WHO South Sudan second quarterly report, 2013

This report summarizes achievements, challenges and the way forward for the WHO South Sudan activities covering the period April – June 2013 and focuses on twelve programme areas.
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1.0 Background

1.1 The Current context in the Republic of South Sudan.

The second quarter of 2013, saw no serious improvement in the humanitarian situation in the country. There were continued displacements of people from their villages resulting from inter-tribal clashes in six priority states of Unity, Upper Nile, Warrap, Lakes, Northern Bahr el Ghazal and Jonglei states. Inter-tribal clashes and militia attacks in Jonglei state also caused massive displacements. Access to the affected persons in Jonglei state to deliver humanitarian assistance was challenging as this was hampered by insecurity and fear of attacks from the rivalry tribe and militia groups.

The influx of refugees from South Kordofan and the Blue Nile as well as the high numbers of returnees from Sudan into South Sudan continued in this period, this has over stretched health services in the states where the refugees have settled. A total of 221,093 refugees were registered in all parts of South Sudan by the end of this quarter.

During the quarter in focus, WHO maintained its support by providing life saving interventions and leadership to other health partners (UN agencies, NGOs, Civil societies and MOH) in emergency and crisis preparedness at the national and sub national levels. Technical and financial support was also provided to the Government of the Republic of South Sudan and the states to implement key focused life saving health interventions while advocating for more attention and funding for the country. Together with the MoH/RSS, the organization participated in joint health assessments in states affected by different emergencies.

Cases of Hepatitis E in Maban and Yida counties, Upper Nile and Unity states respectively continued during this quarter. In a period of three month, two thousand one hundred and forty six (2,146) newly suspected AJS (acute jaundice syndrome) cases (incidence rate of 971 per 100,000 populations) and twenty nine related deaths (CFR of 1.7%) were recorded across the ten states of South Sudan. Other suspected diseases reported and investigated during this quarter included; measles, acute flaccid paralysis and meningitis. All these were investigated by rapid response teams at the state levels.

A meningitis outbreak was reported during this quarter in Malakal county, Upper Niles state. WHO in collaboration with the
ministries of health at the state and central levels together with other partners worked hand in hand to contain the outbreak that saw 123,522 people vaccinated in Malakal County with the help of WHO.

In addition, WHO continued providing technical, logistics and financial support the Ministry of Health at the central and state levels for immunization activities of polio and measles.

This quarter was also marked by major milestones for addressing blood safety in South Sudan. WHO supported the Ministry of Health, Republic of South Sudan to organize a workshop to disseminate findings of a gap analysis report on blood transfusion services, develop roadmap for formulation of a National Blood Policy and 5-Year Strategic Plan for the national blood service (NBTS).

Progress towards the eradication of dracunculiasis continued in this period, the incidence of the disease continued decreasing with transmission zones was limited to the geographical foci of Kapoeta East, Kapoeta north, Pibor and Gogrial East Counties. The many reported cases from Pibor could also be attributed to the limited access of the community in this areas arising from the insecurity.

The organization also supported the Ministry of Health at the central and state levels with activities aimed at strengthening the health system in the country. These focused four main areas of: leadership and governance; donor coordination and collaboration, development of policies, strategies and reports and strategic information capacity building.

Other programmatic areas that WHO continued providing technical and financial support were; maternal and new-born health, outreach campaigns to neighboring health facilities in order to strengthen referral of mothers to Bor state hospital, mentorship for nurses, midwives and doctors in the maternity wards in Malakal, Yambio and Wau hospitals. The organization also supported the tuberculosis programme; health education and promotion, and communication and advocacy. Have another read through of this text.

The onchocericiasis elimination programme received the 2013 mectizan supply which will soon be transported to states and distributed to the communities with onchocericiasis.
2.0 WHO's Major Achievements in the second quarter, (April to June) 2013

2.1 Emergency Humanitarian Action (EHA)

The strategic objective of the EHA unit is to reduce the health consequences of emergencies, disasters, crisis and conflicts and minimize their social and economic impacts.

The overall humanitarian situation in South Sudan continued to deteriorate during the quarter in focus with increased hostilities in the state of Jonglei particularly in Pibor County. These hostilities led to a humanitarian crisis in South Sudan’s Jonglei State. Aid agencies estimate over 100,000 people affected by the latest wave of violence in Pibor and Pochalla counties, which broke out in March 2013 with an estimated 54,000 displaced. To date, Over 17,936 returnees remain stranded in transit camps while 50,700 others have returned to their homes since the beginning of the year. One hundred and thirty thousand, 130,000 people remain displaced from Abyei and Twic areas, while additional 190,000 refugees who fled into South Sudan from South Kordofan and Blue Nile states are currently living in camps in Unity and Upper Nile states.

Despite this, WHO and other humanitarian agencies continue to coordinate the provision of health services provided to the people affected by the ongoing humanitarian crisis and violence. Humanitarian actors are also concerned by the build up and presence of troops and the ongoing military offensive on non state armed actors and the impact this has on the humanitarian operations.

In this reporting period, WHO continued to support the Ministry of health at the national and sub national level to;

1. Fill in critical gaps and backstop health cluster partners in emergencies
2. Strengthen local emergency and preparedness capacities of the health authorities and health cluster partners, and
3. Coordinate health and humanitarian action and conduct health and needs assessments in areas reporting high populations of humanitarian concern.

2.1.2 Emergency Health and Humanitarian Coordination

During this quarter, WHO maintained its support and provided leadership to health partners (UN agencies, NGOs, Civil societies and MOH) in emergency and crisis preparedness at the national and sub national levels. Orientation on contingency planning was provided to emergency and preparedness committees tasked with the coordination of emergency responses at the various state levels. In these areas, committees met regularly and deliberated...
on key issues and challenges faced by partners and actors during the response to the emergencies in Pibor. In total 6 meetings were held to this effect.

WHO also supported the revitalization of the EPR task force at national/central level to strategically direct the response to ensure all vulnerable groups are accessed.

Given WHO’s technical and advisory role, the organization provided support supervision to partners to strengthen response to emergencies. A total 4 counties and 10 health facilities were visited and supported, these included; Tonj East County, Malakal County, Bor County and Aweil Center County. At each site, emphasis was put on emergency preparedness plan, resources including prepositioning of supplies and public health surveillance.

Technical support was provided to the central and State Ministry of Health in the area of coordination meetings of health actors, through weekly and monthly coordination forums/technical working groups in order strengthen coordination mechanisms of health emergency response at national and state level. This improved as a result 23 coordination meetings were held at the central and state levels.

Support was also provided to various states in the area of health assessments and investigations of some priority diseases. In total the organization supported 12 health assessments among them; verification exercise for suspected measles outbreak was conducted to Pariang; rapid assessment for an estimated 11,000 Murle people currently in Juba; Interagency Assessment for internally displaced persons site, Jaac, Aweil North; assessment mission to identify gaps in integrated disease surveillance and response reporting in Northern Bahr el Ghazal state; investigated reports of suspected measles cases in Panrieng County, Unity State, New Fangak, Jonglei state and in Guit Upper Nile state and conducted an assessment of new internally displaced persons in Chalek, Aweil North and verification of internally displaced persons in Boma and Uror in Jonglei state. Other assessments conducted include – verification and outbreak response in Malakal and Baliet and the rapid health assessment for health needs in Budi county (Kiliilay/Lorema).

As part of its mandate to strengthen humanitarian coordination and health emergency responses, WHO identified and recruited national emergency public health officers for Unity and Western Equatoria states. This was aimed at improving supervision, visibility of WHO activities and ensuring rapid response in terms of assessments so that critical gaps in emergencies are documented.

To further strengthen its activities in the Maban County where over 120,000 refugees at risk of Hepatitis E are in need of humanitarian response, WHO stationed and deployed a technical officer to oversee the WHO supported activities and provide technical support to the Maban County Health department. As a result of the information management, disease surveillance was enhanced and the support to the control activities of the outbreak was strengthened.
2.1.3 Technical support during emergencies

WHO in partnership with the Ministry of Health (MoH) Republic of South Sudan addressed the health emergency needs for returnees and the vulnerable population from Sudan. This was done by supporting the ministry of health to develop guidelines for the management and provision of health services in emergency settings and areas with high returnees, refugees and IDPS. These together with treatment guidelines were distributed to health partners involved in the management and provision of health services to the population affected. WHO also supported surge capacity and human resources for health in eleven counties that reported measles outbreaks by deploying health officers to work with the State MOH teams and as such technical assistance was also provided to the county health departments to develop work plans, micro plans and documentation of measles vaccinations.

