32.9%) need to be rebuilt. Besides the HFs, renovation of training schools, offices and staff houses is needed. In addition in total there are 340 non-functional HFs.

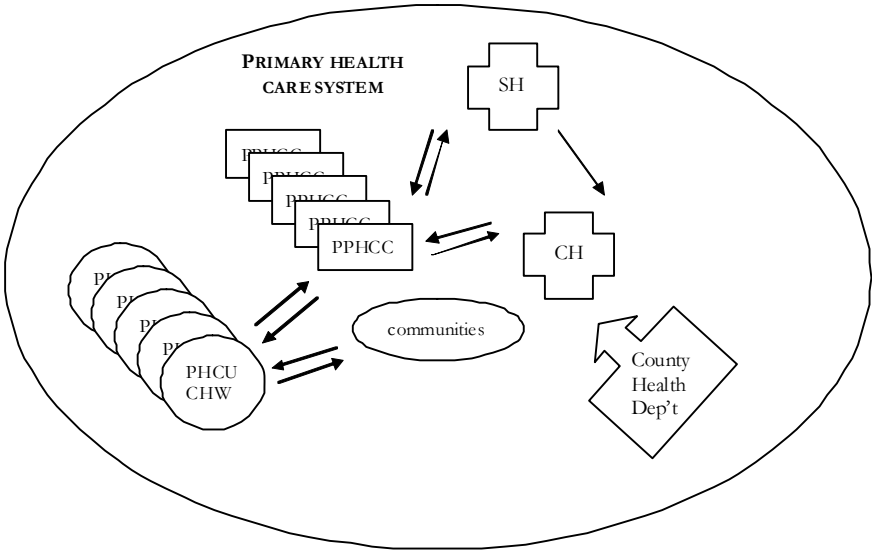
The transport system is severely hampered with insufficient ambulances capacity and lack of a reliable fleet of vehicles (cars, motorbikes, boats) for the provision of medicines, supplies, managerial support and for the functioning of a reliable referral system. There is no maintenance system for infrastructure, vehicles or medical equipment.

User rates are compounded by problems in the supply of services due to a serious lack of qualified staff; inadequate equipment and supplies, long distances to facilities, poor roads and transport, limited/no ambulance service, dysfunctional referral system and cultural and financial barriers. In particular the provision of safe CEmOC in hospitals is very low. The caesarean section rate, a good indicator of access to CEmOC, was only 0.5%[2] of the population served in the three teaching hospitals of Juba, Malakal and Wau. This is one of the lowest rates in Africa[3]. Secondary and tertiary hospitals have limited diagnostic capability and lack specialised equipment and facilities.

PHC provision is very low, as are utilisation rates and access to known, cost-effective, life-saving maternal and child health interventions, although some indicators are starting to show improvements. 60% of households have one or more insecticide-treated nets; 12% of children with fever were treated with an appropriate anti-malarial medicine within 24 hours of the onset of fever[4]. In 2006, just 1.8% children under-five years of age[5] were fully immunised (SHHS 2010: 1.8%) and only 43% had completed the course of 3 doses of DPT[6] (SHHS 2010: 13.8%). According to SHHS 2006, only 48% of pregnant women attended one or more ANC visits (SHHS 2010: 46.7%). Only 10% of deliveries were attended by a skilled birth attendant (SBA) (SHHS 2010: 14.7%) while institutional deliveries accounted for just 13.6% of births (SHHS 2010: 12.3%). The contraceptive prevalence rate (CPR) is 3.5% (SHHS 2010: 4.7%). These factors, combined with the high total fertility rate at 6.7 per woman (SHHS 2010) contribute to the high maternal mortality ratio (MMR) in South Sudan.

[1] Coverage estimates for 10 States that have been analysed.
[2] Report of Strengthening of Hospital Management in South Sudan, caesarian rate in the 3 THs was 0.5%. SHHS 2010 also confirms the same figure.
[3]Examples of caesarean rate for some African Countries: Kenya = 2 4%, Zambia = 2.1%, Ethiopia = 1.1%, Ghana = 6.9%, Rwanda = 2.9%, Sudan = 4.5%, Uganda = 3.1% and Tanzania = 3.2%
[4]SS MIS 2009
[5]SHHS 2006
[6]UNICEF 2009

FIGURE 2: PRIMARY HEALTH CARE SYSTEM



In the first phase the BPHS aims to improve the quality of service provision and not the quantity of HF. Initially, while some overlap of services coverage between HFs will exist, there will be more underserved areas. Therefore the targets in population sizes are estimations aiming to working towards at least a few quality health facilities within a certain geographical area.

3 DISEASE PATTERN

Decades of marginalisation and civil war have made South Sudan one of the most underdeveloped countries in the world. The MMR, with 2 054 women dying for every 100 000 live births, is among the highest in the world.[7] One out of every nine children dies before his or her fifth birthday (106 per 1 000 live births)[8] (only 27% of adults are literate[9] and, even when harvests are good, 20% of the population is food insecure and requires emergency assistance[10]).

Malaria and respiratory diseases account for almost 50% of diagnoses reported by HFs while malaria accounts for 20% - 40% of all consultations at outpatient departments and between 20-25% of deaths, especially amongst under-5 children, pregnant women and people from highly endemic areas. According to the 2009 South Sudan Malaria Indicator Survey (SSMIS), up to 35% of children below 5 years had suffered from a fever within the two weeks preceding the survey.

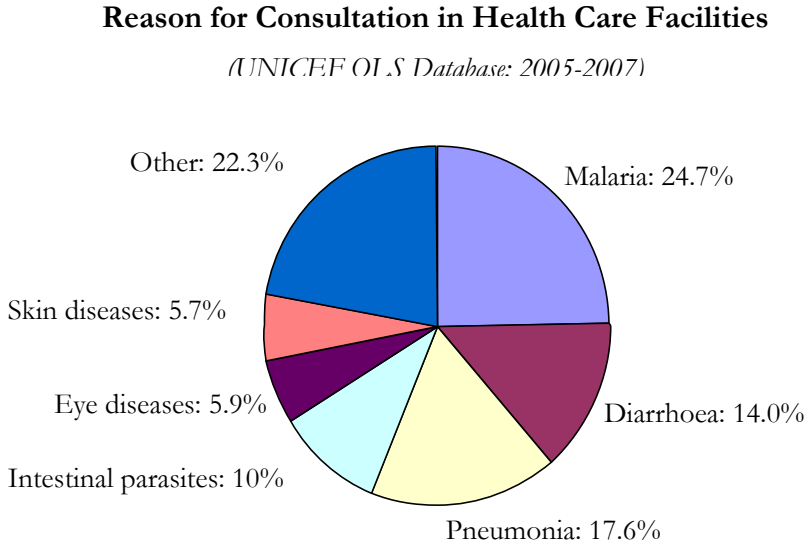
The annual incidence of all forms of tuberculosis (TB) is estimated to be 140 per 100 000 people (79 per 100 000 are smear positive cases) which translates to around 6 923 new sputum smear positive cases and 11,911 TB cases of all forms occurring every year. HIV co-infection among TB patients is estimated at 11.7% from the current sites of TB-HIV collaborative activities during 2009. TB mortality is estimated at 65 per 100 000 people. HIV and AIDS prevalence is still low at 3%[11], but is expected to increase due to the large number of refugees returning from neighbouring countries with high levels of HIV and multiple sexual partners. A range of neglected tropical diseases is still endemic in South Sudan and accounts for a considerable proportion of the disease burden.

Acute and chronic childhood malnutrition is a recurrent problem, with seasonal and geographical variations. The current prevalence of global acute malnutrition (GAM) amongst children under five is 21%, and the prevalence of severe acute malnutrition is 7.63% and of stunting 25%

[7] Southern Sudan Household Health Survey, 2010
[8] Maternal Neonatal and Reproductive Health Strategy, MoH for Southern Sudan, 2009-2015
[9] National Baseline Household Survey (2009)
[10] Crop and Food Supply Assessment Mission to Southern Sudan, FAO and WFP, January 2011
[11] 2009 Antenatal Care Surveillance Report

(SHHS 2010). The 2010 SHHS showed that only 68% of the population had access to improved drinking water sources and only 15.4% of the population had access to sanitation facilities.

FIGURE 3: REASON FOR CONSULTATION IN HEALTH CARE FACILITIES



3.1 MATERNAL AND NEWBORN HEALTH

3.1.1 Safe Motherhood/Essential Obstetric Care (EOC)

The Southern Sudan Household Health Survey (SSHHS) of 2006 estimated the maternal mortality ratio (MMR) at 2054/100 000 live births. Given the current estimated population of 9.7 million and a rate of natural growth of approximately 4%, this translates to severe complications in 76 000 mothers during pregnancy and child birth, with close to 10 600 dying every year. Therefore the GoSS has highly prioritised maternal and child health, emphasising strongly preventive and promotive maternal and child health services in PHC and the BPHS. This will be done by increasing the number of women delivering in health facilities and overseen by skilled birth attendants (SBA) from 14.75% to 30% by 2012.

The EOC comprises the minimum initial service package (MISP) for Reproductive Health (RH) and emergency preparedness and response and includes: (i) counselling for early identification of pregnancy, seeking and compliance with antenatal care (ANC); (ii) focused ANC, which aims at early initiation of ANC and attendance of at least 4 ANC sessions by all mothers to identify and refer early high risk pregnancies for management by adequate SBA; (iii) nutrition education and support for expectant and postnatal mothers; (iv) skilled care and hygienic handling for mothers and newborns by SBAs at delivery; (v) early identification, provision of life saving first aid measures and rational referral for life threatening complications (antenatal haemorrhage, infections, severe hypertensive-renal disorders in pregnancy); (vi) focused postnatal care to prevent complications or identify any complications early (observing the mothers at least once at 6hrs, in 6 days, after 6 weeks and at six months - the four sixes), checking especially for post partum bleeding and or sepsis, starting life saving management and referring the mother and child promptly for further treatment; (vii) post abortion care (PAC) to minimise mortality and prevent severe morbidity as a result of inevitable or incomplete abortions; and (viii) prevention of mother to child transmission (PMTCT) of STI and HIV, and nutrition education and support for lactating mothers; (ix) newborn care that aims to prevent the risk of death from hypothermia especially for the newborns with low birth weight and choking; and "baby friendly initiatives", i.e., prevention of pre-lacteal feeds, early initiation of breastfeeding and encouragement of

exclusive breastfeeding ; identification of malformations, convulsive disorders or other obvious developmental anomalies and referral for treatment.

3.1.2 (Adolescence) Reproductive Health and Family Planning (FP)

The objective of is to increase the percentage of women in their reproductive years using effective methods of contraception from 1.73% (2008) to 8% by 2012. Service elements are: (i) awareness raising on FP to empower women and men to practice conception by informed FP choices; (ii) provision of appropriate choices of effective FP methods to enable delay in initiation of child bearing for girls and birth spacing for women and to minimise grand multi-parity; (iii) promotion of tetanus toxoid (TT) vaccination for women of reproductive age; (iv) condom programming for protected sex and syndromic management of STI (SMSTI) and mass communication to promote voluntary counselling and testing (VCT).

In the next phase of the BPHS, it can be expanded and include (v) create awareness and provide screening for and management of obstetric fistula; (vi) training in self palpation skills for masses in the breast and seeking examination or referral; (vii) encouragement to regularly attend clinics for Pap smear, provider initiated counselling and testing (PICT) for HIV.

Adolescent Sexual Reproductive Health Services (ASRHS)

ASRHS will provide services for adolescents and young people to prevent sexually transmitted infections, adolescent pregnancies and HIV/AIDS. Youth friendly service provision and care will be adopted to encourage health seeking behaviour among young people. The goal is to increase RH awareness and reproductive rights knowledge among the youth. Service elements include: (i) gender and sexuality education; (ii) ABC promotion; (iii) VCT/PICT; and (iv) SMSTI.

