ANNEX N1.

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Southern Sudan Maternal and Reproductive Health Rapid Assessment

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ACRONYMS

AAH	Action Africa for Health
AMREF	African Medical Research Foundation
ANC	Antenatal Care
BCC	Behavior Change Communications
BPHS	Basic Package of Health Services
CBO	Community Based Organization
CDC	Centers for Disease Control
CO	Clinical Officer
CPA	Comprehensive Peace Agreement
CPR	Contraceptive Prevalence Rate
CS	Child Spacing
CHW	Community Health Worker
CM	Community Midwife
DfID	Department for International Development
FBO	Faith Based Organization
FGM	Female Genital Mutilation
FP	Family Planning
GBV	Gender Based Violence
GOSS	Government of Southern Sudan
HBLSS	Home Based Life Saving Skills
LLITN	Long Lasting Insecticide Treated Net
MCH	Maternal Child Health
MCHW	Maternal Child Health Worker
MDTF	Multi Donor Trust Fund
MIS	Management Information System
MMR	Maternal Mortality Ratio
MOF	Ministry of Finance
MOH	Ministry of Health
MRH	Maternal and Reproductive Health
NGO	Non Governmental Organization
OFDA	Office for Disaster Assistance
PHCC	Primary Health Care Center
PNC	Postnatal Care
PPH	Postpartum Hemorrhage
PSI	Population Services International
RH	Reproductive Health
SBA	Skilled Birth Attendant
SHTP	Sudan Health Transformation Project
SP	Sulphadoxine-Pyrimethamine
STI	Sexually Transmitted Infection
SSudan	Southern Sudan
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
UN	United Nations
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VHC	Village Health Committee
VHW	Village Health Worker

Executive Summary

Following 50 years of war, with absent or crumbling infrastructure, flight of trained personnel, poor roads, transport and communications systems, and very low community awareness about healthly pregnancy and birth practices, pregnant women in Southern Sudan face staggering odds of death and disability. The lifetime risk of a woman dying in child birth is more than 150 times the chance of a woman dying in the US.

Because of the clear evidence that the loss of a mother has extraordinary repercussions on children and families, over the last two decades maternal health programs have emerged globally. Attention to maternal health not only affects individual women, but also brings invaluable gains to families and society as well, including:

- Decreases in not only maternal, but also newborn and child mortality
- Decreases health care costs
- Decreases drain on limited resources in the environment
- Healthy women who can engage in civil society to promote peace
- Improved productivity in agricultural sector
- Job creation in the health sector
- Options beyond repeated childbearing for women

With the dissemination of a recent household survey confirming the alarming number of women dying in childbirth, USAID/Sudan, with strong Ministry of Health (MOH)/Government of Southern Sudan (GOSS) support and participation, commissioned a Maternal and Reproductive Health (MRH) assessment. The team, comprised of members from the GOSS/MOH, USAID/Washington and USAID/Sudan, traveled for two weeks in Juba and Lakes, Warrap and Western Equatoria states to conduct the rapid MRH assessment with the assistance of the Sudan Health Transformation Project (SHTP) and non-USAID funded NGOs. Sites visited were not representative of USAID investment but gave the team an opportunity to view training capability and health services that were accessible in the rainy season.

The team found strong Ministry of Health leadership, visionary policies, as well as weak health systems with limited planning and budget capability or community participation. Services vary widely and are often substandard and either fragmented or unutilized. Many health workers had not been paid recently. Women and their families are guided by traditional practices, some of which are detrimental to achieving healthy pregnancy outcomes. A challenge will be to retain beneficial practices, while reducing those that are a threat to maternal health. Despite difficulties, communities and families strongly desire to improve maternal health during this time of peace.

The recommendations of the team outlined below describe key elements of a program that is designed to promote self reliance in delivering health services, emphasizing high-impact interventions to address the major causes of maternal death and produce rapid results in order to bolster confidence in public institutions within the context of the Comprehensive Peace Agreement.

RECOMMENDATIONS

- Set impact goals for the USAID program that are ambitious and set clear direction for implementation of life-saving health interventions.
- Galvanize action with partners in a 200 day program that can be implemented with current resources and partners.

Health systems

- Demonstrate a model county system for strategic planning, including budgeting, human resources, pharmaceuticals, health information, and supervision, in selected county systems (linking community, country, state and nation) essential for capacity building for development.
- Offer to GOSS technical assistance to encourage solutions to deployment and remuneration policies.
- Where possible and with technical assistance support as needed, work with OFDA to ensure OFDA-supported facilities conduct joint planning, joint supervision, county-wide training, county-coordinated logistics management, and implementation of harmonized health information systems.