In order to boost the immune profile of the community given the low immunization coverage of host community, refugees and returnees, WHO supported the coordination of expanded programme on immunization activities. This was done through mass measles campaigns in Upper Nile, Unity, Northern Bahr El Ghazal, Western Equatoria, Lakes, Eastern Equatoria, Central Equatoria and Jonglei states. In total 222,331, children between the ages of 0 month to five years were vaccinated for measles. In Yida, Renk and Maban, WHO in collaboration with other partners ensured that all new arrivals were given measles vaccine to avoid an emergence of measles outbreak. Other activities enhanced by WHO to strengthen access to health services among returnees and refugees included; support to mobile clinics in Jaac, Twic county, Nyamulel and Gogmuchar camps, Northern Bahr el Ghazal state. During this period, 70,179 people were reached with health service provision. Drugs were distributed to patients to support management of common illnesses. Other areas supported with drugs and other medical supplies were; refugee camps in Maban County and Central Equatoria State; and returnee sites in Mina, Abayok and Parueng. Life saving drugs was also given to Kuda returnee settlement in Terekeka County, Central Equatorial State.
2.1.3 Strengthening local capacities for response and emergency preparedness

In this reporting period, WHO supported the Ministry of Health, to conduct a series of training activities aimed at strengthening the capacity of the critical health work force involved in responding to emergencies. With support from USAID, ECHO, Common Humanitarian Fund and Spanish grants funds, WHO conducted 10 trainings in the six high risk emergency states. In four states, trainings of health workers and community opinion leaders on public health risks in emergencies were conducted. The trainings were conducted with the objective of imparting health workers with skills in emergency management to respond to emergencies in a timely manner. As a result, participants developed preparedness work plans and emergencies budgets to support disease outbreak and risk communication in their counties. Six trainings focused on the management of common illnesses, disease surveillance and integrated management of Childhood illnesses in concentrated populations.

In order to build resilient communities for the management of disasters and to strengthen emergency preparedness, health workers and community leader were also trained in management of public health risks in emergencies in Warrap state. A total of 258 health workers were trained in the areas of communication disease surveillance and communicable disease control. As a result the health workers capacity and skills in emergency response were enhanced.

2.1.4 Filling in critical gaps

Gap identification and filling in of critical gaps is one of the core functions of WHO in humanitarian emergencies. To minimize the response time and mitigate the effects of emergencies, the programme prepositioned adequate stocks of supplies across the 10 states of South Sudan. Twenty five (25) emergency health kits (4 Trauma Kits, 9 DD kits and 12 IEHK) were prepositioned and distributed to various states through the State Ministries of Health while 8 others were directly distributed to partners in the frontline states. The frontline states include; Jonglei, Upper Nile, Unity, Lakes, Northern Bahr el Ghazal and Warrap state. Eastern Equatoria State also received emergency kits given the fact that it boarders Jonglei state and received a case load of displaced form Pibor county through Kapeota South County. The kits supplied were very critical in the management of the common illnesses in among the displaced populations.

In Addition partners were backstopped with anti malaria and rapid diagnostic tests to carry out confirmation of epidemic prone diseases. Of these kits, over 8 were directly donated to frontline partners. A total of 84,983 people received treatment for common illnesses with support of WHO life saving drugs.

The program also backstopped health partner that reported drug rapture in their facilities with drugs and other medical
supplies. Those that received the drugs and other medical supplies include; Medair providing health services in Maban and Jiec, COSV in Ayod, IOM in Renk and Twic County, Healthnet TPO in Wau and Raja, IMC in Akobo, Batil and Raja, Merlin in Boma, NDHF in Walgak, Theso in Guit and Lunyaker, ACROSS in Lakes and Juba, PIN in Kuda, MSF in Pibor, Maban and Aweil, IRC in Aweil, and CMA in Longechuk.

WHO supported the State Ministry of Health to ensure that those injured in the crisis accessed life saving surgery. In order to ensure the patients are managed well, the organization donated Trauma kits and life saving drugs, that was used to treat 355 patients in Bor, Akobo, Boma and Gogrial East primary health care centre (PHCC).

### 2.1.6 Resource mobilization

Following the hostilities in Jonglei state and increased need of the displaced and the affected populations, WHO mobilized a total of $1,766,640 to support medical evacuations and provision of life saving surgery in Bor Hospital. The funds are expected to support procurement of 20 trauma kits and surgical equipment that will be used to manage an estimated 2,000 patients. Supplies will be strategically prepositioned in the hospitals of Bor, Pibor, Pochalla, Akobo, Walgak and Boma.

### 2.1.7 Challenges

1. Humanitarian access of the affected population is very limited in areas that need health service support thus greatly hindering health emergency response.
2. Limited infrastructure to support the humanitarian response hence making the delivery of emergency health supplies costly.
3. Ownership of the humanitarian and emergency responses by the State Ministry of Health wanting.
2.2 Health Cluster Coordination

The humanitarian situation continued to deteriorate as partners faced the ever increasing health needs to respond to the emergencies. The state of Jonglei continued to bear the brunt of the crisis where sporadic clashes left many either killed or wounded. The health cluster partners responded to the crisis through a host of interventions including management of trauma cases and referrals. Coordination was very vital in supporting the articulation of the humanitarian needs and devising response strategies with partners to ensure effective and efficient utilization of resources and timely interventions. Many partners also pulled out in some areas due to the insecurity in places like Pibor town and Boma.

The strategic objectives that guided health partners in this quarter were;

a) Maintaining the existing safety net by providing basic health packages and emergency referral services;
b) Strengthening emergency preparedness, including surgical interventions; and
c) Responding to health-related emergencies, including control the spread of communicable diseases.

2.2.1 Health cluster achievements

During this time, the health cluster conducted 3 health coordination meetings at the central level, with full representation of cluster partners and donors. During the meetings strategic issues on humanitarian situation and responses were discussed with guidance provided to partners. Similar coordination meetings were undertaken at state level where 20 meetings in total took place in the 10 states. For example, in Northern Bahr Ghazal, partners were guided to respond to the measles outbreak through mass vaccination campaigns and implementation of PHC services to new arrivals to Chalek and other IDP settlement areas.

The Health cluster participated in all the Inter-sectoral working group (ISWG) meetings with participation of all sectors in South Sudan. This forum is chaired by OCHA with all cluster coordinators and co coordinators as members present. Health inputs were made during discussions on the humanitarian situation, including development of contingency plans, and Jonglei response plans. Six ISWG meetings were held during the months of April to June.

A tool for monitoring the presence of partners in the humanitarian sphere was used regularly to map out who does what and where (3W matrix). This is updated on a quarterly basis to monitor their presence in the country.

Over 700 conflict related injuries were recorded and treated during the quarter with over 200 civilians medically evacuated to various facilities from different locations as indicated in the chart below.
Advocacy efforts were undertaken by the health cluster to strengthen support to service delivery and emergencies. The health cluster liaised with non cluster members (ICRC and MSF) to respond to the acute emergencies including management of persons wounded in the clashes and responded to outbreaks; advocated for partners to fill in gaps whenever required. The cluster requested MSF to fill the gap in Boma after Merlin pulled out; partners were also asked to fill in the gaps on vaccination campaigns against measles and meningitis. As a result many partners responded and supported the activity. Medair was requested to fill the gap of leading assessments of the Murle Internally displaced persons in Juba.

Through advocacy for the Central Emergency Response Fund, the health cluster strengthened the medical evacuation capacity by hiring 2 helicopters to support the process. These helicopters were placed in Bor and were run by UNHAS specifically for the Jonglei response.

In order to ensure that proper delivery of services for the communities in need, the health cluster supported health partners to clear no cost extension requests to Common Humanitarian Fund. These was needed by partners to enable them have more time to implement activities or change location due to insecurity in their areas of work. Key among the partners supported, were IMC, Care International and COSV.

To support partners with the midyear review of the consolidated appeal process needs and budgets. As a result of the exercise the total requirement for funding dropped from $84.6 million to about $75 million. The revised strategy and funding needs were presented to the advisory board for clearance and approval. The revised CAP is now available online.

A health cluster performance survey was conducted with the objective of ensuring efficient and effective health cluster coordination performance while implementing the core functions as stipulated in the Inter agency standing committee guidelines. These included; supporting service delivery; informing strategic decision of the HC/HCT; planning and strategy development; advocacy; monitoring and reporting; contingency planning and reporting; and accountability to affected population. From the preliminary findings the cluster scored highly in supporting service delivery, contingency planning and preparedness. The final report will be shared as soon as all partners’ inputs and comments are incorporated.

Regular updates on the humanitarian situation and health needs were provided to partners for guidance on areas of priority. This was through sharing of assessment reports, response reports and vaccination campaign reports. Emergency updates to partners with surge and surgical capacity ensured timely interventions especially following clashes in a number of locations in Jonglei and other affected states.
In order to strengthen health cluster coordination at the national and state levels, a Health Cluster Coordinator was recruited during this period. It is hoped that this will go a long way to strengthen the cluster coordination and support partners to respond to crisis effectively.

2.2.2 Challenges

- Unpredictable security situation with difficulties in access to certain locations by partners
- Road access and infrastructure remain a challenge
- Continuous population movement with ever changing population statistics
- Irregular and weak coordination in some of the states.