Men's Reproductive Health Services (MRHS)

MRHS will promote safe sexual practices and raise awareness on reproductive organ diseases of men. The service elements are: (i) promotion of equitable gender roles in family health care; (ii) promotion of VCT/PICT; (iii) reduction of sexual partners and condom use; (iv) SMSTI.

The next BPHS phase shall include also (v) awareness raising and referral for suspected prostate cancer and enlarged prostrate.

3.2 Child Health / Integrated Essential Child Health Care (IECHC)

South Sudan currently has the highest child mortality rate in the world. The mean infant mortality rate (IMR) was estimate in the SSHHS of 2006 at 102/1000 live births, while the under five mortality rate was 135/1000 live births. The rate of generalised acute malnutrition (GAM) is 33%, with only 21% mothers exclusively breastfeeding their children fox six months. The same survey showed that only 43% of all under fives were fully immunised.

Integrated essential child health care (IECHC) incorporates "the global integrated management of childhood diseases" (IMCI), while approaching child survival and development from a health perspective. Hence it includes all the technical aspects of IMCI and focuses on the well child and disease prevention. The aim is to improve child survival and development. The interventions to achieve these objectives are integrated in BPHS under the following specific service norms:

Box 2: Interventions in Integrated Essential Child Health Care (IECHC)

Interventions in Integrated Essential Child Health Care	
Community Based Child Survival	A combination of community level actions addresses the most common childhood illness by promoting preventive measures, recognising signs of illness in children and treating them early while observing danger signs for referral to the PHCUs, PHCCs or hospitals. The community interventions include behaviour change communication on nutrition, growth monitoring, prevention, home treatment of malaria, diarrhoea and recognition and referral of pneumonia. The CHW will be trained in the competent use of simple algorithms to assess, classify (assign) and treat the ill children, while counselling mothers, fathers and other caregivers in child health seeking behaviour. Hence, the community based child survival package will include but not be limited to (i) prevention and treatment of malaria, (ii) prevention and treatment of diarrhoea, (iii) management of acute respiratory infection (ARI) and pneumonia, (iv) mass campaigns for immunisation, (v) community based growth monitoring and promotion,(vi) home management of mild malnutrition, vitamin A supplementation and periodic mass treatment for worms, (vii) referral of children with severe malnutrition and complications or those with malnutrition not responding to appropriate community based rehabilitation to therapeutic feeding centres (TFCs).
Expanded Program on Immunisation (EPI)	At present the routine immunisation coverage is far below the required "herd immunity" of at least 80% or more. (as measured by DPT3 coverage.). This will be attained through routine immunisation of children daily in all PHCC, monthly immunisation of children in PHCUs and other designated sites by mobile outreach teams, mass immunisation on acceleration days, NIDs and mop up immunisation activities.
Essential Nutrition Action (ENA)	The target is to reduce severe malnutrition through primarily prevention of malnutrition and specific measures for resuscitation and rehabilitation of severely malnourished children. This includes (i) the promotion of exclusive breast-feeding for at least the first 6 months of life and provision of complementary feeding with continued breastfeeding for at least 24 months, (ii) growth monitoring and promotion (iii) micronutrient supplementation and community based nutrition rehabilitation for children with mild to moderate malnutrition; (iv) provision of treatment and rehabilitation for children who get severe malnutrition, with complications at designated Therapeutic Feeding Centres (TFCs).
Home treatment of malaria, diarrhoea and pneumonia	In South Sudan, malaria accounts for 20% to 40% of all consultations at outpatient departments and between one in every five and one in every four deaths. Deaths are especially common among children under the age of five years, pregnant women and people from areas where malaria transmission is seasonal. Diarrhoea and other enteric infections are common because of poor sanitation and use of surface water or water from unprotected sources. It is estimated that diarrhoea associated deaths account for between one in five to one in three of childhood deaths. Reduction of the period of breast feeding and early introduction of weaning foods (before six months) significantly increase the diarrhoea morbidity and the risks of deaths from severe dehydration. There is currently little or no accurate data on the frequency of occurrence of ARI, but on the average children get infected once every one or two months. Vitamin A deficiency also increases the risk of all the three infections pneumonia and the risk of dying from the vaccine preventable childhood infections. Protein energy malnutrition and micronutrient deficiency especially vitamin A and zinc, aggravate the severity of infections and increase the risks of deaths in childhood.

3.3 Most Common Diseases and Public Health Risks

3.3.1 Common Endemic Diseases

The most common endemic communicable diseases in South Sudan are malaria, diarrhoea, enteric infections and worm infestations, acute respiratory infections (ARI), tuberculosis (TB) and the neglected tropical diseases (NTD). South Sudan also lies along the meningococcal belt of the African Continent and outbreaks tend to occur at the beginning of dry season. The country

is now also exposed to the human immunodeficiency virus (HIV) infection pandemic and all efforts need to be made to prevent the epidemic taking root in the country.

3.3.2 Malaria

In the swampy lowlands malaria is transmitted throughout the year and in all other areas the incidence of malaria increases during rainy or flooding seasons as well as in association with movement of populations. Since malaria is among the top leading contributors to the burden of diseases, the Ministry has established a Roll Back Malaria Programme within the Directorate of Preventive Health. The programme has 8 set objectives that are integrated into the BPHS under the following service norms:

TABLE 1: SOUTH SUDAN ROLL BACK MALARIA PROGRAMME (DIRECTORATE OF PREVENTIVE HEALTH / MINISTRY OF HEALTH)

SOUTH SUDAN ROLL BACK MALARIA PROGRAMME (DIRECTORATE OF PREVENTIVE HEALTH / MINISTRY OF HEALTH)		
Objectives	**Targets**	**Services**
1. Prevention to increase population coverage with effective malaria prevention as part of an integrated vector control strategy that utilises all approaches including long lasting insecticidal nets, indoor residual spraying and environmental management when and where most suitable and sustainable.	(i) 60% of children under the age of five sleep under LLITN; (ii) 70% of households have one or more LLITN; (iii) 60% of pregnant women sleep under LLITN; (iv) (80%) of structures in target areas are sprayed with quality indoor residual spraying (IRS).	(i) Mass distribution of LLITNS; (ii) distribution of LLTNS through ANC, immunisation clinics; (iii) mass spraying of living structures.
2. Case management to provide wide access to diagnosis and highly efficacious artemisinin - based combination therapy to all affected by malaria using a mix of approaches that include public and private health care providers, a trained and supervised commercial sector and community distribution	(i) 60% of children under the age of five with fever receive ACT within 24 hours; (ii) Sixty per cent (60%) of patients with uncomplicated malaria attending health facilities receive correct diagnosis (iii) Identify signs of very severe disease timely, give pre-referral treatment (oral ACT for those who can swallow and retain, rectal Artesunate suppositories for those who cannot swallow or retain and anticonvulsant – diazepam- for patients who have fits) and refer promptly in 90% of cases.	(i) Use of algorithms for assessment, assignment and treatment of children < 5 promptly with appropriate (ACT) at community- home management of malaria within 24hrs, to minimise delay in initiation of treatment, (ii) early detection of sings of malaria prompt confirmation of diagnosis of malaria and treatment for older children and adults at PHCU/PHCC; (iii) recognition of danger signs of malaria, referral and prompt initiation of second line treatment with quinine.
3. Malaria in Pregnancy to deliver a package consisting of ITN, IPT and effective treatment to pregnant women through comprehensive and focused antenatal care services involving all levels of health care including the communities.	(i) 60% of all pregnant women with ANC services with 2 or more doses of intermittent preventive treatment (IPT); (ii) 60% of expectant mothers sleep under LLTNs.	(i) Counselling of mothers to attend ANC and get at least two (2) doses of IPT; (ii) early detection of fever in pregnant mothers, test for malaria at PHCU/PHCC and provision of treatment with appropriate medicines; (iii) complementary distribution of IPT through community based maternal health workers or midwives; (iv) detection and treatment of anaemia.
4. IEC, Social Mobilisation	(i) at least 80% of responsible members	(i) Awareness creation on malaria

and Advocacy to mobilise all sectors of society to promote malaria control and increase adoption of positive behaviour, based on a comprehensive malaria communications strategy that includes all available media and communication channels.	of families know the effects, signs and symptoms of malaria, importance of prompt and complete treatment with the effective artemisinin - based bases combination treatment (ACT); (ii) 80% of health service providers sensitizs and advise their clients (patients) on malaria prevention, early detection and treatment of cases at each health service session.	and its effects; (ii) promotion of acquisition and on sleeping under LLITNs, ANC and IPT, use of simple algorithms for home management of malaria for children <5 by household health promoters (iii) compliance counselling for proper use of LLTNs.

3.3.3 Diarrhoea, enteric infections and infestations

In South Sudan, enteric infections are still common and cholera epidemics occur from time to time especially during the changes from dry to wet seasons and vice versa. During such periods dysentery caused by bacteria, amoeba or flagellate infections also tend to increase.

The service elements for management of enteric infections comprise of (i) raising community awareness on the causes of diarrhoea and its prevention, including encouragement of mothers to continue with the healthy infant feeding and weaning practices; (ii) training communities on safe use of potable water and promotion of hand washing before and after handling food, after toilet including after cleaning or handling children's faeces; (iii) raising awareness on safe disposal of faeces including those of children; (iv) promoting immunisation especially against measles (v) and regular administration of vitamin A (every six months) for all children under the age of five; (vi) training parents and caretakers of children to (a) recognise outbreaks of diarrhoea early and immediately alert staff at PHCU or PHCC.

In addition, children are to be dewormed regularly through periodic mass campaigns and school health activities as well as health education on recognition of other enteric infections, especially abdominal pain, progressive fever, generalised weakness, constipation or small loose stools that signify typhoid fever. Such cases are to be referred to CH for laboratory investigation, diagnosis and treatment with antibiotics and be reported to the Payam and County health authorities.

Other community directed activities for prevention of diarrhoea include awareness and knowledge creation for village development committees and participatory health and sanitation (PHAST) training for CHWs, including construction of demonstration toilets and protection of water sources in schools, market places, administration centres, and any other community gathering venues; facilitation for practical identification of water points, their protection and discouragement of risky sanitary practices and emergency preparedness by identifying early warning signs for outbreaks of diarrhoea and developing responses and reporting..

3.3.4 Acute Respiratory Infection and Tuberculosis

See above for Acute Respiratory Infection (ARI) among children. In addition attention will be given to older people with pneumonia who must be referred promptly to the PHCU to start treatment with oral antibiotics immediately and further to PHCC for treatment with antibiotics injections and oxygen if respiratory failure sets in.

Tuberculosis remains to be a major cause of morbidity and mortality in the country. The incidence of new sputum smear positive TB cases is at around 101/100 000 population and 228/100 000 for all TB forms. With a population of approximately 9.7 million people in 2007, this translates to estimated annually 9 797 new sputum smear positive TB cases and 22 116 TB cases of all forms. TB mortality is assessed at 65/100 000. The HIV epidemic is likely to worsen the situation which is estimated from limited surveys to be at 1% to 7% in the general population with border towns close to neighbouring Uganda, Kenya, Ethiopia, Democratic Republic of Congo and Central African Republic which have higher prevalence rates. The HIV sero-

prevalence among TB patients indicate that 11.2% of the TB patients are co-infected with HIV while higher prevalence is noted in Nzara (50%), Nimule (25%), Yei (14%) and Rumbek (10%).