Human resources

- Work closely with GOSS and NGOs to determine the appropriate role for community health workers and promote standardization and dissemination of the most effective community-base cadre model for eventual nation-wide coverage.
- Include TBAs in MCH preventive health service training to deter harmful traditional practices and ensure household receive effective high impact interventions, but do not build a program around training them to provide skilled care.
- Support GOSS and AMREF to coordinate the development and use of a standard manual to select and train village health committee members to develop a strong consistent force to change birth, maternal nutrition, child spacing and other key practices and norms in SSudan.
- Ensure that all training for each cadre is consistent with the GOSS national Human resources plan.

Service delivery

- Initiate a culturally sensitive, yet robust, child spacing/family planning program integrated within the maternal child health system oriented to helping families improve health of mothers and children.
- Strengthen quantity and quality of child spacing in the postnatal period, antenatal care, and birth services, including newborn care, in an integrated program through on the job training and technical assistance with emphasis on measurement of provision of high impact interventions in selected counties for immediate and visible results.

Beliefs and practices

- Use the HBLSS planned activities and commission a review of completed qualitative research including ethnographic and program MRH studies among selected tribes in SSudan to inform development of a formal but rapid research approach to identify harmful, neutral and helpful beliefs and practices related to family planning, pregnancy and birth in key tribal contexts in SSudan.
- Conduct community death audits in targeted communities to sensitize them and others to the role that communities can take in averting maternal death and disability.
- Fill the MRH "literacy gap" by designing and implementing a focused mobilization and BCC strategy for Southern Sudan, building on CPA principles for decentralization and collective participation of disadvantaged groups. Use a two pronged approach:
    - at the policy level – help shape a supportive multi-sectoral policy environment for promoting maternal health at GOSS central, state and county level to advocate for increased attention and funding for maternal health at the decentralized level; and
    - at the community level -- target different groups with messages that are culturally appropriate and impact on changes in behavior that can be measured.

In addition

- Support an MRH Advisor in the MOH to implement the new MRH protocols.
- Participate in the Inter-Agency Reproductive Health Working Group through active involvement of USAID and partners by bringing data and issues to each meeting and offering to carry out selected activities.
- Strategically link USAID health programs, including OFDA, with education, economic growth, and democracy programs through promotion of girls' education and empowerment activities to engage women in active participation in civil society.

When the model county system is functioning and quality services are being provided in the initial counties

- Phase in expansion of quantity and quality of child spacing, birth, antenatal care services and model health systems program in additional counties to demonstrate an approach to provision of quality services at scale.

INTRODUCTION AND BACKGROUND

Since independence in 1956, Southern Sudan (SSudan) has suffered from civil war with only a decade of troubled peace from 1972 to 1983. The civil war period, characterized by devastation of economic, political and social structures, left the health status of the Southern Sudanese people among the poorest globally. Since the mid-90s, non-governmental organizations (NGOs), faith-based organizations (FBOs), and multilateral/bilateral agencies offering humanitarian relief became the prime providers of health services. NGOs and FBOs continue to play the lead role in health service delivery; of the 30% of the population covered by health services 68% are provided by NGOs or FBOs.

With the signing of the comprehensive peace agreement (CPA) on January 9, 2005, the political climate in South Sudan is changing to enable the transformation of health services delivery from humanitarian relief to a more developmental approach -- focusing on development of systems, putting in place infrastructures, strategies and policies that are sustainable, while at the same time ensuring that basic health services are initiated and provided to the people of SSudan.

The onset of peace has created expectations for a return to normality, including the provision of health services. The Government of Southern Sudan (GOSS) is under significant pressure to improve health services and status and thereby make rapid and visible progress toward establishing legitimacy with the people of Southern Sudan. Since the maternal mortality ratio is extremely high, the GOSS leadership believes that good maternal and reproductive health services could radically reduce maternal and infant mortality that result from complications of pregnancy and childbirth. This includes women having the ability to make informed, voluntary choices about the number and timing of children. USAID/Juba, in partnership with GOSS/MOH, agreed on a USAID Maternal and Reproductive Health (MRH) Assessment to determine how USAID could assist to improve its support to maternal and reproductive health services to improve health impact. (See the MRH Scope of Work in the Annexes.)

OVERVIEW OF SOUTHERN SUDAN'S HEALTH STATUS AND SECTOR

The MRH Policy for Southern Sudan presents a full picture of the Sudan health sector. This report briefly summarizes the highlights, with the addition of new information where it has become available.

Health services in SSudan, weak at independence, were further deteriorated by decades of war, increasing morbidity and mortality to extremely high rates: maternal mortality ratio estimated at 2,037/100,000, infant mortality rate at 150/1,000, child mortality rate at 250/1,000 and a fertility rate ranging from 5.9 – 6.7. Diseases that are controlled elsewhere in the world and malnutrition are endemic in SSudan. Health service coverage is estimated at 30%.

The nutritional status of children and adults is extremely poor. Low birth weight is reported at 30 – 40% and exclusive breastfeeding rates are low. Only about 30% of the population use water from a protected source and only about 20% reported having received any hygiene/sanitation information.