2.2.3 Way forward

- Continue advocacy at all levels with all stakeholders to improve access
- Encourage partners to return to program areas as the security situation improves or as access gets granted
- Revive production of health cluster bulletins
- Conduct training of state cluster coordinators and the public health officers on cluster coordination and response

2.3 Communicable Disease Surveillance and Response. (CSR)

2.2.1 Epidemic Preparedness and Response Coordination

To continue strengthening epidemic preparedness and response activities in the country particularly at the central level, WHO continued working with the central Ministry of Health to convene weekly Epidemic Preparedness and Response (EP&R) meetings. In this quarter, there was increased participation of health officers and health cluster partners. This meeting is a forum that brings together health officers and representatives from key cluster partners that are involved in epidemic preparedness and response activities to review the weekly surveillance data; discuss weekly alerts reported from across the country; and provide the necessary technical advice and support to surveillance teams and health partners on outbreak verification and response. In total 10 EPR meetings were held. In addition a number of emergency task forces meetings were convened this quarter at central and states level to coordinate specific outbreak or emergency responses including measles, hepatitis E, meningitis, Jonglei crisis. In states similar EPR committees or emergency task force were also held once a week or on bi-weekly basis.

2.3.2 Training and Capacity Building

Improving knowledge and skills among first line health care workers, surveillance officers, public health officers and other health managers is one of the key mandates of WHO Country office, South Sudan. In line with this, WHO supported a series of training or retraining activities for health workers and other health cadres to
upgrade their knowledge and skills to be able to participate in case management, laboratory diagnosis, reporting, investigations and respond to outbreaks or other health related emergencies. During this reporting period, a total of sixteen (16) different trainings were conducted across the country, namely;

a) Integrated Disease Surveillance Response (IDSR)

Twelve (12) trainings on integrated disease surveillance and response were supported in nine of the ten states of South Sudan (except Western Equatoria state). During this time a total of three hundred and sixty seven (367) health care workers from silent health facilities in the nine states were trained. The trainings aimed to reorient health workers to integrated disease surveillance system and provide new knowledge and skills needed to improve outbreak investigation, disease surveillance, reporting of early warning signals of impending outbreaks and help initiate an effective response in a timely manner. All trained participants received IDSR training package and technical guidelines for future reference;

One of the above trainings was ToT training organized by MoH-RSS and WHO in Juba, where four master trainers from the ten states were trained. The purpose of the IDSR training of trainers (ToT) was to roll out the newly revised Integrated Disease Surveillance Response training modules based on the training needs assessment (TNA) conducted in 2012. It also aimed at enhancing training skills of the trainers from the states to enable them effectively implement IDSR trainings at the lower level in their various counties.

b) Outbreak investigation and response trainings

One (1) outbreak investigation and response training for rapid response team was conducted during this reporting period in Renk County (Upper Nile state). This training targeted health care workers (Medical Officers, Clinical Officers, Nurses and Laboratory Technicians) and health managers (Surveillance Officers, County Health Officers, Public Health Officers etc) from five counties in Upper Nile state. A total of 40 health workers (including 9 females) participated in the training. The purpose of the rapid response team training was to enhance the capacity of the public health systems to detect, investigate and respond to disease outbreaks and/or unusual public health events at counties and local levels. It was also intended to improve participation of public health laboratory in the confirmation of outbreaks and strengthen integrated disease surveillance and response implementation in the country.

c) Laboratory In-service refresher Training

One (1) in-service refresher training on the basic and advanced laboratory diagnostic techniques for laboratory professionals from hospitals and primary health care centers in Central Equatoria state was conducted. In this training, 27 laboratory technologists, technicians and assistants were trained.
The aim of the laboratory in-service refresher training was to harmonize and strengthen the capacity of the laboratory personnel on basic and advanced laboratory diagnostic techniques for efficient and improved quality of laboratory service delivery offered in South Sudan. The participants were also given some reference materials.

d) Integrated Management of Childhood Illnesses Training

Three (3) trainings on integrated management of childhood illnesses were conducted for health workers in Bor (Jonglei), Wau (WBeG) and Yambio (WES). During which a total of 60 primary health care workers were trained. The overall objective of the integrated management of Childhood Illnesses training was to enhance knowledge and skills of health workers working in children clinics so as to reduce childhood mortality caused by malaria, pneumonia and dehydration due to diarrheal diseases.

2.3.3 Surveillance and Epidemic Response

a) Outbreaks Investigation

A total of one hundred and sixty-five (165) outbreak rumors/alerts were reported and verified by the state rapid response teams in the ten states during this quarter. More than 48% of all reported and investigated outbreak rumors were measles followed by acute flaccid paralysis (25%), malaria (6%), meningitis (5.4%), kala azar (4.2%), acute jaundice syndrome (3%), Guinea worm (3%), shigellosis (2.4%); and the remaining 3% being cholera reported from Northern Bahr el Ghazal and Jonglei states, Viral Hemorrhagic Fever (EHF), neonatal tetanus (NNT) and whooping cough. Of these alerts, only eight (8) measles outbreaks from Aweil Centre, Juba, Ayod, Maban, Longichuk, Pariang, Guit and Lapon counties, and one (1) meningococcal meningitis outbreak due to Neisseria meningitides sero group A in Malakal county were confirmed as true outbreak. All other alerts were classified as false alarms/alerts after verification and/or investigation. The state rapid response teams carried out all the verification and investigations of alerts/rumors on notification, and over 60% of all outbreak rumors were investigated within three (3) days of notification. About fourteen (14%) of the rumors were investigated after more than three (3) days of notification, this delay could partly be due to insecurity, inaccessibility and high fuel prices. WHO provided technical and financial support for all the investigations.

Most of the alerts or rumors were reported from health facilities; however community informers also reported some alerts, but this often lacked detailed information like the date of onset, location, number of affected patients, etc and this usually makes investigation difficult and it accounted for 25% of all rumors/alerts received. Nevertheless, the state rapid response team members made extra efforts to respond to all outbreak rumors on time with WHO providing technical and financial support to support the collection of additional information for the alerts.
Meningitis Outbreak: In week 16, Malakal County in Upper Nile state reported suspected meningitis cases and within two weeks, the meningitis alert and epidemic thresholds had exceeded although with no laboratory confirmation. With technical support from WHO and MSF, more cerebrospinal fluid (CSF) specimens were collected and tested using meningitis pastorex rapid test. In week 18, the first few meningitis cases were confirmed, and in total 14 CSF samples tested positive for Neisseria meningitides serogroup A. On the other hand, CSF specimens sent to AMREF reference laboratory for culture also yielded isolates of Neisseria meningitides serogroup A. In the same week the outbreak of meningitis due to Neisseria meningitides serogroup A in Malakal County was declared by the MoH-RSS. The State Ministry of Health together with WHO, UNICEF, MSF, Medair and others had implemented comprehensive meningitis outbreak response including enhanced surveillance, effective laboratory diagnosis and case management, community mobilization and vaccination using meningococcal A conjugate vaccine. The investigation and confirmation of the outbreak was very quick and the response plan implemented successfully.

The vaccination campaign lasted for ten (10) days and over 80% of the target population was vaccinated. At the end of the outbreak, the total cumulative number of cases was 141 and 7 related deaths.

Measles Outbreak: Eight counties of Aweil Centre, Juba, Ayod, Maban, Longichuk, Pariang, Guit and Lapon declared measles outbreak after clinical and laboratory confirmation during this reporting period. In the last three years, the number of measles cases reported from various communities or counties were higher than in the previous years, with each of the 10 states having been affected by the outbreak. Although follow up campaigns or outbreak response campaigns against measles were conducted in most states or counties in 2011 and 2012, eight new measles outbreaks were confirmed in the 2nd quarter of this year. Six of these outbreaks were confirmed in the first quarter of 2013. The majority of the affected age group were below five years of age, and the target age group for the vaccination campaign was up to five years. The state health authorities in collaboration with cluster partners implemented the measles vaccination campaign with financial and technical support having been provided by WHO.

b) Laboratory Specimen

During this reporting period a total of three hundred and ten (310) clinical specimens (273 were serum/blood, 9 of them stool and 28 of cerebral spinal fluid (CSF)) were collected and analyzed at reference laboratories in Juba (for measles), CDC-KEMRI (for VHFs e.g. AJS, Ebola, yellow fever) and AMREF-Nairobi (for cholera, shigellosis and meningitis). Of these blood specimens, fifty-five (55) tested positive for measles, five (5) tested positive for Rubella IgM and fifty-six (56) tested positive for hepatitis E virus. A total of one hundred and six (106) serum/blood specimens are pending in the various reference laboratories (Juba and CDC-KEMRI) for analysis. None of the 9 stool specimens cultured in AMREF reference laboratory indicated shigellosis or cholera. Twelve (12) of the twenty-eight (28) CSF specimens
c) Health Facility Reporting Performance

All the functional health facilities are required to submit weekly surveillance reports on 14 priority diseases (mostly outbreak prone diseases) and to immediately report to any suspected outbreaks in the county and/or state health authority. Timeliness and completeness are key indicators for the surveillance performance and are defined as the proportion of expected reports received on time (timeliness) and the proportion of the expected reports received (completeness).