TABLE 2: OBJECTIVE AND ACTIVITIES OF THE NATIONAL TB PROGRAMME

OBJECTIVE AND ACTIVITIES OF THE NATIONAL TB PROGRAMME	
Overall Goal	to contribute to the improvement of the quality of life of the people of Southern Sudan by reducing dramatically the burden of the TB in Southern Sudan in line with the Millennium Development Goals and Stop TB Partnership Targets
Objectives	**Activities**
(i) to expand the DOTS coverage to 100% by the end of 2013 without compromising the quality of case detection and treatment, integrating it into the BHSP;	(i) Continue the expansion of the TB treatment centres to reach the level of one centre per 100 000 people by integrating the centres in the PHCCs as they get established, to improve patients' access to effective diagnostic and treatment services. This requires high political commitment with sustained financing to the tuberculosis control in Southern Sudan.
(ii) to raise the number of tuberculosis cases detected from 1,562 cases in 2005 to 7,000 smear positive cases by 2013 while maintaining cure rate at 85%;	(ii) Promote effective community involvement in tuberculosis and patient centred care through advocacy, communication and social mobilisation.
(iii) to prevent emergence of drug resistant tuberculosis and monitor TB resistant patterns in Southern Sudan and	(iii) Ensure that all laboratories in Southern Sudan submit TB slides for quality control to ensure effective TB microscopy.
(iv) to enable and promote operational research.	(iv) Ensure that all treatment centres use standard treatment regimen and are regularly supervised and patients supported.
	(v) Ensure that all TB treatment centres have regular supply of TB drugs.
	(vi) Ensure that 100% of the TB treatment centres receive regular and effective supervision and monitoring from all levels of government and impact assessment is done.

3.3.5 Sexually Transmitted Infections, HIV/AIDS

Sexually transmitted infections (STI) are common diagnoses in South Sudan (e.g. in Lakes State, STI is the fifth most common cause of illness; a IRC reportfhas shown that out of 125 clients who came to a clinic in Rumbek with STI complaints 10 were confirmed to have syphilis).

Data on the prevalence of HIV infection and AIDS in South Sudan are limited. However, it is believed, that the incidence and prevalence of HIV are lower than in neighbouring countries, because it was protected during the two-decade-long civil war by the restricted labour migration and trade which could accelerate HIV transmission. The country faces now a massive threat from HIV because it is surrounded by countries with high HIV prevalence, it has up to four million displaced people and refugees, some living in high prevalence countries in the region and will be returning home, it has high levels of poverty, low school enrolment, a rudimentary health system and its women and girls have a low status in the society. So far data from different sources which include VCT centres, maternal health services centres that offer prevention of mother to child transmission of HIV (PMTCT) and TB treatment centres indicate that the HIV/AIDS epidemic has reached a low generalised phase: data from ANC clinics extrapolated to the whole population estimate a prevalence rate of 3.1% and data from VCT in the TB clinics a prevalence of 17% of TB patients in Nzara, 14% in Yei, 10% in Rumbek and 25% in Nimule giving an average prevalence HIV in 8% of all cases of TB.

The approach to STI and HIV/AIDS are aimed at ensuring adequate access to integrated prevention, treatment, care and support for all and especially marginalised populations. This entails the creation of a supportive environment for a sustainable and effective response to HIV. The national HIV/AIDS programme foresees scaling up care and treatment especially for the

vulnerable populations and expands access to comprehensive adherence counselling, psycho-social support and care for PLWHA. Special activities will target populations at risk such as sex workers, adolescents, long-distance truck drivers, uniformed services and prisoners. The service elements include, (i) awareness creation on the causes, risk factors complications and dangers of STI and HIV/AIDS; (ii) promotion of safer sexual behaviour including condom promotion, procurement and distribution; (iii) encouragement of prompt health care-seeking behaviour in case of experiencing symptoms and signs of STI, (iv) comprehensive case management of STI at PHCU and PHCC; (v) prevention and care of congenital syphilis and neonatal conjunctivitis; (vi) promotion of provider initiated counselling and testing; (vii) referral linkage with HIV testing and other HIV/AIDS prevention, treatment and care services and (viii) home based care and adherence counselling for PLWHA on treatment.

3.3.6 Neglected and Tropical Diseases

The MoH recognises NTDs as a major obstacle in improving the health of the people of South Sudan. At least twelve NTDs are known to be endemic in Southern Sudan[12]. Most NTDs have previously been targeted only by intermittent control through short-term donor funded interventions and were largely limited to target onchocerciasis, trachoma, and guinea worm.

The community based component of BPHS include (i) health education to create awareness on the causes, dangers and impact and means of prevention of the diseases; (ii) promotion of interventions to reduce the contact of people with the parasites or their vectors, through provision of protected water sources, provision of fuel wood away from known breeding sites of vectors, encouragement of construction and proper use of toilets or avoidance of water sources by all especially those who are infected and (iii) preventive chemotherapy through mass drug administration (MDA) and other complementary approaches recommended by the WHO. In summary the activities are:

Schistosomiasis:	Control Initiative (SCI)that include prevention of transmission with a single, annual dose of the drug praziquantel, mass treatment with albendazole, identification and treatment of cases with albendazole and health education to increase number and use of toilets.
Onchocerciasis:	Control Initiatives (OCI) that encompasses the mapping of Loa loa using RAPLOA method and sustainable community-directed distribution systems and mass administration of ivermectin; and elimination of the blackfly through insecticide spraying.
Trachoma:	RAAB and trachoma mapping, community distribution of topical antibiotics for mass treatment and the visual health program (see the visual health section below
Kala Azar:	Phlebotomine sand flies have a relatively short flight range and are susceptible to control by systematic spraying with residual insecticides, covering exteriors and interiors. Current treatment options[13] include the pentavalent antimonials SSG, applied as injections of over 30 days.
Guinea Worm:	Southern Sudan harbours over 80% of the global caseload for guinea worm disease with major negative impacts in villages, where fewer people are able to tend their fields or livestock, resulting in food shortages, interference with education and loss of income. The eradication measures include (i) mobilisation of communities to

[12] E.g. some 400 communities, i.e. over 4 million people, are known to be at risk of river blindness

[13] Other treatment options are amphotericin B deoxycholate, liposomal amphotericin B, paromomycin and miltefosine. A combination therapy might be available in the near future. Although the list of treatment options seems extensive, each has significant limitation

undertake community-based surveillance activities [14], (ii) providing care to individuals with active infection, (iii) treatment of water sources with an approved larvicide[15].

3.4 NON-COMMUNICABLE DISEASES

While the emphasis will remain on the prevention and the treatment of communicable diseases and MCH on short and possibly medium term, hypertension and diabetes have to be recognised and responded to as the most common chronic non-communicable diseases. However, at present, the volume of these conditions cannot be quantified and qualified due to absence or incompleteness of data. Similarly, the burden of war related physical disabilities among ex-combats and the civil population cannot well numbered while physical and societal rehabilitation is required and have to be included in the BPHS.

3.4.1 Primary Eye Care and Visual Health

The visual health programme is part of the vision 2030, which in South Sudan aims at prevention of avoidable blinding diseases that contribute 75% of the blindness, namely: cataract, corneal scarring diseases including trachoma and vitamin A deficiency, onchocerciasis, refractive errors and low vision and childhood blindness. It is estimated that close to 4% of people aged 5 years and above suffer from significant blindness and the average prevalence of active trachoma (TF in children aged 1-9) ranges between 15% - 87%. Overall it has been estimated that 3.9 million people need antibiotic treatment and that up to 206 000 people are in need of immediate surgery to correct the scaring that results from trachoma (trichiasis). Visual health can be maintained through simple preventive approaches.

The service elements include: (i) health education and awareness on the types and causes of eye diseases and promotion of eye health; (ii) prevention of eye infections through regular washing of face; (iii) management of common and simple eye diseases especially through distribution of topical antibiotics for treatment of epidemic eye infection during outbreak seasons; (iv) detection and referral of treatable blindness including cataract and corneal opacities or trichiasis; (v) training school teachers in visual acuity testing and referral and outreach mass testing in schools to detect children suffering from refraction errors; (vi) training in simple lid eversion and the removal of sub-tarsal foreign bodies; (vii) irrigation of the eye for chemical injuries; (viii) referral of cases that need more complicated treatment to county hospitals; (ix) community based mass distribution campaigns for antibiotics for trachoma and OV preventions commodities including water filters, outreach trichiasis surgeries and cataract extraction and provision of lenses.

3.5 MENTAL HEALTH

Neuropsychiatric disorders (NPDs) contribute to higher rates of morbidity among the non-communicable diseases [16]. This is significantly more than heart disease, stroke and cancer. Depression, alcohol, substance use disorders and psychoses cause significant chronic disability, yet their burden is underestimated because of inadequate appreciation of the connection between mental disorders and other health conditions. Depression can be treated effectively also in low income countries with low-cost antidepressants, psychological interventions and/or family focused psychosocial interventions. Service elements for mental health include (i) awareness

[14] Promotion of drinking safe water only; encouraging persons with emerging guinea worms not to enter ponds or other surface wells that people may use for drinking water; distribution and promotion of use of water filters (i.e. fine-mesh cloth filters like nylon, to remove the Guinea worm-containing water fleas)

[15] such as abate, that kills water fleas, without posing a great risk to humans or other wildlife

[16] Globally NPDs are estimated to contribute 14% of all diseases burden, which is significantly more than heart disease, stroke and cancer.

creation among communities on mental disorders and their manifestations; (ii) support for parents of infant with mental impairment; (iii) school-based interventions, such as teacher to pupil and peer to peer counselling, identification and referral of children with poor school progress or with "new" onset deterioration in class; (iv) workplace and off-workplace counselling for youths and adults and (vi) abatement of domestic and gender related violence.

In addition, post traumatic stress disorders are believed to be frequent, both, among the civil population as well as the (ex-) combatants. An assessment is currently ongoing on the psycho-social effects on ex-combatants and the society they have been returning to. The results of this study are not known yet, however initial indications emphasis the need for a special intervening programme.

3.6 COMMUNITY ENGAGEMENT, IEC AND HEALTH PROMOTION

Efforts are to be made to integrate service development and delivery for the health, education, agriculture, communication, gender, social, culture and religious affairs sectors facilitate synergism in the improvement of health and nutritional status of the people. Health professionals and their respective counterparts in other sectors are to work together towards a health care system which contributes to the pursuit of health and social advancement. This moves the role of health sector beyond responsibility for providing clinical and curative and preventive services only.

In South Sudan, health promotion aims at increasing awareness and demand for essential health services, with major focus on prevention of disease and promotion of health. It also addresses the emerging or new morbidities that have serious public health consequences i.e. STI and HIV/AIDS, trauma and related disability. The health promotion service elements will include (i) awareness creation and counselling during home visits, (ii) advice and counselling during visits to facilities, (iii) social mobilisation for uptake of preventive basic health services during health acceleration days and during the international consciousness or memorial days (iv) production and distribution of audio, visual and written health education and promotion materials including posters, fliers and other published materials that disseminate health messages. Behaviour change communication supports compliance with basic and essential preventative health activities: ANC, immunisation, growth monitoring, use of bed-nets, use of water from protected sources, avoidance of fast running streams and use of water filters and water-guards, safe sexual and reproductive and prevention of STI and HIV/AIDS. These messages will be timed to ensure focus at the most appropriate time for each problem, including periods of most likely epidemic outbreak.

Captive audience including schools, women, youth and men's economic and social groups should be engaged as partners in the joint initiatives in this process of learning for transformation.

3.6.1 Basic Package of Health and Nutrition for Schools

Basic education has the highest potential for instilling a lasting societal change. Therefore schools will be used as entry points into the communities to open channels between the health sector and broader social, political, economic and physical environmental sectors. The "Basic Package for School Health (BPSH)," which was developed by UNICEF and WHO will serve as a standard guideline in all schools. The objectives are to maintain optimal health of school pupils, to induce health awareness in the new generations and to transfer the benefits of healthy school life to the homes, villages and future generations. Adolescents should benefit from knowledge about reproductive health and rights in preparation for healthy reproductive lives.

Demonstrations for safe water sources, toilets, house ventilations, kitchens, and play grounds are to prioritise schools to ensure the sustained improvement of health of most school children

while passing health messages[17] to the surrounding communities. School health inspection and growth monitoring outreach will be carried out regularly by school health teams to monitor and evaluate the outcome of the initiatives.