From independence, FBOs supplemented poor or non-existent public health services. During the last 20 years of civil conflict, multilateral/bilateral donors and NGOs joined FBOs to fill the gap in service delivery. NGOs including FBOs continue to play the lead role in health service delivery; of the 30% of the population covered by health services 68% are provided by NGOs or FBOs. The delivery of health relief activities by over 40 NGOs has left the health system fragmented. Over the coming years, emergency relief funds supporting these NGOs services will phase out, creating another challenge for continuing sustainable health service delivery to the population.

Overall, the health systems, including human resources, planning and budgeting, pharmaceutical management, health information systems, and engagement of civil society, are very weak.

Although many constraints exist, the MOH has moved ahead quickly in developing its health policy, strategy, and a "Basic Package of Health Services for Southern Sudan" (BPHS). As stated in the Southern Sudan National Health Policy, the objective is to reduce mortality and morbidity through strategic approaches under the overall stewardship of the Ministry of Health that ensure:

- Improving the delivery of accessible, acceptable, affordable, sustainable, cost effective maternal and child health and nutrition programs;
- Enhancing and accelerating disease prevention and control programs;
- Strengthening the health system at all levels through adequate and fair financing, good governance and accessible health services;
- Developing a comprehensive approach to human resource development including planning, training and continuous education, and management of personnel; and
- Institutionalizing effective partnerships with other stakeholders through coordination and other collaborative mechanisms.

MATERNAL AND REPRODUCTIVE HEALTH OVERVIEW

SSudan MRH Indicators	
Maternal Mortality Ratio	2,037
Antenatal Care Coverage	16%
Skilled Birth Attendance	5%
Postnatal Care Coverage	not available
Contraceptive Prevalence Rate	<1%
Total Fertility Rate	5.9-6.7

Among the highest globally, Southern Sudan's maternal health statistics are alarming with 2,037 deaths for every 100,000 births recently reported in a household survey not yet published. This maternal mortality ratio, the chance of dying once pregnant, is higher than Afghanistan and Sierre Leone—estimated by WHO/UNICEF and UNFPA in 2000 to have the highest rates in the world. As evidenced by the very low percentage of births attended by a skilled birth attendant (SBA) at approximately 5%, for majority of the population, access to maternal and reproductive services is minimal and severely hindered by geography, financial barriers, poor quality of services or the lack of information needed to make informed decisions. With contraceptive prevalence (CPR) less than 1%, leaving total fertility rate (TFR) at 5.9 – 6.7, another powerful intervention in reducing maternal and child death by increasing spacing and reducing the number of births at high risk is also absent. Antenatal Care Coverage (ANC) could also improve maternal health, but at the current 16%, any significant impact is unattainable. For women with prolonged or obstructed labor, fistula resulting in urinary of fecal incontinence is a known problem; the overall burden of this problem in the population of childbearing girls/women has not been documented.

There is a particularly high burden of malaria, which can significantly adversely affect pregnancy outcome. Several studies suggest that resistance in SSudan is emerging to both chloroquine and sulphadoxine-pyrimethamine (SP). Use of insecticide treated bed nets and intermittent presumptive treatment for pregnant women is very low.

There is growing information on STI prevalence. In ANC clinics at 11 sites located in towns in SSudan, HIV prevalence of 3.7% and syphilis of 10.9% with wide variation by site has been reported by the Centers for Disease Control (CDC). These infection rates represent an enormous risk for the mother and her fetus/newborn.

Little is known about malnutrition in SSudanese women. In child populations, anemia and vitamin A and iodine deficiencies have been documented in SSudan and they are likely to affect a proportion of the women of childbearing age, thus jeopardizing positive pregnancy outcome.

Early marriage, resulting in pregnancies before physical maturity that put girls at risk. UNFPA has undertaken in depth assessments throughout SSudan highlighting the issues and challenges of adolescent reproductive health and urging more attention to the next generation of Sudanese women. In addition, gender based violence (GBV) is widespread in Southern Sudan; female genital mutilation (FGM) is not known to be a major problem.

The MOH MRH Policy describes a comprehensive maternal and reproductive health package with a scope to address the direct service delivery needs, as well as the root causes of the poor maternal and reproductive health conditions in SSudan. The MOH vision for improved health for women and children in SSudan is robust and recognizes the challenges.

USAID'S CURRENT MATERNAL AND REPRODUCTIVE HEALTH ACTIVITIES

Within the mix of available services, USAID, through OFDA's emergency health services, has provided a significant share of maternal health services in SSudan. (See Map of USAID Sites, Annex B.) USAID and OFDA will work with GOSS to identify how these emergency activities will transition to support MOH's desire to strengthen the delivery of basic health services.