As shown in figure 1, the proportion of health facilities that submitted complete weekly surveillance reports slightly increased during the second quarter as compared to the same project period in 2012 and 2011, except in week 19 when the proportion significantly dropped. The completeness rate increased to 67%, as compared to the same period in 2012 and 2011 where the completeness rate was at 54% and 48% respectively. The average timeliness rate during this reporting period was 42.3%. Nonetheless, 87% of priority sites (hospitals and Primary Health Care Centres) reported regularly during. The ongoing capacity building of health workers and support supervision continued to play a crucial role in the improvement of surveillance weekly reporting.

As seen in figure 2 below, Upper Nile, Warrap and Northern Bahr el Ghazal state (NBeG) states were the best performing states maintaining over 80% completeness rate of reporting, while Eastern Equatoria State and Central Equatoria State were the worst performing states during this quarter. Reporting performance by Western Equatoria state dropped significantly during this reporting period as compared to the same period in 2010 and 2012. Overall, the performance of health facilities from across the country improved considerable as compared to the same period in 2012 and 2011. (Refer to figure 1 and 2 for details).

Table 1: Laboratory Confirmed and Unconfirmed Laboratory Specimens by Disease in South Sudan (January-March 2013)

<table>
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<th>Disease</th>
<th>Confirmed</th>
<th>Unconfirmed</th>
<th>Pending</th>
<th>Total</th>
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<td>Suspected Cholera</td>
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<td>9</td>
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<tr>
<td>Suspected Shigellosis</td>
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<td></td>
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<tr>
<td>Meningitis</td>
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<td>0</td>
<td>26</td>
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<td>Other species</td>
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<td>0</td>
<td>10</td>
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<td>Measles</td>
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<td>Yellow Fever</td>
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<td><strong>310</strong></td>
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2.3.4 Disease Specific Surveillance Update

a) Acute Watery Diarrhea (AWD)

A total of 131,394 cases of AWD (Incidence rate of 1,590.63 per 100,000 populations) with 159 related deaths (CFR of 0.12%) were recorded across South Sudan between April-June 2013. The number of AWD cases recorded during this reporting period was higher as compared to those recorded in the same period in 2012 and 2011 (Incidence rate of 1,018 per 100,000 and CFR of 0.17% and Incidence rate of 603 per 100,000 and CFR of 0.12% respectively). Figure 3 shows the incidence rate of AWD cases per 100,000 populations reported across the country which remained relatively stable in most states with the exception of Upper Nile state followed by Unity state due to the large numbers of refugees living in these two states. Another possible reasons for the rise is the poor hygiene and sanitation among the vulnerable population compounded with the rainy seasons and flooding. With the rise in diarrheal patients in many health facilities, the surveillance team have advised health workers to collect more stool samples for further investigation, and disseminate health education materials to all state referral facilities.

Although there were some suspected cholera or shigella cases in Aweil, Maban, Yida and others locations, there were no confirmed cholera or shigella cases during this reporting period.

Acute Bloody Diarrhoea (ABD): A total of 36,163 cases of ABD (incidence rate of 437.8 per 100,000 populations) with 67 related deaths (CFR 0.19%) were reported in this period. Children below five years of age accounted for over 38% of all reported cases of ABD and about 88% of the related deaths. As seen in figure 4 below, the overall ABD incidence rate recorded across the country was slightly higher in this
quarter as compared to the same period of 2012 and 2011 (IR of 325.7; CFR of 0.55% and IR of 238.7; CFR of 0.12% respectively). Upper Nile state recorded the highest ABD incidence followed by Warrap and Lakes states. There was no confirmed dysentery (shigellosis) outbreak in any part of the country.

Figure 5 shows Warrap state reported having the highest incidence rate followed by Upper Nile, Central Equatoria State and Western Bahr el Ghazal state; while Jonglei state reported the lowest incidence rate during this reporting period.

c) Meningitis

A total of one hundred and seventy five (175) suspected meningitis cases (incidence rate of 2.12 per 100,000 populations) and 6 related deaths (CFR of 3.43%) were reported during this period across the county. Malakal County reported increased number of meningitis cases at the beginning of week 16 and crossed the epidemic threshold by week 18. Subsequently, the first Neisseria meningitides serogroup A outbreak was confirmed and formally declared by the MoH-RSS in Malakal County on May 2013. A quick and effective response was implemented by the health authority in collaboration with WHO, MSF, Medair and other health partners.

In Malakal County alone, a cumulative number of 146 cases with 5 related deaths due to meningitis were reported and confirmed. Over 50% of the suspected meningitis cases reported from the other

b) Malaria

A total 345,688 malaria cases (IR of 4,184.84 per 100,000 populations) and 320 related deaths (CFR of 0.09%) were reported across South Sudan during the 2nd quarter of 2013. Figure 5 shows that the overall incidence rate of malaria slightly increased in the second quarter (April-June) of 2013 as compared to the same period in 2011 (IR of 2,450.67 per 100,000 populations) and in 2012 (IR of 3,171.88 per 100,000 populations). Children below five years of age accounted for over 41% of all reported malaria cases, while the case fatality rate (CFR) recorded during this reporting period mostly occurred in children below 5 years of age (64% of total deaths). The majority of the malaria deaths were recorded from Central Equatoria (CES), Upper Nile, Jonglei and Eastern Equatoria states.
locations (except in Malakal County) were in children below five years of age. WHO and the Ministry of Health Republic of South Sudan (MoH-RSS) prepositioned laboratory supplies and drugs to high risk states, and conducted refresher trainings on meningitis surveillance, case management, and epidemic preparedness and response conducted.

The state surveillance team in Upper Nile played a crucial role in timely verification and confirmation of the meningitis outbreak in Malakal. This shows that the early warning surveillance system is very sensitive and timely.

d) Measles

A total of three hundred and sixty-five (365) suspected measles cases (incidence rate of 4.42 per 100,000 populations) and six (6) deaths (CFR of 1.64%) due to measles were reported across the country through weekly surveillance reports. Of these reported cases, over 77.8% were in children below 5 years of age, with almost 100% of the related deaths. Despite the increase number of measles cases recorded across the country with multiple measles outbreaks confirmed, the mortality rate associated with the current measles outbreaks was quite low due to improved early detection, case management and better nutritional status among children.

As seen in figure 6, Western Equatoria state recorded the highest incidence rate of suspected measles cases followed by Central Equatoria and Lakes states, while Warrap state recorded the lowest incidence rate of measles cases during this reporting quarter Surveillance officers and partners investigated all reported measles cases, and collected blood samples from suspected measles cases for analysis. All measles analyzes were done at Juba measles reference laboratories and turnaround time to complete the analysis to below 3 days. A total of 104 blood specimens were analyzed and 52% these specimens tested positive for measles IgM while 4% were positive for rubella IgM. As a result of these laboratory confirmations, eight measles outbreaks in eight different counties of Aweil Centre, Juba, Ayod, Maban, Longichuk, Pariang, Guit and Lapon were officially declared by the MoH-RSS and appropriate responses implemented by health authorities and health cluster partners. Measles outbreak has affected the "hard-to-reach" populations most with known low coverage among refugees and displaced people.

Measles can be quite serious and highly contagious. It remains one of the leading causes of vaccine-preventable death among children globally. Since the start of the first quarter, fourteen measles outbreaks were confirmed from different counties and responded with vaccination and other preventive measures. One of the main factors leading to the escalating numbers of the measles cases and the recurrent outbreaks is poor routine immunization activities across the county. Consequently, vaccination coverage for measles among young children is below the international standards. The last coverage survey finding indicates that the measles coverage in South Sudan is below 63%.

Health authorities and health cluster partners are concerned of the measles situation in the country and have put in place various preventive measures to control the spread of measles outbreak.
Surveillance was enhanced in all counties, and case management and surveillance skills among front-line health workers and surveillance offices improved through training and support supervision. Measles surveillance improved at facility and community level, and case based investigation system has been put in place. Awareness raising and sensitization campaigns were conducted by health authorities and partners to educate the community on prevention and mitigation of the spread of measles and other communicable diseases.

In the second quarter of this program, a total of two thousand one hundred and forty-six (2,146) suspected AJS cases and twenty-nine (29) related deaths (CFR of 1.7 %) were recorded across the ten states of South Sudan. Of these cases and deaths, more than 90% of them and approximately 100% of the deaths were recorded in Maban and Yida refugee camps, with the remaining 10% of the cases reported from other locations/states (host community in Maban, Unity, Central Equatoria State and Western Bahr el Ghazal state). Hepatitis E outbreaks in Maban and Yida refugee camps are still ongoing, and during this reporting period the incidence and case fatality rates of AJS/HEV cases and deaths in Maban refugee camp and Yida camp slightly decreased as compared to cases and deaths recorded in the first quarter of 2013 due to improved water and sanitation conditions in Batil, Jamam (now Kaya) and Gendrassa camps. Fewer cases were recorded in Batil as compared to the previous quarter, while the number of cases recorded from Doro, Yida, and Gendrassa slightly increased.