3.6.2 Community based Nutrition and Food Security Programme (CBNFSP)

Food available for families and their knowledge on nutrition will benefit from cross-sectoral initiatives, as the Community based Nutrition and Food Security Programme (CBNFSP). The CBNFSP will address food production, preservation, preparation and dietary practices in close collaboration with the ministries of agriculture, water, environment, education, gender, social services, culture and religious affairs. Actions and specific responsibilities will be assigned to the sector extension workers while the county health department staff will plan and implement productive projects. Captive groups that include women, youth, farmers' groups and schools will be sensitised and provided with necessary inputs for farming, animal and poultry production in sufficient quantities to bridge the gaps in their food sufficiency.[18].

3.7 EMERGENCIES AND EMERGENCY PREPAREDNESS

South Sudan is prone to a variety of possible emergencies doe to environmental and climatic factors and due to the population movements of returning families and individuals as well as the increasing movements of people when more roads are opening and become passable. Possible country internal conflicts or with the neighbouring north present the risk of emergencies due to violence and fleeing people. The nature of expected or possible emergencies comprise a wider range:

A. Population movements
   i Returnees
   ii Violence
B. Epidemics
   i. Cholera, dystentery
   ii. Leishmaniasis
   iii. Vaccine preventable diseases due to low immunisation rate: measles
   iv. Haemorrhagic fever inducing viruses
C. Violence
D. Widespread acute malnutrition
E. HIV: is likely to peak due to returnees from neighbouring, high(er) HIV prevalent countries and increasing mobility of the population

[17] Health messages can be passed through school exercises, e.g. young and lower grade learners can be given reading exercises that promote health seeking practices such as taking infants for immunisation and growth monitoring, keeping infants under LLINs, making under-fives sleep under bed nets, and reinforcing staple diets with high protein supplements. Schools drama, participatory educational theatres, folk music and first aid contests are to be organised to facilitate as participatory education and learning process. School letters to parents should also be used to pass health messages.

[18] Women will be taught income generation skills and opportunities for benefiting from microfinance skills. They will also be trained in storage of grains and pulses and methods of preservation of perishable foods (vegetables, milk and meat) as appropriate for their local situations including value addition where possible. Community groups will be facilitated in investing in low level technologies and other methods of food production and preservation that they are willing to adopt. Demonstration farms will range from ever green kitchen gardens to large mechanised farms depending on the willingness of communities to invest. In schools the aims will be farms that will not only make the schools food sufficient, but also to be a source of extra income. The demonstration projects will be used as forums for training in nutrition and dietetics, construction of safe and energy conserving kitchens and appropriate food granaries. Such farms should be large enough to interest the grandaunts in commercial food production, including fish farming.

Each group of emergencies require a different set of the actions, whereby the main and first element of preparedness lays in habits and practices, individually and in families (e.g. utilisation of sanitary facilities and clean water; uptake of vaccination and protected sexual practices), precautions under the responsibilities of the, distinct and/or at large scale, communities (e.g. protect water sources, non violent conflict resolution) and in increased coverage and quality of health services (e.g. vaccination coverage, surveillance.) The latter are captured in the BPHS in the respective sections.

Emergencies caused by war-related violence c and some disease epidemics are largely beyond the influence of families and communities. The same applies to varying degrees once an epidemic has commenced and is ongoing. Therefore cross-sectoral emergency preparedness plans have to be developed whereby the health sector is assuming its specific role. The plans have common elements which apply to several or all possible emergencies and elements which are specific for the nature of the emergencies. It is beyond the scope of BPHS to elaborate these plans, however they are referred to. Regular (half yearly) updates of the surveillance system, the emergency preparedness plans and knowledge update of the health staff should be seen as routine.

4 BPHS PHASE 1 SERVICES AND ACTIVITIES

The Basic Package of Health Services ascribes to the values of the GoSS health policy of, the right to health equity, pro-poor, community ownership, good stewardship and good governance. The priorities of the BPHS are set in the Health Sector Policy and Health Sector Development Plan.

The BPHS puts much weight on the engagement with the communities in order to enable them to take greater responsibility for their health, in identifying their health priorities, mobilising and managing locally available resources to carry health activities. Hereby the communities are an active partner in implementing, monitoring and evaluating with support from Community Health Workers (CHW). The CHW are posted in the Primary Health Care Units (PHCU) and in turn present the link between the communities and the health system.

The BPHS and its delivery on primary health care level is linked to secondary and tertiary care through County, State and the teaching hospitals (and State and Central Public Health Laboratories) for patients with more serious, complicated or relatively rare health problems.

At the same time the County Hospitals provide technical oversight, support and capacity strengthening especially in diagnostic and curative care related services in the villages, PHCUs and PHCCs of their catchment area.

The County Health Departments (CHDs) are responsible for the preventative and community based health activities within their counties. CHD and hospital staffs are therefore all members of the county health management teams (CHMT). This is to ensure rational referral and that hospital-based resources strengthen the delivery of the BPHS.

BPHS recognises the importance of all the sectors in improvement of health and encourage joint implementation of development initiatives that impact the health of people in Southern Sudan.

4.1 SAFE MOTHERHOOD AND REPRODUCTIVE HEALTH

TABLE 3: SERVICES AND ACTIVITIES - SAFE MOTHERHOOD AND REPRODUCTIVE HEALTH

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
SAFE MOTHERHOOD AND REPRODUCTIVE HEALTH				
Focused Antenatal Care				
IEC	✓	✓	✓	✓
Identification of pregnant mothers and counselling for early initiation and compliance with ANC	✓	✓	✓	✓
Referral for ANC, PMTCT, STI prevention and treatment	✓	✓	✓	✓
Monthly ANC mobile clinic services. - identification of high risk cases and referral to CH or SRH		✓	✓	
Nutrition counselling; Micronutrient supplementation; iron, folic acid, Vit A	✓	✓	✓	✓
Malaria prevention, LLINs and IPT	✓	✓	✓	✓
Preparation and timely travel for BEmONC or CEmONC (according to risk status), arrangements for waiting homes	✓			
Management of normal deliveries		✓	✓	
Management of moderate complications and risks: infection, post partum haemorrhage: volume replacement – ORS - Infection: cotrimoxazole - Pallor: iron, folate and multivitamins, HBP, refer to PHCC/CH			✓	✓
Management of high risk cases or complications to CH or SRH (EmNOC centre) incl. i.v., antibiotics, MVA, PAC, caesarean section - CPD, fluid retention, previous C/section, multiple pregnancy and grand multiparity, antepartum haemorrhage, severe oedema, severe antepartum fits				✓
All signal functions of Comprehensive EmONC (at antenatal preparation)				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Care of uncomplicated delivery				
Referral of all mothers in labour to PHCU for clean hygienic assistance of uncomplicated delivery	✓	✓		
Clean hygienic assistance of delivery for precipitous labour, while transferring to PHCU/PHCC	✓			
Provision of clean hygienic assistance of uncomplicated delivery for abrupt labour, oral misoprostol (or cytotec)		✓		
Clean hygienic assistance of uncomplicated delivery: gloves, cotton wool, clean blade, soap, oral misprostone-cytotec			✓	
Refer obstructed labour and haemorrhage: to CH or SRH	✓	✓	✓	
Comprehensive non surgical and surgical obstetric care (24hrs)				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
Emergency Obstetric and Neonatal care				
Awareness raising on, identification of high risk labour and refer to CH: CPD and other obstructed labour, haemorrhages, fever, convulsions	✓			
Identification of haemorrhage and stabilise with ORS for volume replacement for transfer to CH		✓	✓	
Transfer cases of obstructed labour, eclampsia, high fever, sick neonates tp CH		✓	✓	
The signal functions of Basic EmONC: - I.V antibiotics administered - I.V. oxytoxics administered - I.V anti-convulsants - Manual removal of the placenta - Assisted delivery by vacuum extraction - Manual vacuum aspiration of retained products of conception - Neonatal resuscitation			✓	✓
The signal functions of Comprehensive EmONC, in addition to basic EmONC: - Surgical obstetrics: caesarean section and emergency hysterectomy				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Focused Postnatal Care				
Maternal and IECHC counselling	✓	✓		
Referral for PNC and Child Health Clinic	✓	✓		
Identification, treatment and immediate referral: - To CH or SRH: postpartum haemorrhage; inevitable or incomplete abortion volume replacement with ORS, MVA and misoprostol - To PHCC: infection: cotrimoxazole; pallor: iron, foliate, multivitamins; convulsion: clear airway, oral sedative	✓	✓	✓	
Counselling Referral for PNC and Child Health Clinics			✓	✓
Immediate treatment for puerperal complications: - (i) Postpartum haemorrhage/inevitable or incomplete abortion: volume replacement with IV fluids, MVA/PAC and parenteral oxytocics or oral misoprostol - (ii) Infection: parenteral antibiotics - (iii) Anaemia:: iron, folate and/or referral - (iv) Convulsion: clear airway, iv anticonvulsants			✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
(Adolescence) Sexual and Reproductive Health and Family Planning				
Awareness creation/demand generation for ARH and counselling of women and their sexual partners to accept FP/RH services.	✓	✓	✓	
Youth focused services: CT, SMSTI and counselling on	✓	✓	✓	

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
sexuality and ABC				
Promotion of VCT and SMSTI.	✓	✓	✓	
CBD of oral FP methods	✓	✓	✓	✓
Condom promotion and supply	✓	✓	✓	
(in next phase include: BP check, SMSTI, VCT Pap Smear, LT contraceptives-IUD and Sc implants; palpation for breast masses by quarterly appointments)		✓	✓	
Surgical male and female contraception				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓

Men's RH

Advocacy for gender equitable sexual roles.	✓	✓		
Counselling for gender equitable sexual roles, referral for VCT and SMSTI	✓	✓	✓	
Social marketing of condoms	✓	✓	✓	
Awareness creation on male reproductive organ disorders, urethral stricture, prostate hypertrophy and cancer and testicular cancer	✓	✓	✓	
Identification and referral for male reproductive organ disorders		✓	✓	
Case identification and referral			✓	
Limited care on male reproductive organ disorders, urethral stricture,			✓	✓
(in next phase include outreach surgery and referral of prostatic hypertrophy and all prostatic and testicular cancer)				✓+ refer
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓

4.2 CHILD HEALTH

TABLE 4: SERVICES AND ACTIVITIES - CHILD HEALTH

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
CHILD HEALTH				
Immunisation/EPI services				
Promotion of EPI among parents	✓			
Defaulter tracing of < 5 immunisation, counsel and refer	✓	✓	✓	
Mobilisation of communities to attend mass outreach/mobile immunisation or during NIDs.	✓	✓	✓	
Surveillance and reporting of cases of vaccine preventable diseases	✓	✓	✓	
Monthly routine outreach/mobile immunisation and static centres		✓	✓	✓
Daily routine immunisation, five days a week			✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Essential Nutrition Action				
Counselling: prevention of pre-lacteal feeding, exclusive breast feeding for first six months, timely weaning and continued feeding for 24 months	✓	✓	✓	
Community based growth monitoring and counselling and training/demonstrations in diet rich in protein and calories by selection and enrichment of local weaning diet.	✓	✓	✓	
Screening and supplementary feeding for moderate malnutrition and for children in families of at risk child.	✓	✓	✓	
Mass de-worming and micronutrient supplementation on NIDs	✓	✓	✓	
Growth monitoring (detect malnutrition, esp. in families of at risk child)		✓	✓	✓
Nutrition rehabilitation for the mild to moderately malnourished children			✓	
Referral of severe malnutrition to therapeutic feeding	✓	✓	✓	
Treatment of severe malnutrition at designated TFCs				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Integrated Management of Childhood Illness				
Creation of awareness and promotion of ITNs on NIDS and mass distribution days	✓			
CHWs to use simple algorithms of assessing, classifying and assigning treatment or refer cases of fever (treatment of uncomplicated fever with ACT)		✓	✓	
Refer children with danger sings to CH (severely cold or hot body, inability or refusal to feed, fast breathing, skin pinch returns very slowly)		✓	✓	
Creation of awareness on recognition of diarrhoea, promote	✓	✓	✓	