In 2004, as the first country to provide bilateral health interventions (beyond emergency relief), USAID began its long term health development effort through the Sudan Health Transformation Project (SHTP). Through support to NGOs and direct technical assistance, SHTP supports six counties (and will eventually support an additional 6 counties and 3 urban areas within the Mission's Fragile States Strategy) with high impact, primarily health services. (See Map of Sites, Annex B.) In 2006, USAID supported the Extending Service Delivery Program to develop FP/RH technical guidelines for service delivery based on GOSS national maternal and reproductive health policy. USAID is also supporting SHTP to provide technical support to Ministry of Health on policy development and build the capacity of FP/RH health workers. USAID participates in the Inter-Agency Reproductive Health Working Group, lead by GOSS, with technical assistance from UNPFA, which supports and coordinates an ongoing process to develop national maternal and reproductive health policy and implementation guidelines and protocols.

With FY 2007 resources, USAID plans to strengthen focus on maternal health and a number of potential activities are outlined in the FY 07 Operation Plan, including antenatal care and safe delivery, treatment of serious complications of pregnancy and childbirth, stronger family planning programming, training of health care workers/managers, policy development, treatment of STIs, nutrition improvement, and strengthening systems of referral, quality assurance and community behaviors. The MRH Rapid Assessment is designed to assist the USAID Mission to determine which activities present the best opportunities within the GOSS MRH Policy for short and long term success.

DONOR/PARTNER MATERNAL AND REPRODUCTIVE HEALTH ACTIVITY

Soon after the CPA was signed, a Multi Donor Trust Fund (MDTF) was established for all the sectors (managed by the World Bank) with every two dollars of GOSS funding matched by one dollar of donor funds. In health, MDTF funding is designated to increase access to primary and secondary health care, including maternal and child health. In the ten states with these funds, GOSS is contracting with lead NGOs to work with the State MOHs to provide and manage primary health care services. Unfortunately, there are challenges in ensuring GOSS counterpart funding for the MDTF and subsequent contracting actions as planned. Changes in the MOH/donor counterpart ratio are planned to increase donor funding in supporting the MDTF.

Emergency obstetrics is the main medical focus of the UN Population Fund (UNFPA). In addition, UNFPA provides most of the contraceptives to the public sector (although

GOSS has included FP commodities in their annual budget) and also supports a fistula repair training program, population advocacy and emergency obstetric care at three state hospitals. In addition, UNFPA conducted MRH assessments in 10 states to highlight the issues confronting youth in SSudan.

DfID provides support for PSI to socially market bednets for women and children.

The team did not have the opportunity to see or discuss private sector maternal and reproductive health services

KEY FINDINGS

HEALTH POLICY FRAMEWORK

The GOSS/MOH has been made impressive progress in generating a range of policies for setting the health policy framework for primary health care, including maternal and child health services for SSudan. The framework, which comprises 9 key policy inputs is progressive and represents the state of the art thinking in programming in post conflict settings. The framework captures key policies which have been developed over the past several years. They include:

- the Comprehensive Peace Agreement (2005)[1] to accelerate development to bridge the gaps across the regions;
- the 2005 Joint World Bank UN Assessment Mission framework for Sustained Peace, Development and Poverty Eradication (2005);
- the Interim Constitution of Southern Sudan (2005);
- the Health Policy of the New Sudan (1998);
- Health Sector Recovery Strategy (2004);
- the Basic Package of Health Services (2005) which spells out structure and function of services at the five levels;
- the Interim Health Policy (2006-2011); and
- the GOSS/MDTF South Sudan Umbrella Program for Health System Development.

These GOSS policies flow from and complement the ICPD Global Program of Action (1994) and Millennium Development Goals.

The overall Health Policy is well written and comprehensive and lays out the basic mission statement, values, and principles for implementing primary health care in SSudan as transition from war to peace in a post-conflict environment. This policy was developed through a consultative process with key stakeholders, international agencies, local partners and the diaspora. A health policy workshop was held in January 2007

[1] Signed January 9, 2005, all parties to the Comprehensive Peace Agreement expressed commitment to a democratic system of governance founded on the values of justice; democracy; good governance; respect for fundamental human rights and freedoms of the individual; and mutual understanding of tolerance and diversity within Sudan as a whole. The CPA provides for an interim period of 6 years at the end of which there will be an internationally monitored referendum to vote for either the unity of Sudan or for the secession of Southern Sudan.

with senior representatives from all 10 states to review and provide feedback on the draft policy.

With technical assistance from USAID, GOSS has developed FP guidelines and protocols for strengthening provider skills in FP/RH service delivery. A copy of the guidelines was secured by the team before departure and appears consistent with the MOH MRH policy.