According to the information from the host community in Maban camps, many of the Hepatitis E patients do not visit health facilities, instead preferring to visit traditional healers. Refer figure 7 and 8 for the AJS/HEV epi-curve in Maban and Yida.

The Ministry of Health together with UNHCR, WHO and others partners have taken steps to contain the ongoing outbreak including increased water access in camps; increasing the number of latrines and hand washing facilities; decommissioning of filled up latrines; increased supervision and monitoring of water, sanitation, and hygiene activities;

e) Acute Jaundice Syndrome (AJS)

Acute Jaundice Syndrome (AJS) is one of the priority diseases included in the weekly reporting of integrated Disease Surveillance and Response (IDSR) surveillance system. One of the most common causes of acute jaundice syndrome is Hepatitis E Viruses (HEV), followed by dengue, yellow fever and others. South Sudan has experienced a recurrence of hepatitis E outbreaks in the past ten years. Some neighboring countries have also experienced a similar outbreak including Sudan and Uganda.
increased hygiene and sanitation messages in the community and schools; improved coordination of health agencies, partners and camp managers; and strengthened disease surveillance and case management across the camps and host communities.

- The rapidly evolving humanitarian context in South Sudan and the unpredictable population movements constituted major challenges to accurate and effective plan for project implementation, especially in high risk areas.

- Retention of qualified and highly trained health personnel became very challenging due to delayed salaries coupled with availability of highly paid employment opportunities with the UN, INGOs and other NGOs.

- Limited involvement of health authorities at the central level in monitoring and supervision of the ongoing disease surveillance activities at state or county levels.

- Lack of public health reference laboratory infrastructure and services at the central and state level.

- The ongoing crisis in Jonglei state has hampered surveillance activities in high risk counties, with most surveillance teams and health workers fleeing their location.

f) **Influenza Like Illnesses (ILI)**

A total of three (3) suspected cases of influenza like illnesses with zero death were reported from Akobo County (Jonglei state), 100% of the reported cases were in children below five years of age. No specimen was collected for laboratory confirmation.

2.3.5 **Challenges**

- The ongoing economic austerity combined with the high inflation rate has negatively affected the basic social services. State health authorities are lacking resources to support key health care services and other day to day operations. The high inflation rate and shortage of the local currency are also impacting the availability food, fuel and other essential commodities at all level.
2.4 Expanded Programme on Immunization/Polio Eradication Initiative

The objective of WHO Polio eradication initiative (PEI)/Expanded programme on immunization Program is to provide technical and financial support to the Ministry of Health/RSS Expanded Program on Immunization (EPI) thereby enabling the program reduce morbidity and mortality due to vaccine preventable diseases amongst children in South Sudan.

There is ongoing progress in improving routine immunization performance and the implementation of quality campaigns as evidenced by reduction in cases of zero report case of wild polio virus and a reduction in the outbreak of measles cases as seen in the weekly polio updates.

2.4.1 Routine Immunization (RI)

During this quarter, the planned targets for 2013 were sustaining 2012 DPT-3 coverage with a focus on measles control and reduction in vaccine preventable diseases mobility. However, attempts to reach programme targets were marred by some challenges. Key among them was; inaccessibility of hard to reach areas resulting from armed conflict, poor road networks and lack of funds to support routine immunization activities. Resource mobilization was a challenge as many donors who pledged financial support had not released funds. However, WHO recently secured funding for outreach activities which will be disbursed during the next quarter. Routine immunization performance dropped this reporting period due to lack of financial support for the outreach services.

2.4.2 Expanded Programme on Immunization meeting

As support for routine immunization program (EPI), WHO in collaboration with the Ministry of Health and other health partners organized an annual expanded programme on immunization review meeting. The objective of the meeting was to review EPI performance for 2012 while focusing on routine expanded programme on immunization; supplementary immunization activities; surveillance, consolidate preparation for the introduction of pentavalent vaccine and other new vaccines and discuss expanded programme on immunization priorities for 2013/2014. The 4 days meeting brought together all expanded programme on immunization stakeholders and actors including donors and NGOs. At the end of the meeting a communiqué was developed for the government of South Sudan.
2.4.3 Immunization campaigns

Since the beginning of 2013, WHO provided support to the Ministry of Health to conduct two rounds of polio national immunization days, four measles outbreak response campaigns in four states and two rounds of maternal and neonatal tetanus eradication campaigns. The first phase of the Maternal Neonatal Tetanus campaign focused on the greater Upper Nile states while the second phase focused on the equatorial region. The implementation of these campaigns were carried out through collaborative efforts of the Ministry of health and leading health partners, namely; WHO, UNICEF, USAID, UNFPA and NGOs.

2.4.4 Polio Immunization Days

During the quarter the second round of the polio national immunization days (NIDs) was conducted making a total of two rounds since the beginning of the year. The campaigns were conducted simultaneously in all the states with the exception of Pibor county in Jonglei due to insecurity. WHO provided over 950,000 USD as operational cost for the campaigns. As a result over 3.2 million children under the age of five were reached. WHO also provided technical support during the planning and implementation phases of the campaign. Pre-positioning of logistics, training of supervisors & monitors, social mobilization, support supervision, post campaign evaluation analysis and backhauling were also some areas in which WHO provided her support function thus filling the gap of the critical human resource component of the Ministry of Health. It’s worth mentioning that in the first two rounds of this year all states achieved less than 10% missed children thus reaching the global polio eradication initiative milestone.

2.4.5 Measles Based Surveillance

Measles case based surveillance operations have improved since their initiation in 2010 despite the current challenges of measles outbreaks. During the 2nd quarter of the year 2013, one hundred and twenty eight (128) cases were reported in the case base surveillance system, of these 121 samples, were collected 88 of them laboratory confirmed measles cases. In addition, there
were four (4) laboratory confirmed Rubella cases. Comparatively in the same period in 2012, 1,042 suspected cases were noted with 62 lab confirmed and one confirmed case of Rubella. A descriptive analysis of the cases reveal that over 80% of cases (number?) were children less than 5 years among whom 83% (number??) had never been vaccinated or were with unknown vaccination status.

Case based surveillance indicators for the period did not meet desired standards as shown in Table 1 below. The performance is a systemic challenge resulting from poor integration of measles case base surveillance with other surveillance activities such as Acute Flaccid Paralysis (AFP) coupled with poor adherence to the case based surveillance protocols. Sensitization of health workers and health partners including the INGOs was carried out and a joint report of measles and AFP cases emphasized to all states leadership and partners for adherence.

<table>
<thead>
<tr>
<th>FIGURE 1 MEASLES THEMATIC MAP FOR OUTBREAKS</th>
<th>target</th>
<th>actual Jan-Dec</th>
<th>actual Jan-June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidence: Achieving and maintaining a zero incidence of confirmed or</td>
<td>Zero</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>import related measles cases in the population, excluding cases confirmed as</td>
<td>reported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting Rate: At National and state levels the rate of 2 non-measles</td>
<td>≥2</td>
<td>1.1</td>
<td>0.85</td>
</tr>
<tr>
<td>febrile / rash illness (FRI) cases per 100,000 population should be considered</td>
<td></td>
<td></td>
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<tr>
<td>Minimum. These cases must have been tested negative for IgM in a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentinel collection and Laboratory Confirmation: Specimen adequate for</td>
<td></td>
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<tr>
<td>detection of measles IgM should be collected on at least 80% of suspected</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>measles cases in a sentinel laboratory, except in the denominator are</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cases that are epidemiologically linked to a laboratory confirmed case.</td>
<td>≥60%</td>
<td>13.9</td>
<td>24.5</td>
</tr>
<tr>
<td>Case Investigation: At least 80% of all reported suspected cases should have</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>had an adequate investigation within 48hrs of notification. The numerator is</td>
<td>≥80%</td>
<td>75.5</td>
<td>21.3</td>
</tr>
<tr>
<td>the number of suspected cases for which adequate investigation was carried</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>out within 48hrs of notification; and the denominator, the total number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of suspected cases</td>
<td>80%</td>
<td>27.8</td>
<td>14.9</td>
</tr>
</tbody>
</table>

2.4.6 Outbreak Response

The high build up of susceptible persons resulting from weak routine immunization systems where only 32% of health facilities provide fixed expanded programme on immunization services migration of returnees and internally displaced persons and insecurity and inaccessibility, resulted in persistent measles outbreaks despite recent follow-up campaigns in 2011 and 2012. During this period laboratory confirmed outbreaks were noted in 12 counties in the six states namely; Upper Nile, Central Equatoria, Western Equatoria, Eastern Equatoria, Lakes and Northern Bahr el Ghazal.

As a way of ensuring effective campaigns to reach the children, WHO has communicated concerns about the quality of campaigns and invented a new strategy by empowering States through the use of NGOs working in affected counties. WHO supported the outbreak immunization response by providing 227,477.60 SSP and technical assistance in developing micro-plans and coordinating activities at the national and state levels. In most instances children 6 – 59 mths were targeted except in Maban and Fangak where ages limits were extended to 15 years.