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
and train parents on use of ORS, zinc supplement and encouragement of increased frequency of feeding during and post diarrhoea				
Creation of awareness on recognition of pneumonia (counting number of breaths/ minute and in chest in-drawing and encouragement of increased frequent feeding during and post ARI	✓	✓	✓	
Early treatment and referral with cotrimoxazole for cases of cough, rapid breathing in drawing of chest and nasal flaring		✓	✓	
Sedation for cases of convulsion and referral for first time convulsion		✓	✓	
Encouragement of isolation of sick children and quarantine for children during epidemic outbreaks of cholera and meningitis	✓	✓	✓	
Algorithm guided treatment of malaria with ACT or second line treatment		✓	✓	✓
Algorithm guided treatment of moderate dehydration from diarrhoea (ORS) and severe dehydration or diarrhoea with danger sings (IV ringers solution) Use of zinc and other micronutrient supplement, encouragement of increased frequency of feeding during and post diarrhoea		✓	✓	✓
Algorithm guided treatment of pneumonia Counting number of breaths per minute and in chest in-drawing nasal flaring with parenteral antibiotics- amoxicillin and provision of moist oxygen		✓	✓	✓
Epidemic and outbreak management - cholera and meningitis, measles, whooping cough, polio yellow fever, RV fever etc		✓	✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓

4.3 MOST COMMON DISEASES AND PUBLIC HEALTH RISKS

TABLE 5: SERVICES AND ACTIVITIES - MOST COMMON DISEASES AND PUBLIC HEALTH RISKS

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
MOST COMMON DISEASES AND PUBLIC HEALTH RISKS				
Prevention and Control of Communicable and other Endemic Diseases				
Malaria				
IEC	✓	✓	✓	✓
Clinical diagnosis		✓	✓	✓
Microscope diagnosis			✓	✓
Treatment of uncomplicated cases – firstline treatment		✓	✓	✓
Treatment of uncomplicated cases not responding to firstline		refer	✓	✓
Treatment of severe and complicated cases		refer	✓+ refer	✓+ refer
Promote use of insecticide-treated mosquito nets	✓	✓	✓	✓
Intermittent therapy (pregnant women)		✓	✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Tuberculosis				
IEC	✓	✓	✓	✓
Case detection among self-reporting patients using sputum smear	refer	refer	✓	✓
Short course chemotherapy, incl. DOTS		follow up	follow up	diagnose and treat
Defaulter tracing	✓	✓	✓	✓
BCG vaccination	assist	assist	✓	✓
X ray for smear negative patients				✓
Algorithms of treatment for AFP (-)			✓	✓
Preventative therapy for children contact of TB patients	refer	refer	✓	✓
DOTS-plus in muti-drug resistant TB		follow up	✓	✓
Inpatient management of severe cases			refer	✓+ refer
Management of complicated cases				✓+ refer
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
STI, HIV/AIDS				
IEC on STI and HIV including - promotion of safer sexual behaviour including condom promotion, procurement and distribution; - encouragement of prompt health care-seeking behaviour in case of experiencing symptoms and signs of STI - referral for VCT	✓	✓	✓	
VCT and provider initiated counselling and testing (PITC)			✓	✓
HIV/AIDS treatment and care including PMTCT	refer	refer	✓	✓
Comprehensive case management of STI		✓	✓	
Prevention and care of congenital syphilis and neonatal conjunctivitis	✓	✓	✓	✓

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
Home based care and adherence counselling for PLWHA already on treatment	✓	✓	✓	
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓

Diarrheal, Enteric Infections and Infestations

IEC on the causes of diarrhoea and its prevention and - encouragement of mothers to continue with the healthy infant feeding and weaning practices - safe use of potable water - promotion of hand washing before and after handling food, after toilet including after cleaning or handling children's faeces - recognition of other enteric infections (esp. abdominal pain, progressive fever, generalised weakness, constipation or small loose stool) - early recognition of outbreaks of diarrhoea and immediately alert staff at PHCU or PHCC - safe disposal of faeces including those of children	✓	✓		
Creation of awareness among village development committees on participatory health and sanitation (PHAST)	✓	✓		
Facilitation for practical identification of water points - protection of water points - discouragement of risky sanitary practices	✓	✓		
Construction of demonstration toilets protection of water sources in schools, market places and administration centres, community gathering venues	✓	✓		
Promotion of immunisation especially against measles	assist	assist	✓	
Regular administration of vitamin A (every six months) for all children under the age of five	✓	✓		
Regularly de-worming of children - mass campaigns, school health programs	✓	✓		
Refer suspected typhoid fever cases to PHCC/CH for laboratory investigation, diagnosis, treatment with antibiotics and report to Payam and county health authorities		refer✓	✓	✓
Emergency preparedness by identifying early warning signs for outbreaks of diarrhoea, developing responses and reporting	✓	✓	✓	✓
Treatment of mild cases of dehydration (ORS)		✓	✓	
Treatment of severe cases of dehydration (IV) and cases requiring antibiotics			✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓

Acute Respiratory Infection

IEC on early signs of respiratory infection among children and adults	✓	✓		
Refer cases of suspected pneumonia promptly to the PHCC to start treatment with oral antibiotics immediately		refer	✓	✓
Refer older people and/or severe cases of suspected pneumonia promptly to the CH to start treatment with antibiotics injections and oxygen if respiratory failure sets in.		refer	refer	✓

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓

Neglected and Tropical Diseases
Schistosomiasis (snails fever), trypanosomiasis (sleeping sickness), visceral leishmaniasis (Kalar Azar), lymphatic filariasis (elephantiasis), river blindness (onchocerciasis), guinea worm infections, trachoma

IEC to create awareness on the causes, dangers and impact and means of prevention of the diseases	✓	✓	✓	
Promotion of interventions to reduce the contact of people with the parasites or their vectors (carrying agents) Provision of protected water sources, provision of fuel wood away from known breeding sites of vectors, encouragement of construction and proper use of toilets or avoidance of water sources by all especially those who are infected and	✓	✓		
Preventive chemotherapy through mass drug administration (MDA) and other national control programmes	✓	✓	✓	
Schistosomiasis Control				
IEC to increase number and use of toilets	✓	✓	✓	
Annual dose of the drug praziquantel	assist	assist	✓	
Mass treatment with albendazole	assist	assist	✓	
Identification and treatment of cases with albendazole				✓
Onchocerciasis Control Initiatives				
Mass administration of ivermectin	assist	assist	✓	
Elimination of the blackfly through insecticide spraying	assist	assist	✓	
Community distribution of topical antibiotics for mass treatment	✓	✓	✓	
Community directed visual health programme	✓	✓	✓	
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓

4.4 NON-COMMUNICABLE, HIGH PRIORITY DISEASES AND CONDITIONS

TABLE 6: SERVICES AND ACTIVITIES - NON-COMMUNICABLE, HIGH PRIORITY DISEASES AND CONDITIONS

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
Non-Communicable, High Priority Diseases and Conditions				
Diabetes and Hypertension				
Awareness, prevention and education	✓	✓	✓	✓
Case detection	✓	✓	✓	✓
Clinical diagnosis		✓	✓	✓
Laboratory diagnosis			✓	✓
Treatment of uncomplicated cases	follow	follow up	✓	✓
Treatment of complicated cases		refer	✓+ refer	✓+ refer
Defaulter tracing	✓	✓	✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Mental Health				
Mental health education and awareness	✓	✓	✓	✓
Case detection	✓	✓	✓	✓
Anxiety disorders (e.g. post-traumatic stress-; panic disorder)	refer	follow up	✓	✓
Depression: identification and bio-psychosocial management	refer	follow up	✓	✓
Epilepsy: identification and treatment	refer	follow up	✓	✓
Psychotic and psychiatric cases: bio-psychosocial management	refer	follow up	✓	✓
Mental retardation: identification, education to parents	✓	✓	✓	✓
Community based care and rehabilitation incl. support groups	✓	✓	✓	
Inpatient treatment			refer	✓+ refer
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Disability (physical)				
Awareness, prevention and education	✓	✓	✓	✓
War injuries	refer	refer	refer	✓+ refer
Traumatic amputations	refer	refer	refer	✓+ refer
Prosthesis	refer	refer	refer	✓ + refer
Assessment and treatment of physically impaired patient	refer	refer	refer	✓ + refer
Community based care and rehabilitation incl. support groups	✓	✓	✓	
Primary Eye Care				
IEC on the types and causes of eye diseases	✓	✓	✓	
Promotion of eye health/prevention of eye infections regular washing of face	✓	✓	✓	
Community based mass distribution campaigns for antibiotics for trachoma and OV preventions commodities (water filters)	✓	✓	✓	
Management of common and simple eye diseases especially topical antibiotics for treatment of epidemic eye infection during outbreak seasons		✓	✓	✓

SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
Detection and referral of treatable blindness including cataract and corneal opacities or trichiasis		refer	refer	✓ + refer
Visual activity by school teachers	✓	✓		
Mass testing in schools (refraction errors)	✓	✓		
Simple lid eversion and removal of sub-tarsal foreign bodies		✓	✓	
Irrigation of the eye for chemical injuries, (		✓	✓	
Referral of complicated treatment to CH and SRH		refer	refer	✓ + refer
Trachoma trichiasis surgeries		refer	refer	✓ + refer
Cataract extraction		refer	refer	✓ + refer
Provision of lenses				✓

4.5 SUMMARY OF KEY SERVICES PROVIDED AT PHCC

- Preventive care and health promotion
- 24-hour basic Emergency Obstetric and Neonatal Care
  - I.V. antibiotics administered
  - I.V. oxytoxics administered
  - I.V. anti-convulsants
  - Manual removal of the placenta
  - Assisted delivery by Vacuum Extraction
  - Manual vacuum aspiration of retained products of conception
  - Neonatal resuscitation
- Curative care (including I.M. injections and I.V. lines for I.V. fluids and antibiotics)
- Home treatment and outpatient care for moderate and severe acute malnutrition
- Inpatient stabilisation care for severe acute malnutrition (SAM) with complications
- First aid for emergency conditions and referral
- Small surgery (incl. first aid for trauma, stabilisation and referral)
- TB diagnosis and treatment (DOTS)
- Laboratory examinations
- Screening for STIs/HIV and provision of VCT and PMTCT services (at present in selected PHCCs)
- Observation, with 10-20 beds
- Training (for PHCU staff)
- Health Management Information System (clinical documentation, regular reporting, audits)
- Administrative and support activities (e.g. register keeping, drug management and maintenance)

4.6 SUMMARY OF KEY RESPONSIBILITIES OF THE BOMA HEALTH COMMITTEES (BHCS)

The BHCs will provide administrative support and mentorship. They consist of elected community members, representing the whole community and maintaining a gender balance:

- Implementation of community health activities
- Community participation and involvement
- Community ownership and development of local leadership
- Referral system and surveillance
- Monitoring and Evaluation
- Monthly work plans by health committees
- Outreach health programs
- Health education and promotion
- Health campaigns and awareness programs
- Efficient and cost-effective use of resources
- Contribution and participation in emergency preparedness and in emergency interventions, in cooperation with the CHD and under the guidance of the State MoH.

4.7 SUMMARY OF KEY RESPONSIBILITIES OF THE COUNTY HEALTH DEPARTMENT

The County Medical Officer of Health (CMOH) as the head of the County Health Department (CHD) guarantees the implementation of the health policy, co-ordinates with other authorities and actors and oversee health activities by all agencies or stakeholders working , such as, health promotion, curative services, HMIS, EPI, pharmaceuticals and medical supplies data management for securing commodities, HR management and administration and finance. The county health department houses the oversight team. It also Chairs the County Healthy forums that has the responsibility for the development of comprehensive sector wide county health plan. The CHD guarantees the implementation of the health policy, co-ordinates with other authorities and actors and supervises specific areas activities that include:

- Health coordination
- Assessment and analysis of local health and managerial needs
- Joint strategic planning based on local needs and problems
- Contributions towards management of information systems
- Implementation of health care and services
- Monitoring and evaluation
- Referral system and epidemiological surveillance
- Efficient and cost-effective use of resources
- Contribution and participation in emergency preparedness and in emergency interventions, under the guidance of the State MoH.