MRH Policy Highlights

Within the context of the CPA, the Ministry of Health recognizes the importance of providing a comprehensive MRH package in order to address the poor MRH conditions in SSudan. As a result, with assistance from USAID, a Draft Maternal & Reproductive Health Policy (November, 2006) was developed. Although the policy is still in draft, it was developed through a highly collaborative and participatory process and is comprehensive in laying out the policy principles and imperatives for supporting MRH in SSudan. It focuses on strategic action for improving management of human resources, infrastructure, equipment, MRH information systems, research and scaling up proven interventions for making safe motherhood and neonatal health a reality in Southern Sudan. The policy promotes a “bottom approach” with targeted interventions and resource allocation shifting to meet the unmet needs of the most disadvantaged segments of the population. These groups include MRH services to women, youth, adolescents, returnees, refugees, pastoralists and minority communities by promoting RH literacy. GOSS intends to collaborate with Ministry of Education and Youth, Culture and Sports to promote dialogue on sensitive RH issues to address those at risk groups. The policy calls for building capacity for decentralized planning for MRH at all levels to: reduce disparities in services; strengthen providers’ skills in the formal, informal or traditional sector; financing; strengthen the role of NGOs and the private sector; improve GOSS regulatory role; and streamline the referral system.

HEALTH SYSTEMS ENVIRONMENT AND CAPACITY

Management Systems: State level

As described in the National Health Policy, the State level is responsible for the overall management of county health services. Specifically, this task includes monitoring, evaluating, and auditing contracts with NGO health providers; management of public providers; resource allocation; strategic planning; and coordination among different actors within the health system.

During our interviews, Warrap State officials cited a lack of critical resources needed to accomplish their roles, including basic skills in financial management and bookkeeping, auditing and accounting, planning and administration. In our interviews, the dearth in skilled staff was due to limited and irregular finances flowing from the Central level for salary support. State health management committees are intended to form the backbone of planning, monitoring, and evaluation of State health activities; however we found that most States do not have functional committees that meet on a regular basis.

Management Systems: County level
Counties, being the closest unit to the health facilities and to the communities, are responsible for the vital role of supervising, monitoring, and guiding health service delivery. They also serve as the main vehicle to identify local needs, both at the facility and community level, to feed into the strategic planning process at the State level. Counties are to serve as the main implementing arm of the States and will be critical in the day-to-day management of service delivery contracts at the facility level.

The team's visit to Miridi county, Tonj county, and Rumbek county revealed that county administrations receive limited to no support by State administrations. In some cases, such as Miridi County, NGOs have supported the county level administration, offering staff, equipment, and technical support. In Rumbek, where no NGO support for counties exists, the Lakes State supports the salary of one county official to oversee 3 counties, but does not offer any administrative support. Thus, the Rumbek county official does not have office space, supplies, communications infrastructure, or transport for conducting supervision.

Management Systems: Village Health Committees
Community ownership of health care has been a part of the traditional structure of the SSudan health system, even during times of war. At the payam and boma level, village health committees (VHCs) usually made up of community members, health facility representatives, and other stakeholders, often exist to provide voice and input into the functioning of primary health care units and centers. These teams can serve as a critical force in ensuring that health facilities are providing high-quality services that serve the needs of the local community. They can serve as a powerful voice against corrupt practices, inappropriate resource allocation, lack of commodities, poor treatment by health workers, and overall poor quality of care. For example, if health facilities are routinely stocking out of drugs, are not regularly immunizing children, or are charging informal fees for immunizations and other PHC services, community health teams can directly address these issues, as well as inform the county level.

So far, the selection and training of health committees is not standardized; each NGO has their own way of selecting and training health committees. Our interviews with NGOs and health facilities reveal that community health teams are not operating in a consistent manner across SSudan. In some areas, they are strong and active, particularly where NGOs are supportive of the committees. For instance, in Miridi, village health committees meet on a regular basis, vote on priorities, and communicate with county officials. In one instance, the VHC of a health center was frustrated by the lack of drugs, salaries for community health workers, and basic commodities, and voted to impose user fees for certain drugs. These revenues were then used to pay community health workers and procure basic commodities. Other health centers in the area also proposed the same idea, but their VHCs voted against the proposition. Thus, the VHCs were observed to be an important mechanism for ensuring civil society participation in the health sector.

Aside from providing management support, the VHCs we encountered in Miridi were

also actively involved in promoting health messages to the community. They reported that they identify pregnant women and advise them to obtain ANC and skilled delivery. In other areas, VHCs meet on an ad hoc basis. And still in other areas, they are non-existent. Though the development and strengthening of these teams is an important part of the Basic Package of Health Services Strategy, there is no national strategy to address this issue.

Strategic Planning

Strategic planning is a core management function at all levels of the government. At the State level, we find that there is little capacity for strategic planning. The Warrap State administration did not have a designated office for strategic planning; and its staff had limited strategic planning experience. The main reason cited by Warrap State was the lack of salary support in the financial transfers from the central level, as well as difficulty in finding qualified staff to fill planning roles.