Available results from the response indicate that coverage for Yambio was at 54%), Longichuk at 100%, Maban at 100%, and Aweil East at 96.4%. The implementation of response is ongoing in the other counties.
2.4.7 Maternal Neonatal Tetanus Elimination Campaign

With the support of UNICEF, WHO and UNFPA the Ministry of Health has committed to eliminate maternal and neonatal tetanus from South Sudan by 2015. This will be done through phases of preventive campaigns in which tetanus toxoid vaccines will be administered to women of child bearing ages (14 - 49 years). The campaign will be implemented in phases between 2012 and 2014. The goal of the elimination campaign is to achieve 1 case per 1000 live births in every country.

During the quarter, WHO joined UNICEF, UNFPA and other partners to support the Ministry of Health to conduct the first round of the second phase of the maternal and neonatal tetanus campaign in Western Bahr el Ghazal, Northern Bahr el Ghazal, Warrap, Unity & Upper Nile states. Below are graphs showing results of the first round of phase-2 states & the overall results of the MNTE for both Phase 1 & 2 states.

2.4.8 AFP Surveillance

Since the beginning of the year a total of one hundred and seventy-seven (177) cases of acute flaccid paralysis (AFP) have been reported and investigated. Out of these 81 cases were reported during the quarter under review. As of week 25 only 8 of these cases were still pending laboratory investigations while 90% of the cases were discarded thus cumulating into an NPAFP rate of 4.31%.

2.4.9 Challenges

1. Restricted movement resulting in low and minimal supervision caused due to insecurity in some areas

2. Influx of refugees due to conflicts in South Kordofan and Blue Nile States (in the Republic of Sudan)

3. The rapid turnover of what? Staff?? still poses a challenge.

4. The escalating living costs lately posed a huge burden on the program due to the sky rocketing costs of fuel and transportation.

5. The persistent lack of both accountability and ownership of the program from the health officials at different levels especially at the state and county levels hinders the success of the program.
2.4.10 Way forward

- Continue quarterly and monthly monitoring of routine immunization activities /coverage at all levels.
- Enhance support supervision of health facilities personnel.
- Implement strategies for increasing routine immunization.
- Intensify support supervision in low performing counties.
- Support the MoH/RSS to conduct monthly outreach services as a way of scaling up RI performance/ Refocusing on outreach activities

2.5 Guinea Worm Eradication Programme

During this reporting period, South Sudan reported 68 cases between April and June 2013 compared to 328 cases over the same period in 2012. The cumulative total cases reported between January and June 2013 were 74 compared to 387 cases over the same period in 2012; representing an 81% guinea worm case reduction in 2013 compared to 64% in 2012. Of the 74 cases reported this year 53 of them (72%) of them were contained. This reduction is a major achievement towards the eradication guinea worm disease in South Sudan. The 68 cases were reported from four out of the 80 counties in South Sudan, namely: Kapoeta east, Kapoeta north, Pibor and Gogrial east. Eastern Equatoria state accounted for 86% of the 2013 cases. It should be noted that only 15 cases were reported outside of South Sudan in 2013 (Ethiopia 6, Chad 5 and Mali 4). The reduction in cases in South Sudan is attributed to improved surveillance, targeting of cattle camps population and the improved use of the guinea worm case containment centers. Some progress has also been made in the provision of safe drinking water. In this period, five new boreholes were drilled and 19 wells rehabilitated in endemic villages in Kapoeta east county, Eastern Equatoria State with support from the Rotary Foundation and implemented by the New Sudan Service and Supply (NSSS).
### 2.5.1 Capacity Building

WHO also supported key government officials to attend a meeting in Burkina Faso to participate in the Guinea Worm World Meeting. Those who attended the meeting from South Sudan included; Dr. Margaret Itto, The Minister of Health for Eastern Equatoria state, Dr. Samson Paul Baba, DG Community and Public health, H.E, Mr. Titos Loteam Lokwachuma, Commissioner, Eastern Equatorial state, Mr. Samuel Makoy Yibii, Director of the South Sudan Guinea worm Eradication Programme WEP and a representative from the WHO country office.

Currently there are four endemic countries for guinea worm disease in Africa, all of which reported a total of 542 cases in 2012, 97% of these having been reported from South Sudan (521).

In this reporting period, WHO also conducted training of health workers to strengthen their capacity in guinea worm disease surveillance. This was done by setting up community based surveillance structures in 9 priority counties as an extended arm of the Integrated Disease Surveillance and Response (IDSR) that links community based surveillance to the formal IDSR health facilities. The trainings were conducted in; Terekeka, Juba, Cueibet, Yirol, Nyioror, Uror, Ayod, Pibor, Akobo and Jur River County. A total of 546 volunteers and 33 payam supervisors were trained on guinea worm disease surveillance. WHO also supported Training of Trainers (TOT) workshop for 40 guinea worm program state coordinators, payam supervisors and surveillance officers. The trained TOTs are implementing a hybrid surveillance structure for guinea worm disease surveillance in the priority counties.

### 2.5.2 Challenges

Insecurity in Pibor, the only remaining county in Jonglei state continues to be a big threat in interrupting guinea worm disease transmission. The guinea worm team and other NGOs working in Buma were forced to evacuate the area which also saw their compound vandalized.

### 2.6 Human Immune Deficiency Virus (HIV)

#### 2.6.1 Blood Safety Services

This quarter was marked by major milestones for addressing blood safety in the country. WHO supported the Ministry of Health, Republic of South Sudan to organize a workshop to disseminate findings of a gap analysis report on blood transfusion services, develop roadmap for formulation of a National Blood Policy and 5-Year Strategic Plan for the national blood
service (NBTS). The workshop was attended to by 33 participants including 5 Directors General, medical officers, laboratory technologist and representatives of UNDP, CDC, Swiss Red Cross and WHO.

During the workshop, priority areas of action and definition of strategic objectives for the next 5 years were identified. The workshop was organized with the objectives of; development of the national blood transfusion policy and legislation, strengthening of human resource capacities for service delivery, development of sustainable funding mechanism for blood transfusion services, establishment of a national quality management system, strengthening of blood transfusion services infrastructure and equipment, development and implementation of strategies for the recruitment and retention of voluntary blood donors and promotion of the appropriate clinical use of blood and blood products. A technical working group with support of a WHO consultant was formed to develop the 5 year strategic plan.

2.6.2 Blood Donation Drive

As way of creating awareness on the importance of blood worldwide, WHO joined the rest of the world to celebrate World Blood Donor day. The event was organized by the Ministry of Health with support from World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC). The day serves to raise awareness of the need of safe blood and blood products and to thank voluntary unpaid blood donors for their life-saving gifts of blood.

Every year approximately 5,000 blood donations are collected from the 29 Hospitals across South Sudan which falls far short of the need in the country. Timely access to safe blood for those in greatest need such as pregnancy-related complications, severe childhood anemia and in surgical emergencies related to injuries is very difficult.

2.6.3 Capacity Building

Inadequate capacity by health care providers at facilities delivering HIV services in South Sudan has been identified as a critical bottleneck in scaling up quality provision of Anti Retrial Viral therapy. The Ministry of Health is committed to strengthening and building the human capacity to scale up antiretroviral therapy and move towards universal access.

During this quarter, the MoH with technical support from WHO organized Integrated Management of Adolescent and Adult Illness (IMAI) training. The training aimed at building the capacity of health care providers in the provision of basic HIV care including Antiretroviral therapy, strengthening health systems including
referral and adherence counseling, and follow up care in the scale up of universal access. During the training, concepts of task shifting, networking, integration and decentralizing HIV services were introduced. The Ministry of Health utilizes IMAI as a base to human capacity development for HIV care and treatment. Integrated Management of Adolescent and Adult Illness is an integrated package of technical tools including simplified clinical guidelines consistent with WHO recommendations and training materials for clinical teams on chronic HIV care, prevention, ART, patient monitoring and drug supply management.

This refresher training focused on the first batch of 41 service providers including medical doctors, clinical officers/ medical assistants, nurses, ART aide counselors, dispensers/ pharmacists, data clerks from 11 health facilities in 7 states.

2.7 Tuberculosis

During the quarter in focus, WHO distributed various TB information, education and communication (IEC) materials (500 posters and 2,000 leaflets) to 14 health facilities including TB management units in Central Equatoria State, to support and promote health education.

In collaboration with the National TB/Leprosy/Buruli Ulcer Control Program (NTLBP), the organization trained 30 health workers from Central Equatoria State on TB diagnosis and management, and TB/HIV collaborative activities. The training took place in Yei, from 24-28 June, 2013.

2.8 Health Systems Development

The health systems development team implements activities that contribute to the attainment of WHO strategic objectives 10 and 11. This report outlines major activities carried out between April to June 2013.