In view of the shortcomings of skilled human resources, many of these functions may be carried out initially by an implementing partner to whom the BPHS is contracted out or by a separate partner charged with the responsibility of building the capacity of the CHD, (in case the MoH decides that the possibility of a conflict of interest requires separating service delivery from coordination). It is important that these functions are located at the CHD and not in the NGO/FBO partner's office and that continued investment in infrastructure and capacity building takes place over the years.

4.8 ESSENTIAL DRUG REQUIREMENTS PER LEVEL OF PROVIDER

In order to avoid duplication and possible conflicting documents, it is referred to the GOSS Essential Medicine List

4.9 REQUIRED STAFFING PER LEVEL OF PROVIDER

TABLE 7: STAFFING PER LEVEL OF PROVIDER

Staffing cadres	Vill	Boma PHCU	Payam PHCC	CH
CHW		2	2	
Community midwifes			2	
MCHW (or community midwifes)		2		
(Community) nurses			3	10
Medical Assistants				3
Clinical Officer			2	3
Physician				1
Nutritionists			2	2
Laboratory Assistant			2	
Pharmacy Assistant			2	
"Field" nurse				1
"Field" public health technician				1
"Field" nutrition assistant				1
Statistical Clerk			2	2
Theatre attendants				2
Hospital Director				1
Medical Director				
Nursing Director/Matron				1
Administrator (and accountant)				1
Total technical positions		**4**	**17**	**29**
Pharmacist assistants			2	2
Guards				2
Cleaner		1	2	2
Laundry				2
Cook				2
Tailor				1
Total support positions		**1**	**4**	**4**

TABLE 8: STAFFING CADRES OF COUNTY, PAYAM AND BOMA HEALTH OFFICES / COMMITTEE

Office/Committee	Staffing	
1. County Health Department	County Medical Officer	1
	Disease Surveillance Officer	1
	M&E Officer	1
	County Nursing Officer	1
	Nutrition Officer	1
	Pharmacy Technician/Assistant	1
	Support staff	2
	Total: 8	8
2. Payam Health Department	Public Health Officer	1
	Health Education and Promotion Officer	1
	Health Supervisor/Medical Assistant	1
	Maternal Health Coordinator	1
	Support Staff	1

	Total:	5
3. Boma Health Committee	Min. 6 people (unpaid), chaired by a village elder and the CHW as the Secretary. Members are representative for and of the main community groups (women, youth, CHW, water and livestock representatives, etc) **Total: 6**	**6 - 10**

4.10 EQUIPMENT AND SUPPLIES PER LEVEL OF PROVIDER

Due to the differing catchment population sizes for County Hospitals the number of expected outpatients, the number of beds and the quantity of the required resources (staff, equipment, infrastructure) cannot be well standardised for CH at this stage.

Additional resources are required for the CH as listed in the Secondary Care BPHS document.

TABLE 9: EQUIPMENT AND SUPPLIES PER LEVEL OF PROVIDER

Equipment and Supplies	Vill.	Boma PHCU	Payam PHCC	CH
Examination tables		1	2	✓
Delivery table		1	2	✓
Fetoscope		1	2	✓
Stethoscope		2	4	✓
Sphygmo-manometer		2	2	✓
Thermometers		2	4	✓
Otoscope			1	✓
Set of basic EmONC equipment			1	✓
Delivery forceps, vacuum extractor			1	✓
Manual resuscitation equipment			1	✓
Surgical toilet tray set			1	✓
Set of minor surgery equipment				✓
Oxygen supply (portable oxygen concentrators)			1	✓
Autoclave / sterilisation set			1	✓
Cold chain / refrigerator			1	✓
Laboratory set			1	✓
Dressing set		2	2	✓
Baby scale		1	2	✓
Adult scale		1	2	✓
Beds, bedding 10 general			10	✓
Communication set (radio, phone)		1	1	✓
Bicycle		2	3	✓
Additional equipment required for CH as listed in the Secondary Care BPHS document				

4.11 INFRASTRUCTURE PER LEVEL OF PROVIDER

TABLE 10: INFRASTRUCTURE PER LEVEL OF PROVIDER

Infrastructure	Vill	Boma PHCU	Payam PHCC	CH
Reception/waiting area		1	1	1
Consultation Rooms		2	3	6
Dental room				1
Counselling Centre				1
Emergency room female				1
Emergency room male				1
ANC room			1	1
Delivery room		1	1	2
Maternity ward/female beds			5	15
Nutrition room				1
Therapeutic feeding centre				1
EPI room			1	1
Cold chain store unit			1	1
General observation wards			1	
Paediatric ward (CH 10-30 beds)				1
Female Med. ward (CH 10-30 beds)				1
Male Medical ward (CH 10-30 beds)				1
Female Surgical ward (CH 10-30)				1
Male Surgical ward (CH 10-30)				1
Theatre for CS and minor surgery				1
Laboratory			1	1
Pharmacy			1	1
Medical store		✓	1	1
X ray room				1
Latrine		1	4	10
Non-medical store			1	1
Sterilisation unit			1	1
Laundry				1
Kitchen				1
Water storage		✓	✓	✓
Protected water source (20 000, respect. 40 000 litres)			1	1
Maternity waiting shelter				✓
Staff residential houses			10	20
Electricity supply 24 hours			✓	✓
Office of hospital director				1
Office for administrator				1
Office for account				1

5 MONITORING OF THE SERVICES PROVIDED

As stated in the introductory chapter, the BPHS does not and cannot replace or duplicate the national HMIS or the monitoring and evaluation (M&E) system. The BPHS rather points out how these systems can and shall be used to monitor also the BPHS implementation.

5.1 HEALTH MANAGEMENT INFORMATION SYSTEM (HMIS)

The primary mechanism for monitoring the progress in the BPHS implementation will be the situation analyses for future County Health Plans (CHPs), and the Health Management Information System. A newly designed HMIS is in slow but steady process to be rolled out and related training for health workers is to be carried out by all implementing partners. All of the indicators selected for inclusion will serve to monitor BPHS activity levels and impact.

A gap in the new HMIS is the currently incomprehensive or co-ordinated reporting of community-based activities and these are to be developed as soon as BPHS implementation starts. At present, activities which take place community-based, such as outreach from health facilities for immunisation, are to be aggregated and reported on the same registers and formats as PHCU activities. For effective monitoring of epidemiological data, coverage and logistics at the community level, a separate format is required to reflect the contents of the community level BPHS.

5.1.1 Integrated Disease Surveillance and Response (IDSR)

For some key conditions, reliance on the monthly or quarterly reports of the HMIS is not sufficient as they may be notifiable diseases, or subject to epidemic. The IDSR is a separate, but related, reporting system which enables more frequent monitoring of cases of a limited range of disease falling into four categories:

- Diseases of epidemic potential, e.g., meningitis, cholera;
- Diseases targeted for eradication, e.g., measles, polio;
- Diseases targeted for elimination, e.g. Guinea worm disease;
- Diseases of major public health significance, e.g., malaria, childhood diarrhoea and pneumonia and tuberculosis.

Through monitoring of activity levels, an appropriate and rapid response can be put in place if it appears that an outbreak or epidemic is developing. However, all figures are then fed back to the HMIS for routine planning purposes.

5.2 MONITORING AND EVALUATION [19]

5.2.1 Routine Monitoring

Monitoring and evaluation (M&E) are essential in order to provide a basis for assessing and improving performance, and to feed into strengthened planning and management. M&E will take place through a variety of mechanisms, to be integrated across BPHS components as far as possible. The M&E activities will be carried out by the Directorate of Research Planning and Health Systems Development which is responsible for its activities budget.

Equally essential as the choice of the indicators to be use for monitoring input, process, output and outcome, is the awareness, knowledge and the mechanisms to actually use the data on all levels, i.e. including the communities and the village health committees, not only for forwarding to the next layer in the health hierarchy, but importantly for their own review of progress, identifying positive lessons, constraints and gaps as well as for their own planning.

[19] See annexed: Priority Indicators for Routine Monthly Report 2011; Ministry of Health - South Sudan; February 2011

5.2.2 Periodic M & E

Periodic, as opposed to routine M&E will take place through the existing surveys such as the Demographic and Household Survey, and specific surveys as need arise. With a strengthened HMIS and routine performance monitoring, the need for such surveys is expected to reduce. Better use of the research unit within MoH and more frequent analysis and review of existing data can do much to show with updated information how the system and the services are performing.

5.2.3 Operational Research

The bulk of health problems and health systems challenges in developing countries lay at the primary level. A significant number of these require operational research to establish causalities and consequences. Much operational research currently takes place in South Sudan, both initiated from within the country and from outside. However, there is no existing mechanism for "quality control" to ensure reliable evidence and no existing forum for disseminating findings and for ensuring that findings filter through into improved policy and practice. The Directorate of Research, Planning and Health System Development in MoH allocates financial resources towards operational research not the least in order to determine the most cost-effective interventions and strategies for achieving targets. The BPHS lead agents, together with the research unit within MoH are to work together to provide mechanisms for coordinating and housing proposals and study reports, with an improved database of research-related activities relevant to each State whether the proposals originate from within or outside South Sudan.

6 MECHANISM FOR ANNUAL UPDATE OF THE BPHS

Updating of the BPHS is planned in two stage, which are built in both, the annual planning and budgeting cycle, as well as in the strategic review and planning process for the Health Sector Development Plan.

1) During the consultative process for preparing the Annual Operational Plans the retrospective, reviewing part of this process will include identifying key issues in the BPHA which deserve and can be adjusted without major strategic changes.

2) A comprehensive revision of the BPHS will be an integrated part of the development of the next phases of the Health Sector Development Plan, which foresee a sector review as the basis for deciding on and defining the Plan for the following period. The BPHS will be part of this process, both in the retrospective assessment and capture of lessons and experiences, as well as in the prospective, planning stage.

7 ANNEXES

7.1 ANNEX 1: ESSENTIALS OF THE PHC - BPHS SERVICES AND ACTIVITIES

While Basic Package of Health Services defines an already streamlined and focussed package of health services, it has to be acknowledged that even this package might not be realistic in the present situation and resource limitation of South Sudan, in particular, but not solely, of the available human resources, which in turn require several years to be build up in sufficient quantity and quality. Therefore the following table presents the very essential services to be provided.

These activities have to be carried out as an absolute minimum. In locations where circumstances are less constrained, the BPHS can and shall be provided comprehensively.