County levels, being the closest administration to the communities, must be able to feed information from community health teams to the State level and participate in joint planning exercises with the State. However, strategic planning capacity at the county level is even more limited than at the State level. Again, the lack of capacity at the county level fundamentally stems from the limited to non-existent budget for salary staff, as well as the difficulty in recruiting qualified staff.

Health Information Systems

The assessment team found that the health information system in SSudan is weak and extremely fragmented. NGOs, supplying or supporting the main service providers, do not have a standardized method for collecting health information. In the NGO-run health facilities visited by the team, information was rarely passed upwards to the county or state level. Some NGOs visited cited a reluctance to do so, explaining that they do not report to the government. Others explained that the county had never asked for health information.

Not surprisingly, the States do not obtain aggregate reports of health information. This represents a critical gap in the SSudan health system – States and Counties must have health information in order to plan, budget, manage, and monitor health services.

Pharmaceutical Supplies and Equipment

Upon formation of the MOH, pharmaceutical management became one of the priority areas for GOSS and the MOH completed a National Pharmaceutical Policy in 2005. That said, many components of this policy have not yet been implemented. Our field visits reveal a highly fragmented system in which facilities are obtaining pharmaceuticals from a variety of sources. Forecasting and strategic planning for essential drugs was not evident in any of our field visits. Rather, facilities rely on NGOs to provide them with drugs when they run out. The team encountered stock-outs of key essential drugs in almost all facilities visited.

With respect to key drugs for maternal health, there was reported reliance on ergometrine, rather than oxytocin, for postpartum hemorrhage prevention because supplies of oxytocin were insufficient for both prevention and treatment. When asked, stockouts of magnesium sulfate or antibiotics were not reported to be lacking. However, with very small caseloads, supply of these key drugs could easily be exhausted if use of services increase substantially. Many services visited reportedly having UNFPA kits available. Unfortunately, at one site, despite the clear need, health personnel had been told not to open the kits yet.

Budgeting

The budgeting process for health is intended to be a bottom-up system, in which counties feed their budgetary needs to States, and States in turn feed their aggregate needs to the MOH. The MOH is then to advise the Ministry of Finance (MOF) on total health sector needs and negotiate a final budget. Once the budget is finalized, the MOH sends a request to the MOF to transfer budget allocations to each State. Payments are meant to be made on a monthly basis, but the timing is directly dependant on oil revenue transfers from Khartoum.

In practice, much of the financial system is not functional yet, since State Ministers were selected less than one year ago. In terms of bottom-up budgeting, our interviews reveal that States assess their needs without consulting their counties. Moreover, it is unclear as to how exactly States determined their budgetary needs. In our interviews, the Warrap State reported that they never submitted their budgets to the MOH. They cited the lack of qualified budget personnel, lack of information on county needs, and lack of overall health information. In reviewing budget documents, the team found that budget allocated by the MOH to Warrap State was used exclusively for salaries. In addition, banking facilities, infrastructure and routine banking functions are not readily available throughout the country, especially at the state and county levels.

User Fees

GOSS has declared that basic health and emergency services should be provided free of charge to all SSudanese citizens. This declaration applies to all public facilities as well as NGO providers. However, our interviews with State officials and NGO representatives indicate that out-of-pocket expenses are commonplace. At public facilities, the lack of recurrent cost budget forces providers to charge for commodities and pharmaceutical products. Often patients are given a list of products to purchase in the private sector. The team did not find evidence of informal fees.

In Maridi, the county hospital instituted consultation fees, but it appears that the community did not like this and they are not regularly paid. In the health center in Bar Orlu, patients were charged 500 Ugandan Shillings for drugs, but exemptions were given for pregnant women, children under five, and the elderly. Our interviews reveal that there is no consistent policy by which NGOs are operating. In Maridi, the village health committees were instrumental in instituting policies and levels of user fees, as well as reporting discontent with the fees

HUMAN RESOURCES

Across the health sector, the lack of qualified human resources creates the greatest limitation for the expansion of health services in Southern Sudan. With the current estimates of population at ten million (2005), there is less than one health worker (of any cadre) per thousand population, with the majority of health staff concentrated in the three largest cities – Juba, Wau and Malakal.

Health staff availability, training, quality, distribution and remuneration are issues that the MOH considers their top priority. The MOH, with AMREF and USAID/Capacity Project support, is currently developing a Human Resource Plan to outline the human resources required for basic service delivery expansion, developing and harmonizing training to upgrade skills; and allocating new and (reallocating) existing personnel to the appropriate positions. With few resources (financial and technical), this challenge is enormous. Government staff is often unpaid; only NGO health workers receive consistent support; and education, training and management capability is weak.