2.8.1 Donor Coordination and collaboration

WHO continued to participate in the Health Development Partners monthly meetings convened by the Joint Donor Team. During this period the Health Development Plans mainly dialogued on strategies for improving coordination of three primary health care programs funded by the health pooled fund, World Bank and USAID. It was agreed that a common oversight steering committee be established at the office of the Ministry of Health Director General for external coordination.

WHO, proactively participated in the monthly Health Sector Working Group (HSWG) meetings that are convened by the central Ministry of Health directorate of planning and donor coordination. During this period the health sector working group dialogued on the options for and agreed to establish a common framework to build capacity for operational planning at the county level, lead by the Ministry of Health Director General for planning.

WHO also in collaboration with the Ministry of Health conducted a two day workshop hosted by the honorable minister of health to dialogue on options for improving the overall health sector collaboration and the operationalization of the Paris principles of
AID effectiveness. The main recommendations of the meeting will be developed into a road map to strengthen coordination within the health sector.

2.8.2 Development of Policies, Strategies and reports

In order to support policies and strategies of the Ministry of Health, WHO in collaboration with partners supported the ministry of health to develop GAVI Health Systems Strengthening proposal. The organization, lead the presentation of the draft proposal during a peer review workshop organized by the EMRO office in Cairo. Comments from the workshop are being used to revise and finalize the proposal.

WHO continued with the process of developing the inaugural Country Cooperation Strategy (CCS) for South Sudan. In collaboration with and support from WHO EMRO and HQ, consultations were held with the national health authorities, development partners and WCO staff. The outcome of which were the development of the strategic priorities and implications for the WHO to effectively implement the CCS. Final compilation of the CCS document is underway.

The organization deployed a consultant to support the Ministry of Health develop hospital guidelines for county, state and teaching hospitals. This will provide a benchmark for the development of secondary and tertiary health services in South Sudan.

2.9 Ochocerciasis Control Programme

The African Programme for Onchocerciasis Control (APOC) continued to support the South Sudan Onchocerciasis Taskforce (SSOTF) in a bid to establish effective and self-sustainable community-directed ivermectin treatment (CDTI) throughout the onchocerciasis endemic areas. Onchocerciasis is endemic in 9 out of 10 states in South Sudan. The CDTI strategy relies on community participation for the distribution of ivermectin to the targeted population. Project Coordinating Officers, County OV Supervisors, Staffs from Front Line Health Facilities (FLHF) facilitate the CDTI process by organising communities to participate in CDTI activities. Community selected Community Drug Distributors (CDDs) who conduct community censuses, treat the community members with ivermectin and keep records of the households treated.

2.9.1 Preparation of the onchocerciasis control stakeholders meeting

During this reporting period, preparation of stakeholders’ meeting took place. The meeting is meant to be a consensus building meeting for different stakeholders in onchocerciasis control for the proposed roadmap document for onchocerciasis control in South Sudan.

A stakeholders meeting is planned to be held on 24 and 25 June 2013, aiming at building consensus from partners and commit funds to the South Sudan roadmap document.
2.9.2 Training of Trainers

The programme also made preparations for the upcoming training of trainers’ workshop. Training materials were prepared and participants and co-facilitators for the training identified and invited. The training is expected to take place in the third week of July targeting 10 project coordinators from the 10 states. The trained trainers are expected to cascade the training to the lower levels of the onchocerciasis control program.

2.9.3 Coordinating the receipt and dispatch of mectizan supply to states

WHO received the 2013 mectizan supply, these have been stored in a warehouse in Juba awaiting onward transportation to the different project sites. Upper Nile, Lakes, Western Equatoria, Central and Eastern Equatoria CDTI projects received their 2013 mectizan supplies. Those that have not yet received the 2013 supplies include; Jonglei, Warrap, Western Bahr el Ghazal and Northern Bahr el Ghazal, its however expected that these will be dispatched to the states in the next 2 – 3 weeks.

2.9.4 Technical support

In this reporting period, WHO provided technical support to the South Sudan Onchocerciasis taskforce (SSOTF) and some selected CDTI Projects. This was done by supporting the 2012 annual report writing due for submission to the Technical Consultative Committee and APOC Management on July 31st 2013. The projects are currently completing the final drafts of the 2012 reports in order to meet the set guidelines. The process of reviewing these reports for technical accuracy and correctness is going on.

The organization also conducted field visits to states to support the state and county level CDTI staff in planning and implementing CDTI activities. However the operation budget has now been approved and the implementation of field visit activities will take place in the following quarters.

2.9.5 Way forward

Support the states in commencement of the 2013 Mass Drug Administration (MDA) with mectizan for all the beneficiary communities. This will be done by ensuring that the mectizan is delivered to the beneficiary communities, conduct monitoring and supervision visits to the field to ensure that activities are implemented as planned.

Follow up with the different stakeholders on the recommendations and way forward for the re-launch of onchocerciasis activities in South Sudan that will have been agreed on during the stakeholders meeting.

Conduct field visits to provide technical support to staff involved in CDTI activities and monitor the progress of implementation of CDTI project activities.

2.10 Maternal and New-born Health

The World Health Organization with support from the Canadian International
Development Agency (CIDA) continued support to the improvement of the maternal and new-born Health in South Sudan. Through the project ‘Strengthening Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) in South Sudan,’ implementation of the CEmONC project was tolled out in 2011, this initially started in Bor Hospital in Jonglei, but has now included hospitals in 3 additional states. These are; Malakal Teaching Hospital in Upper Nile, Yambio State Hospital in Western Equatoria and Wau Teaching Hospital in Western Bahr el Ghazal. As a result of the severe shortage of Specialists, three Obstetricians were recruited at the beginning of this quarter and deployed to each of the above named states to join the 8 UN Voluntary Mid-wife trainers who were recruited during the previous quarter; to implement the projects activities.

Each team is composed of an Obstetrician and 2 mid-wife trainers whose main task is to train staff working in the maternity wards on prevention, early detection and management of common obstetric and neonatal emergencies. The teams are also expected to participate in outreach activities to dialogue with communities to identify and address barriers that delay access to and utilization of CEmONC services.

2.10.1 Achievements

During this reporting period, the WHO team for better functioning conducted a needs analysis in three hospitals for CEmONC service delivery and data was collected for further analysis. From the identification of the gaps, work-plans were then developed which is unique for each hospital.

On the job trainings were provided to nurses, midwives and medical and house officers in the following areas of management of labour and partograph, Post-partum care, post-operative care, and mentorship of medical officers in surgical skills in Wau hospitals while in Bor hospital on the job training was conducted with focus on detection of potential complications in labour, post operative management, postnatal care, neonatal care, and infection control and universal precautions.

Although the total deliveries remained constant throughout this quarter, the total CEmONC and antenatal admissions increased. Averages of 250 patients were admitted on a monthly basis during the 3 month. Complicated abortions remained to be one of the main reasons of admission and threat to maternal life.

WHO also supported the introduction of vacuum deliveries, manual vacuum aspiration and resuscitation of newborns by providing equipment in the labour ward for all the hospitals.

Outreach activities were conducted in the neighboring counties in all the hospitals where the WHO team is supporting. For example in the National midwifery school at Wau WHO assisted in examining antenatal patients at the school instead of the hospital to help students learn. Later Outreach activities in Odici PHCC in Odici payam, Jur River County were conducted along with ongoing community dialogue.
In Malakal, one medical officer and two interns are going through the mentorship process. One clinical officer, three general nurses and one midwife are undergoing the mentorship process. In Bor so far 6 Medical officers, 5 Community Mid-wives, 2 Certificate nurses, 4 Clinical Officers and 2 MCH Nurses have been trained, while 2 nurses have been trained in anesthesia.

WHO supported Bor hospital administration with guidelines on planning and holding meetings to address patient care issues and hospital administration. The monthly ward meetings initiated in the first quarter continued in to the 2nd quarter, during which time 3 meetings were held during this period. The objectives of the review meetings were for sharing of lessons and mapping a way for improvement.

### 2.10.2 Organizational management improvements

Protocols for common emergency obstetric cases were also developed and distributed at Malakal hospital during this period. For the first time an active maternal and perinatal mortality audit committee has been put in place at the hospital. Maternal death audits is an indicator of the status of women, their access to health care and the adequacy of the health service system to respond to the woman’s needs.

Weekly ward management meetings and clinical meetings are now established. In total ten meetings were held this reporting period. The labor room has been reorganized to manage at risk and emergency cases in a more orderly manner.

The registry books are being used regularly now to facilitate records and to observe where there are delays and gaps in the health delivery system and how it can be improved.

### 2.10.3 Outreaches

In this reporting period, support supervision and mentorship trips were made to surrounding primary health care centers and primary health care units. For example Focus group discussions are carried out in Jur River County, Odici PHCC in Odici payam in Wau.

In Malakal the International UN Volunteers conducted out reaches to Asosa, Malakia and Lwakat PHCUS. World Health Organization has managed to make these non functioning PHCUs into functioning ones with the help of IMA organization where deliveries, family planning, VCT and immunization are provided at all times. Constant supervision and mentoring of the midwives has paid rich dividends to the success of these centres.