SAFE MOTHERHOOD AND REPRODUCTIVE HEALTH

TABLE 11: ESSENTIALS OF PHC - SAFE MOTHERHOOD AND REPRODUCTIVE HEALTH

ESSENTIALS OF PHC SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
SAFE MOTHERHOOD AND REPRODUCTIVE HEALTH				
Focused Antenatal Care				
IEC	✓	✓	✓	✓
Identification of pregnant mothers and counselling for early initiation and compliance with ANC	✓	✓	✓	✓
Referral for ANC, PMTCT, STI prevention and treatment	✓	✓	✓	✓
Monthly ANC mobile clinic services. - identification of high risk cases and referral to CH or SRH		✓	✓	
Nutrition counselling; Micronutrient supplementation; iron, folic acid, Vit A	✓	✓	✓	✓
Malaria prevention, LLINs and IPT	✓	✓	✓	✓
Preparation and timely travel for BEmONC or CEmONC (according to risk status), arrangements for waiting homes	✓			
Management of normal deliveries		✓	✓	
Management of moderate complications and risks: infection, post partum haemorrhage: volume replacement – ORS - Infection: cotrimoxazole - Pallor: iron, folate and multivitamins, HBP, refer to PHCC/CH			✓	✓
Management of high risk cases or complications to CH or SRH (EmNOC centre) incl. i.v., antibiotics, MVA, PAC, caesarean section - CPD, fluid retention, previous C/section, multiple pregnancy and grand multiparity, antepartum haemorrhage, severe oedema, severe antepartum fits				✓
All signal functions of Comprehensive EmONC (at antenatal preparation)				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Care of uncomplicated delivery				
Referral of all mothers in labour to PHCU for clean hygienic assistance of uncomplicated delivery	✓	✓		
Clean hygienic assistance of delivery for precipitous labour, while transferring to PHCU/PHCC	✓			
Provision of clean hygienic assistance of uncomplicated delivery for abrupt labour, oral misoprostol (or cytotec)		✓		

Clean hygienic assistance of uncomplicated delivery: gloves, cotton wool, clean blade, soap, oral misprostone-cytotec			✓	
Refer obstructed labour and haemorrhage: to CH or SRH	✓	✓	✓	
Comprehensive non surgical and surgical obstetric care (24hrs)				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Emergency Obstetric and Neonatal care				
Awareness raising on, identification of high risk labour and refer to CH: CPD and other obstructed labour, haemorrhages, fever, convulsions	✓			
Identification of haemorrhage and stabilise with ORS for volume replacement for transfer to CH		✓	✓	
Transfer cases of obstructed labour, eclampsia, high fever, sick neonates tp CH		✓	✓	
The signal functions of Basic EmONC: - I.V antibiotics administered - I.V. oxytoxics administered - I.V anti-convulsants - Manual removal of the placenta - Assisted delivery by vacuum extraction - Manual vacuum aspiration of retained products of conception - Neonatal resuscitation			✓	✓
The signal functions of Comprehensive EmONC, in addition to basic EmONC: - Surgical obstetrics: caesarean section and emergency hysterectomy				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Focused Postnatal Care				
Maternal and IECHC counselling	✓	✓		
Referral for PNC and Child Health Clinic	✓	✓		
Identification, treatment and immediate referral: - To CH or SRH: postpartum haemorrhage; inevitable or incomplete abortion volume replacement with ORS, MVA and misoprostol - To PHCC: infection: cotrimoxazole; pallor: iron, foliate, multivitamins; convulsion: clear airway, oral sedative	refer	refer	✓	
Counselling Referral for PNC and Child Health Clinics			✓	✓
Immediate treatment for puerperal complications: - (i) Postpartum haemorrhage/inevitable or incomplete abortion: volume replacement with IV fluids, MVA/PAC and parenteral oxytocics or oral misoprostol - (ii) Infection: parenteral antibiotics - (iii) Anaemia: iron, folate and/or referral - (iv) Convulsion: clear airway, iv anticonvulsants			✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
(Adolescence) Sexual and Reproductive Health and Family Planning				
Awareness creation/demand generation for ARH and counselling of women and their sexual partners to accept FP/RH services.	✓	✓	✓	

Promotion of VCT and SMSTI	✓	✓	✓	
CBD of oral FP methods	✓	✓	✓	✓
Condom promotion and supply	✓	✓	✓	
Surgical male and female contraception				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓

CHILD HEALTH

TABLE 12: ESSENTIALS OF PHC - CHILD HEALTH

ESSENTIALS OF PHC SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
CHILD HEALTH				
Immunisation/EPI services				
Promotion of EPI among parents	✓			
Defaulter tracing of < 5 immunisation, counsel and refer	✓	✓	✓	
Mobilisation of communities to attend mass outreach/mobile immunisation or during NIDs.	✓	✓	✓	
Surveillance and reporting of cases of vaccine preventable diseases	✓	✓	✓	
Monthly routine outreach/mobile immunisation and static centres		✓	✓	✓
Daily routine immunisation, five days a week			✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Essential Nutrition Action				
Counselling: prevention of pre-lacteal feeding, exclusive breast feeding for first six months, timely weaning and continued feeding for 24 months	✓	✓	✓	
Screening and supplementary feeding for moderate malnutrition and for children in families of at risk child	✓	✓	✓	
Mass de-worming and micronutrient supplementation on NIDs	✓	✓	✓	
Growth monitoring (detect malnutrition, esp. in families of at risk child)		✓	✓	✓
Nutrition rehabilitation for the mild to moderately malnourished children			✓	
Referral of severe malnutrition to therapeutic feeding	✓	✓	✓	
Treatment of severe malnutrition at designated TFCs				✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓
Integrated Management of Childhood Illness				
Creation of awareness and promotion of ITNs on NIDS and mass distribution days	✓			
CHWs to use simple algorithms of assessing, classifying and assigning treatment or refer cases of fever (treatment of uncomplicated fever with ACT)		✓	✓	
Refer children with danger sings to CH (severely cold or hot body, inability or refusal to feed, fast breathing, skin pinch returns very slowly)		✓	✓	
Creation of awareness on recognition of diarrhoea, promote and train parents on use of ORS, zinc supplement and	✓	✓	✓	

ESSENTIALS OF PHC SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
encouragement of increased frequency of feeding during and post diarrhoea				
Creation of awareness on recognition of pneumonia (counting number of breaths/ minute and in chest in-drawing and encouragement of increased frequent feeding during and post ARI	✓	✓	✓	
Early treatment and referral with cotrimoxazole for cases of cough, rapid breathing in drawing of chest and nasal flaring		✓	✓	
Sedation for cases of convulsion and referral for first time convulsion		✓	✓	
Encouragement of isolation of sick children and quarantine for children during epidemic outbreaks of cholera and meningitis	✓	✓	✓	
Algorithm guided treatment of malaria with ACT or second line treatment		✓	✓	✓
Algorithm guided treatment of moderate dehydration from diarrhoea (ORS) and severe dehydration or diarrhoea with danger sings (IV ringers solution) Use of zinc and other micronutrient supplement, encouragement of increased frequency of feeding during and post diarrhoea		✓	✓	✓
Algorithm guided treatment of pneumonia Counting number of breaths per minute and in chest in-drawing nasal flaring with parenteral antibiotics- amoxicillin and provision of moist oxygen		✓	✓	✓
Epidemic and outbreak management - cholera and meningitis, measles, whooping cough, polio yellow fever, RV fever etc		✓	✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision			✓	✓

MOST COMMON DISEASES AND PUBLIC HEALTH RISKS

TABLE 13: ESSENTIALS OF PHC - MOST COMMON DISEASES AND PUBLIC HEALTH RISKS

ESSENTIALS OF PHC SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
MOST COMMON DISEASES AND PUBLIC HEALTH RISKS				
Prevention and Control of Communicable and other Endemic Diseases				
Malaria				
IEC	✓	✓	✓	✓
Clinical diagnosis		✓	✓	✓
Microscope diagnosis			✓	✓
Treatment of uncomplicated cases – firstline treatment		✓	✓	✓
Treatment of uncomplicated cases not responding to firstline		refer	✓	✓
Treatment of severe and complicated cases		refer	✓+ refer	✓+ refer
Promote use of insecticide-treated mosquito nets	✓	✓	✓	✓
Intermittent therapy (pregnant women)		✓	✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Tuberculosis				
IEC	✓	✓	✓	✓
Case detection among self-reporting patients using sputum	refer	refer	✓	✓

smear				
Short course chemotherapy, incl. DOTS		follow up	follow up	diagnose and treat
Defaulter tracing	✓	✓	✓	✓
BCG vaccination	assist	assist	✓	✓
X ray for smear negative patients				✓
Algorithms of treatment for AFP (-)			✓	✓
Preventative therapy for children contact of TB patients	refer	refer	✓	✓
DOTS-plus in muti-drug resistant TB		follow up	✓	✓
Inpatient management of severe cases			refer	✓+ refer
Management of complicated cases				✓+ refer
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
STI, HIV/AIDS				
IEC on STI and HIV including - promotion of safer sexual behaviour including condom promotion, procurement and distribution; - encouragement of prompt health care-seeking behaviour in case of experiencing symptoms and signs of STI - referral for VCT	✓	✓	✓	
VCT and provider initiated counselling and testing (PITC)			✓	✓
HIV/AIDS treatment and care including PMTCT	refer	refer	✓	✓
Comprehensive case management of STI		✓	✓	
Prevention and care of congenital syphilis and neonatal conjunctivitis	✓	✓	✓	✓
Home based care and adherence counselling for PLWHA already on treatment	✓	✓	✓	
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Diarrheal, Enteric Infections and Infestations				
IEC on the causes of diarrhoea and its prevention and - encouragement of mothers to continue with the healthy infant feeding and weaning practices - safe use of potable water - promotion of hand washing before and after handling food, after toilet including after cleaning or handling children's faeces - recognition of other enteric infections (esp. abdominal pain, progressive fever, generalised weakness, constipation or small loose stool) - early recognition of outbreaks of diarrhoea and immediately alert staff at PHCU or PHCC - safe disposal of faeces including those of children	✓	✓		
Creation of awareness among village development committees on participatory health and sanitation (PHAST)	✓	✓		
Facilitation for practical identification of water points - protection of water points - discouragement of risky sanitary practices	✓	✓		
Construction of demonstration toilets protection of water sources in schools, market places and administration centres, community gathering venues	✓	✓		
Promotion of immunisation especially against measles	assist	assist	✓	
Regular administration of vitamin A (every six months) for all children under the age of five	✓	✓		

Regularly de-worming of children - mass campaigns, school health programs	✓	✓		
Refer suspected typhoid fever cases to PHCC/CH for laboratory investigation, diagnosis, treatment with antibiotics and report to Payam and county health authorities		refer✓	✓	✓
Emergency preparedness by identifying early warning signs for outbreaks of diarrhoea, developing responses and reporting	✓	✓	✓	✓
Treatment of mild cases of dehydration (ORS)		✓	✓	
Treatment of severe cases of dehydration (IV) and cases requiring antibiotics			✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Acute Respiratory Infection				
IEC on early signs of respiratory infection among children and adults	✓	✓		
Refer cases of suspected pneumonia promptly to the PHCC to start treatment with oral antibiotics immediately		refer	✓	✓
Refer older people and/or severe cases of suspected pneumonia promptly to the CH to start treatment with antibiotics injections and oxygen if respiratory failure sets in.		refer	refer	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Neglected and Tropical Diseases				
IEC to create awareness on the causes, dangers and impact and means of prevention of the diseases	✓	✓	✓	
Promotion of interventions to reduce the contact of people with the parasites or their vectors (carrying agents) Provision of protected water sources, provision of fuel wood away from known breeding sites of vectors, encouragement of construction and proper use of toilets or avoidance of water sources by all especially those who are infected and	✓	✓		
Preventive chemotherapy through mass drug administration (MDA) and other national control programmes	✓	✓	✓	
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓

NON-COMMUNICABLE, HIGH PRIORITY DISEASES AND CONDITIONS

TABLE 14: ESSENTIALS OF PHC - SERVICES AND ACTIVITIES - NON-COMMUNICABLE, HIGH PRIORITY DISEASES AND CONDITIONS

ESSENTIALS OF PHC - SERVICES AND ACTIVITIES	Vill.	Boma PHCU	Payam PHCC	CH
Non-Communicable, High Priority Diseases and Conditions				
Diabetes and Hypertension				
Awareness, prevention and education	✓	✓	✓	✓
Case detection	✓	✓	✓	✓
Clinical diagnosis		✓	✓	✓
Laboratory diagnosis			✓	✓
Treatment of uncomplicated cases	follow	follow up	✓	✓
Treatment of complicated cases		refer	✓+ refer	✓+ refer
Defaulter tracing	✓	✓	✓	✓
Reporting	✓	✓	✓	✓
Monitoring and supervision		✓	✓	✓
Primary Eye Care				
IEC on the types and causes of eye diseases	✓	✓	✓	
Promotion of eye health/prevention of eye infections regular washing of face	✓	✓	✓	
Community based mass distribution campaigns for antibiotics for trachoma and OV preventions commodities (water filters)	✓	✓	✓	
Management of common and simple eye diseases especially topical antibiotics for treatment of epidemic eye infection during outbreak seasons		✓	✓	✓