Training

During the years of war, health service and training infrastructure deteriorated dramatically; health professionals left the country, were displaced, or absorbed into the military. Emergency relief NGOs filled the gap by hiring/training health staff and recruiting health professionals from other countries (particularly Kenya and Uganda). Since delivery services were limited to TBAs (or no services), a front-line maternal health cadre, the Maternal Community Health Worker (MCHW), was created (and trained for nine months). The MCHW was more skilled and could work with TBAs to attend deliveries and provide maternal health services. Another front-line worker, Community Health Workers (CHWs), a cadre in existence since the 1970s, also serve rural communities with curative and educational outreach services, including women/children's health. In partnership with the government, AMREF has trained CHWs in SSudan since 1976. However, when the war intensified in 1993, it became dangerous for AMREF expatriate staff to remain in the country, hence a local NGO Action Africa for Health (AAH) was created to resume CHW training. AAH continues to train CHWs up to today.

The MOH plans to increase the number of health care workers by 25% by 2011 and is moving to train high, middle and lower-level skilled personnel to improve maternal and reproductive health within the health system. The Maternal and Reproductive Health Policy outlines the MOH plan to establish a national Medical Training College for middle level cadres with satellite colleges located at every State Hospital - similar to the Kenya Medical Training College Model. This plan also includes scholarship programs, targeting both short- and long-term training, and a training program for the traditional or informal sector health care providers. Once the CPA was signed and donors and the government pooled resources into the Multi-Donor Trust Fund (MDTF), GOSS contracted with AMREF to strengthen and centralize training. AMREF, with GOSS, SHTP/USAID and other partner support, rapidly developed the curricula for key health

cadres. AMREF also renovated and equipped the three national training centers in Miridi, Lui and Yei.

In April 2008, the pilot Community Midwifery (CM) training program (18 months) will graduate the first 44 CMs from the three regional national training centers. CMs have a post -primary school education, are selected by their communities, and interviewed by a panel of professionals -- GOSS, AMREF, training tutors -- to ensure candidates are qualified. GOSS's focus is equitable health staff coverage between each State and hard-to-reach areas of the country. The agreement with communities is that CMs will return to their home areas to service rural populations. In October 2007, another sixty CMs were selected to begin training this year. Community Midwives (CMs) will incrementally replace MCHWs to provide maternal health/delivery services. Ultimately, the CM training program will transform into a post-basic training program, targeting those already trained as nurses, producing skilled attendants. However, the current recruitment of 60 women per year for CM training (not all of whom complete training) will not result in attaining widespread access to skilled attendance at birth in the foreseeable future.

From interviews with AMREF's Deputy Director (at the National Training Institute/Miridi) and health worker trainees, many students (nursing, midwifery, and clinical officer) have higher ambition than providing health services in rural areas or hospitals. In fact, the vast majority in one class of nursing students visited do not plan to practice nursing but use the credential a stepping stone. The current "career ladder" may have the short term result of creating a revolving door so that a limited number of nursing and midwifery graduates actually use their new skills.

Staff Recruitment

GOSS plans to recruit different cadres of health staff from within and/or outside SSudan to fill in the massive gap identified in accordance with the basic establishment standards in the BPHS. NGOs are strongly encouraged to hire Sudanese where possible or train Sudanese to take on future health positions. The recruitment plan is to target skilled reproductive health workers, namely obstetricians/gynecologist, skilled medical officers, nurse midwives, skilled clinical officers/medical assistants, and skilled enrolled/certificate nurses. However, with the reduction in expected resources in MDTF, it will be difficult to stabilize staff levels within the interim period as planned by the MOH.

Deployment

The Ministry of Health recognizes that ensuring the deployment and retention of staff especially in the rural areas where the majority of the population live is an immense a challenge. The MOH has prioritized the deployment of newly trained staff to under served states and counties. The plan is to classify hardship areas with a view to developing incentive and benefits structure. Although financing for deployment is much less then expected, the MOH Human Resource Development Plan will include clear staffing norms including allocations, postings, transfers and discipline to form the basis for future health sector personnel policy towards an effective, efficient and responsive health service system. Using staffing norms, policies will promote a proper ratio

amongst the various cadres to patients. In this regard, the personnel establishment and cadres will be rationalized as matter of priority and immediate attention will be given to the harmonization of SPLM/NGO/old Sudan staffing norms and classifications.

Remuneration

With a range of NGOs as the primary employers of health staff, compensation packages are insufficient and staff payment is unpredictable and, in some cases, non-existent. Although for some organizations health worker compensation is small, for the most part, NGOs compensate workers at a level unaffordable by the MOH or bilateral donors. Additionally, NGOs provide a range of non-financial incentives, from professional development (e.g. training, housing, team building) to retain workers. Currently, the MOH and donors are not positioned to assume the NGO health care programs at the levels they are currently funded. Since support for relief NGOs is phasing out, in the future this will be a serious issue affecting all services, including MRH services.