Kiech Kon and Jikmier Primary Health Care Centers (PHCC) of Upper Nile were also visited and assessed. It was observed that these PHCCs need EmONC training, proper referral system for sick patients, medical supplies and on the job training.

In Bor State Hospital, the team went to Panyagou Primary Health care center which is one of health facilities in Jonglei. It is a level 2 facility in Kongor Payam in Twic East county. It was observed that the staff needed on the job training to be more effective and to provide better services. In
addition, community mobilization and health education was lacking.

Technical, operational and organizational capacity building was carried out during this quarter. In Yambio, during this time, 8 training sessions were conducted and extended to a total of 60 participants. On job training outreach activities were also conducted for World vision supported primary health care unit focused ANC. As a result four (4) primary health care unit staff were trained and updated on the ANC concept. Daily CEmONC related case activities like emergency operations and ward rounds are carried out.

2.10.4 Capacity building

In partnership with UNFPA, the WHO Malakal team participated in two major BEmOC trainings of frontline health workers in the state: 25 people were trained in Malakal in May, and another 20 trained in Maban in June.

The most important achievement is acquiring admissions for 20 Medical Officers from the 10 State Ministries for postgraduate training in Obstetrics and Gynecology to Kenya, Uganda, Tanzania, Ethiopia and Khartoum.

2.10.4 CHALLENGES

- Lack of qualified staff in the maternity ward. For example in Malakal there is no qualified anaesthesiologist; only one trained midwife, and the rest of the nurses are cadres that are not properly classified and are not properly trained in midwifery. Also now that WHO is sponsoring 20 medical officers to Kenya, Uganda, Tanzania and Ethiopia, there are hardly any medical officers left to train on the ground. There is a dire need of properly qualified and trained doctors and midwives.

- There is very little community awareness and education this is evidenced by the number of antenatal visits that pregnant women come for. It’s a challenge convincing women to return for subsequent antenatal visits and the deliveries taking place in institutions is still low. This requires a lot of effort, health education and work in the community to change the health
seeking behaviour of the communities to access quality medical care.

2.10.5 Way forward

- Construction work for the Maternity waiting homes for Yambio, Malakal Bor and Wau Hospitals.
- Intensive outreach activities in neighbouring counties of all state hospitals.
- Continued partnership with the State Ministries and the other partners and stakeholders
- Gradual hand over of the CEmONC activities to Bor Hospital management.

2.11 Neglected Tropical Diseases

WHO supports activities of Human African Trypanosomiasis (HAT) and Visceral Leishmaniasis (VL) diseases known to be neglected.

There are eight (8) treatment centers for HAT activities in South Sudan namely; Yei, Yambio, Lui, Juba Nimule, Tambura, Maridi and Kajo Keji Hospitals and eighteen (18) treatment centers for VL in South Sudan. Human African Trypanosomiasis mainly occurs in central, Eastern and Western Equatoria States where else VL is found in Eastern Equatoria, Unity, Upper Nile and Jongolei States of South Sudan.

During this quarter, a total of 262 cases; (210- 80.2% new case, 42-16% relapses and 10-3.8% PKDL. 1- 0.4% deaths and 8 - 3% defaulters) were reported as compared to the first quarter, where 608 cases were reported (508 -83.6% new cases, 82 – 13.5% relapses and 18 – 2.9% PKDL, there were 10 - 1.6% deaths and 11 – 1.8% defaulters). From January to June, 870 cases have been reported (718-82.5% new cases, 124-14.25% relapses and 28-3.2% PKDL. There were 11-1.3% defaulters and 19-2.2% deaths compared to the total number of cases; 3202 (2758 - 86.1% new cases, 289 -9% relapses and 155-4.8% and 130-2.5% defaulters and 77-1.5% deaths) reported as of June 30th 2012.

There is a generally decline in the number of cases in 2013 as compared cases reported in 2012 and 2011 however the trend is more or less the same.

A total of 1,099 VL suspects were screened using three testing techniques i.e, rK39 – 587, DAT – 362 and LNA – 150. Of the 1,099 suspected cases tested, 196 turned out positive (rK39 – 122, DAT- 27 and LNA 47) while 903 were negative (rK39 – 465, DAT- 335 and LNA - 103), Compared to 2398 people screened by the three techniques i.e. DAT- 609, rK39 –1,598 and LNA -191. Of the 2,398 suspects, 343 were positive (rK39-236, DAT – 55 and LNA-52) and 2,055suspects were negative, (rK39 –
236, DAT – 55 and LNA 52) in the first quarter

Since the start of the year, a total of 3,205 VL cases have been screened 502 having tested positive and 2,703 having tested negative. Refer to graph 2.

During this quarter, a total of 25 new cases (12- stage I and 13 stage II) were diagnosed in the 8 treatment centers namely; Yei, Maridi, Yambio, JTH, Kajo keji, Lui, Tambura and Nimule compared to 42 new cases (13 stage I and 29 stage II) new cases from the same treatment centers in the previous quarter. Refer to graph 3.

As of 30th June 2013, there were 67 new cases, 25 of them in stage I and 42 in stage II as compared to 158 new cases, 46 in stage I and 112 in stage II reported in first 6 months of 2012.

Screening of HAT was also conducted in the second quarter. A total of 6, 460 people were screened,383 were passively screened while 6,077 were actively screened in all the eight (8) HAT treatment facilities as compared to 13,876 people screened with 12,498 and 1373 active and passive respectively in the previous quarter.

2.11.1 Capacity building

During this reporting period, two trainings were conducted in Bentiu, Unity state and Juba, Central Equatorial state for Visceral Leishmaniasis (VL) Ambisome and Laboratory respectively. During the trainings, a total of 58 health workers were trained on 28 VL and 30 others trained on laboratory. The participants for VL trainings were Clinical Officers, Nurses, Laboratory personnel and Community Health Workers where else Participants for laboratory training were purely laboratory personnel.

2.11.2 HAT-VL Drugs and Supplies Distribution

WHO adopted a system of issuing Human African Trypanosomiasis - kalazar drugs twice in a year. This is done by getting the average consumption for the last six months and multiplied by six and this will give a total estimate for six months. In this quarter, partners who missed out on their consignment of drugs picked them up this reporting period.
2.11.3 Active screening

WHO-MOH have not conducted any active screening but supported HAT active screening done by MSF-H through provision of HAT drugs. The active screening was carried out in Tambura and Mundri Counties of Western Equatorial State. The activity started late first quarter and ended at the beginning of this quarter.

2.11.4 CHALLENGES

- Weak surveillance system hence delays of reports.
- Lack of qualified human resources at the facility level continues to be a challenge in most areas of South Sudan.
- There are few vehicles to facilitate all activities with in South Sudan WHO office, making it difficult to implement some activities.
- Limited health facilities (wards, drug storage etc).
- High rate of staff turn over

2.11.5 Way forward

- There is need for frequent support supervisory visits to the field by WHO and the Ministry of Health.
- Need for more involvement and engagement of state surveillance teams in the compiling of the weekly Epidemiological reports for both HAT and VL to ensure timely reporting of the diseases. WHO and the Ministry of Health need to conduct more hands on training for health workers to improve the quality of services and reporting system, hence strengthening surveillance.

- All NGOs and government health facilities should use the National (South Sudan) guidelines for HAT and VL especially the diagnosis and treatment protocols and the reporting tools.
- WHO to donate solar refrigerator to Koch Hospital so as to keep Ambisome vials and DAT samples.
- Need for the State Ministry of Health to take ownership of HAT-VL control activities at their states.
- Proper use of case definition for KA suspects to avoid over testing of non KA suspects.

2.12 Health Promotion and Prevention and, Advocacy and Communication

During this period, WHO continued providing technical and financial support to the Ministry of Health to conduct visits to two states in Warrap and Northern Bahr el Ghazal states to support the State Ministries of Health to strengthen health education and promotion structures at the state levels. The teams held discussions with the state health authorities and partners and as a result, the state health authorities in Northern Bahr el Ghazal state appointed an officer to take responsibility of health education and promotion activities at the state level.

Support was also provided to the Ministry of Health by participating and coordinating
with partners and the media to organize the World Blood Donor celebrations with the theme: “Give the gift of life, donate blood”. Advocacy and media awareness campaigns were conducted on radio and press release placed in newspapers, as a way of encouraging blood donation at Juba teaching hospital.

In addition, the CIDA programme was supported with to coordinate with the media to produce messages that encourage communities in Malakal, Yambio, Wau and Bor to visit health facilities to access Comprehensive Emergency Obstetric and Neonatal Care and Antenatal care services. Emphasis was made to encourage communities within the catchment areas of the hospital where WHO deployed gynecologists and obstetricians and UNV midwives to visit the hospital for deliveries and antenatal taking advantage of the professional team deployed at these health facilities.

3.0 Conclusion

WHO will continue with its commitments of supporting the Ministry of Health at the central, state and county levels in order to improve the health status of the people of South Sudan. And work closely with the Ministry of Health at the national and sub national levels to realize this goal.

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