7.2 ANNEX 2: PRIORITY INDICATORS FOR ROUTINE MONTHLY REPORT 2011; MINISTRY OF HEALTH - SOUTH SUDAN; FEBRUARY 2011

TABLE 15: PRIORITY INDICATORS FOR ROUTINE MONTHLY REPORTS 2011

MINISTRY OF HEALTH - SOUTH SUDAN

PRIORITY INDICATORS FOR ROUTINE MONTHLY REPORTS 2011

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
1. Utilisation Rate	Curative consultations by the eligible population per time period.	Curative consultation U5 Curative consultation 5 years and older	Total population	OPD and U5 Register The target is one consultation per person per year.
2. Utilisation Rate under 5 years	Curative consultations by the under 5 per time period	Curative care under 5 years (male and female)	Population under 5	U5 Register
3. Antenatal Coverage - 1st visit	Proportion of pregnant women attending the antenatal clinic for the first visit	Antenatal client 1st visit	Estimated pregnant women (5.6% of the population)	ANC Register
4. Antenatal Coverage – 4th visit	Proportion of pregnant women attending the antenatal clinic for the fourth time or more	Antenatal client 4th or more visit	Antenatal client 4th or more visit	ANC Register/ Indicates completion of ANC protocol.
5. IPT 2nd dose coverage	Percentage of pregnant women who receive IPT2 as part of the ANC visits	Antenatal client IPT 2nd dose	Antenatal client 1st visit	ANC Register
6. New contraceptive acceptance rate	Proportion of women 15-45 years of age who start any modern contraceptive method	Family Planning acceptor (new)	Estimated female population 15-45 years of age	ANC and OPD Registers
7. Delivery by skilled birth attendant in facility (rate)	Proportion of women who deliver in health facilities with skilled birth attendants (doctors, registered midwives, nurse-midwife, Medical Assistant or Clinical Officer)	Delivery in Health Facility with skilled health personnel	Estimated pregnant women (5.6% of population)	Delivery Register
8. Delivery by unskilled	Proportion of women who deliver in health	Delivery in Health Facility	Estimated pregnant women	Delivery Register

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
birth attendant in facility (rate)	facilities with TBA, CHW, MCHW, community midwife, village midwife.	with unskilled birth attendants (specified-see left)	(5.6% of population)	
9. Delivery rate in community	Proportion of women who deliver at home in presence of skilled or unskilled birth attendants.	Delivery in the community	Estimated pregnant women (5.6% of population)	From TBA Tally Sheet or TBA Book
10. Delivery referral rate	Proportion of deliveries referred	Delivery referred to higher level	Delivery in HF (8 +9+ 12)	Delivery Register
11. Delivery by C-section rate	Proportion of deliveries by C-Section	Caesarean Section	5.6% of the population OR Delivery in Health Facility	Delivery Register
12. Live births in health facilities	Babies born alive in the health facilities irrespective of status at discharge (dead, alive, referred or admitted)	Live birth in health facility		Delivery Register
13. Postnatal coverage	Percentage of women who come at least once for postnatal care	Post natal visit 1st visit	5.6% of the population	ANC Register
14. Malaria clinically diagnosed uncomplicated U5 rate	Proportion of clinically diagnosed uncomplicated malaria in children under 5 years	Malaria clinically diagnosed uncomplicated U5	All Malaria cases U5	U5 Register
15. Malaria confirmed uncomplicated U5 rate	Proportion of RDT or blood smear confirmed uncomplicated malaria in children under 5 years	Malaria confirmed uncomplicated U5	All Malaria cases U5	U5 Register
16. Malaria severe in children U5 rate	Proportion of severe malaria in children under 5 years	Malaria severe U5	All Malaria cases U5	U5 Register
17. Malaria uncomplicated 5 years	Proportion of uncomplicated Malaria in patients 5 years and over	Malaria uncomplicated 5 years and over	All Malaria cases over 5	OPD Register

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
and older rate				
18. Malaria severe 5 years and older rate	Proportion of uncomplicated Malaria in patients 5 years and over	Malaria severe 5 years and over	All Malaria cases over 5	OPD Register
19. Pneumonia presumed children under 5 years	Presumed pneumonia in children under 5	Pneumonia presumed under 5 years		U5 Register
20. Diarrhoea U5 treated with ORS rate	Proportion of cases of diarrhoea in children U5 treated with ORS	Diarrhoea treated with ORS under 5 years	Diarrhoea (all) under 5 years	U5 Register
21. Vitamin A supplement 6-59 months doses	Vitamin A supplements provided to children aged 6-59 months of age	Vitamin A supplement 6-59 months		U5 Register and EPI Register
22. Vitamin A supplementation to new mothers rate	Proportion of mothers that receive a dose of Vitamin A after delivery	Vitamin A supplement to new mother	5.6% of population	Delivery Register
23. Bed net coverage U5	Proportion of children U5 provided with insecticide treated nets	Insecticide treated net to child under 5 years	U5 population	U5 Register/ calculated at national level to account x campaigns.
24. Bed net coverage pregnant women	Proportion of pregnant women provided with insecticide treated nets	Insecticide treated net to antenatal client	5.6% of population	ANC Register/ calculated at national level to account x campaigns.
25. Severe Malnutrition Prevalence	Proportion of children U5 attending HF with MUAC<115 mm	MUAC under 115 mm under 5 years	U5 Population	U5 Register
26. Moderate Malnutrition Prevalence	Proportion of children U5 attending HF with MUAC<125 mm	MUAC under 125 mm under 5 years	U5 Population	U5 Register
27. Stock Outs of basic	Proportion of Health Facilities experiencing	Stock out of basic	Health facilities in county,	Pharmaceutical Register

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
medication in HF	stock outs of BASIC medication	medication (YES/NO)	state, country.	
28. Death in facility	Deaths in health facility irrespective of age and cause.	Death in health facility		U5, OPD, Inpatients, Delivery Registers
29. Death U5 in facility	Deaths in children U5 in health facilities	Death under 5 years in health facility		U5, Inpatients Register
30. Death maternal in facility	Women who died in health facilities due to pregnancy related causes	Death Maternal in health facility		Delivery Register
31. TB Suspected rate	Suspected TB detected in health facilities	TB patient suspected	Curative consultation 5 years and older	OPD Register
32. TB Referral rate	Proportion of cases of suspected TB referred to TB Management Unit	TB patient referred	TB patient suspected	OPD Register
33. Condom distribution rate	Condoms distributed by the health facility, county or state (free)	Condom distributed	Male population 15-45 years	Stock card
34. VCT Uptake rate	Proportion of VCT clients who accept being tested for HIV	VCT client tested for HIV	VCT client counselled	VCT Register
35. VCT Post test counselling and result rate	Proportion of VCT clients counselled and tested who received test result and post test counselling	VCT client collecting results	VCT client tested for HIV	VCT Register
36. HIV Prevalence VCT	Proportion of VCT clients found HIV positive	VCT client HIV positive - new	VCT client tested for HIV	VCT Register
37. PMTCT Uptake	Proportion of ANC clients who accept being tested for HIV	ANC client tested for HIV	Antenatal client 1st visit	PMTCT Register/ ANC Register
38. PMTCT Post test counselling and result	Proportion of ANC clients counselled and tested who received test result and post test counselling	ANC client collecting results	ANC client tested	PMTCT Register/ANC Register

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
39. HIV Prevalence ANC	Proportion of ANC clients found HIV +	ANC found HIV + (new)	ANC client 1st visit	PMTCT Register/ ANC Register
40. ANC Clients receiving ART prophylaxis	Proportion of ANC clients found HIV + who receive ART prophylaxis for PMTCT	ANC client who receive ART prophylaxis for PMTCT	ANC client HIV+	PMTCT/ ANC Register
41. Advanced HIV + Treatment start rate	Proportion of advanced HIV+ patients eligible for treatment who start ARV	HIV + patients receiving ARV (new\0	HIV+ eligible for treatment (CD4<350 or Clinical Stages 3 and 4)	ART Register

TABLE 16: INDICATORS OF THE EXPANDED PROGRAMME OF IMMUNISATION

These indicators include ONLY eligible population vaccinated during **routine** EPI activities of the health care centres (fixed EPI or outreaches).

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
1. BCG Coverage	Proportion of children under 1 who received one dose of BCG vaccine	BCG in Children U1	5% of population	EPI Register
2. OPV0 Coverage	Proportion of children under 1 who received OPV 0 vaccine	OPV0 in Children U1	5% of population	EPI Register
3. OPV 1 Coverage	Proportion of children under 1 who received OPV1 vaccine	OPV1 in Children U1	5% of population	EPI Register
4. OPV2 Coverage	Proportion of children under 1 who received OPV2 vaccine	OPV2 in Children U1	5% of population	EPI Register
5. OPV3 Coverage	Proportion of children under 1 who received OPV3 vaccine	OPV3 in Children U1	5% of population	EPI Register
6. DPT1 Coverage	Proportion of children under 1 who received	DPT1 in Children U1	5% of population	EPI Register

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
	their first dose of DPT or DPT containing vaccine			
7. DPT2 Coverage	Proportion of children under 1 who received their second dose of DPT or DPT containing vaccine	DPT2 in Children U1	5% of population	EPI Register
8. DPT3 Coverage	Proportion of children under 1 who received their third dose of DPT or DPT containing vaccine	DPT3 in Children U1	5% of population	EPI Register
9. Measles Coverage	Proportion of children under 1 who received one dose of Measles vaccine	Measles in Children U1	5% of population	EPI Register
10. Yellow Fever Coverage	Proportion of children under 1 who received one dose of Yellow Fever vaccine	Yellow Fever in Children U1	5% of population	EPI Register
11. TT1 Coverage in pregnant women	Proportion of pregnant women who received a first dose of Tetanus Toxoid vaccine as part of the ANC clinic	TT1 Antenatal Client	5.6% of population	EPI and ANC Register
12. TT1 Coverage in pregnant women	Proportion of pregnant women who received a first dose of Tetanus Toxoid vaccine as part of the ANC clinic	TT2 Antenatal Client	5.6 % population	EPI and ANC Register
13. TT3+ Coverage in pregnant women	Proportion of pregnant women who received a third or more dose of Tetanus Toxoid vaccine as part of the ANC clinic	TT3+ Antenatal Client	5.6% population	EPI and ANC Register
14. TT1 Coverage in women 15-45 years	Proportion of women 15-45 who received a first dose of Tetanus Toxoid vaccine	TT1 women 15-45	Women 15-45	EPI Register
15. TT2 Coverage in women 15-45 years	Proportion of women 15-45 who received a second dose of Tetanus Toxoid vaccine	TT2 women 15-45	Women 15-45	EPI Register
16. TT3+ Coverage in women 15-45 years	Proportion of women 15-45 who received a third or more dose of Tetanus Toxoid vac.	TT3+ women 15-45	Women 15-45	EPI Register

TABLE 17: IDSR

INDICATOR (MOH - GOSS/ STATE/COUNTY)	INDICATOR DEFINITION	DATA ELEMENT: NUMERATOR (HEALTH FACILITIES)	DATA ELEMENT: DENOMINATOR (STATE, COUNTY; MOH-GOSS)	DATA SOURCES
Public health importance diseases rate	Number of suspected cases of diseases of public health importance in health facilities during the reported period included in the IDSR list	All suspected cases of IDSR diseases	At risk population	OPD, U5 Register
Outbreaks investigated in 48h rate	Proportion of outbreaks investigated 48h after suspected outbreak detected	All outbreaks investigated in 48h	All outbreaks suspected	IDSR Payam Form
Timely reporting by health facilities (*)	Proportion of health facilities in county or state sending IDSR report timely (4 reports during the previous calendar month)	Facilities that have sent 4 reports in the previous calendar month	All facilities in county or state	Quantified Supervisory Checklist / County DHIS
IDSR Guidelines Coverage (*)	Proportion of health facilities in county or state with up-to-date IDSR guidelines	Facilities with IDSR guidelines	All facilities in county or state	Quantified Supervisory Checklist / County DHIS/ HFA

(*) County and State indicators: To be reported by County Health Officers and State MOH Officers.