Remunerating health staff is a primary concern. The overall compensation package is weak and staff payment is unpredictable or nonexistent. During the team's visit, government health staff had not been paid since April and there was a high degree of discontent. At a meeting with approximately 60 staff at Maridi Hospital, health workers (some supported by NGOs and others hopeful that they may get on a payroll) described frustration, need to earn a livelihood, and concern that patients will be hurt from substandard care because of low staffing levels.

COMMUNITY MOBILIZATION

During the visits, group discussions in each of the rural communities visited revealed that there is huge need to involve the community in maternal health and reproductive health care services in general. In almost all of the areas visited (Tonj South, Wulu, Rachong, and Bar Orlu), there was limited evidence of strong and well coordinated set of outreach and community mobilization activities. Nor was it evident that home visits or community health education sessions are occurring with any intensity. Most of the attention is focused at the facility level -- waiting for clients to come into the facility. The facilities appear to be underutilized.

The team did, however, observe a model for mobilizing communities around HIV/TB/Leprosy interventions in Miridi supported by the Malteser (EU donor). Malteser/Maridi runs an HIV/TB clinic at the hospital serving a population of about 142,000 across 2 counties. Starting in 2005, Malteser initiated interventions to resuscitate village health committees using the PHCCs and PHCUs as a basis for mobilizing and educating the community. Malteser has established and in some cases resuscitated the VHCs by utilizing the traditional system at the village level starting with the Chief→VHC→VHW→selected community/civil society members. Two paid outreach workers work with the VHCs and VHWs to provide the link between the community and health facility. Malteser outreach workers conduct scheduled outreach 3 times a week. They have established excellent relations with the VHCs and VHWs to integrate health messages into public events organized by churches, schools, youth

clubs/choirs and sporting competitions. During these events, HIV/TB health education is provided and referrals are given to where further information and services can be provided.

BEHAVIOR CHANGE COMMUNICATION

In the areas visited, there was no evidence of a vibrant and well targeted strategy or set of Behavior Change Communication (BCC) interventions. Limited and disparate posters and flyers were available in some facilities. Years of war have displaced communities and lack of knowledge of basic primary health care interventions, including maternal and reproductive health, is pervasive. The spontaneous community group discussions conducted by the team revealed genuine interest in the community being engaged. Opinions run strong. Most constant were the following themes: traditional role of males in decision making at the community level; strong cultural and traditional practices that determine health seeking behavior; gender; and awareness of poor maternal health and difficulty in getting care during pregnancy. For female-only group discussions held in Tonj South and Bar Orlu, women were genuinely curious and wanted to discuss deeply personal reproductive health issues and freely shared their concerns regarding frequent pregnancies, as well as the strong traditional practices and preference by their husbands to have 10 or more children. Many women expressed sadness over the number of female relatives and friends who have died due to complications and noted that at a certain point women “just need to rest before birth.” While older women in the group discussions expressed hopelessness about changing their own fates, women under 25 years old raised the issues of men’s attitudes, early marriage, girls’ education, and training for income generation to enable them to help out with the financial burdens of school fees, food and daily expenses. At the Bar Orlu session, the younger women recommended that workshops be held for men and traditional leaders to talk about ways to stop women from dying. The female respondents expressed need for strong livelihoods training, education for women and girls in maternal and reproductive health, nutrition and good eating practices, and breastfeeding and child spacing. In addition, they asked that contraceptives, especially pills and condoms, be made available at their facility. The MCH worker at Bar Orlu indicated that women do come in to ask for child spacing methods, but the clinic does not have supplies and the women were referred elsewhere.

SERVICE DELIVERY

The team visited a number of health centers and hospitals and found varying situations from overcrowded and overwhelmed to underutilized services. Hospital physical infrastructure in Rumbek is old and space extremely cramped for a busy referral hospital. We were told that the Juba Hospital is waiting for planned renovations. Most health centers did not have active delivery services. The team did see examples of better services. Maternity services at the hospital in Maridi, used as a training site for community midwives, and at the health center in Wulu were cleaner and better organized, but underutilized.

Since the team only received the MCH/FP clinical protocols/standard practice guidelines at the end of the visit, it was not possible to assess the provision of care against the country's new practice standards. Based upon what the team expected to see with respect to international evidence-based practice for ANC and birth, provision of care, by and large, appeared to be non-standardized and disorganized. At many facilities there was reported sporadic supply of drugs and commodities. Staff told of lack of sufficient supply of iron folate in ANC services and lack of sufficient and appropriate uterotonics for delivery. IV equipment and solution did appear to be available. Where supplies and drugs were available, they often were located in storerooms without shelves or any system of organization, a situation that could foster drug expiration before use and "stack-ups" (drugs haphazardly piled on top of each other), as well as stock-outs. Cold chain problems in health centers were very evident. Hospitals visited did have the capacity to do Cesarean sections, although delay may be common. During the team's visit to Rumbek Hospital, despite obstetric emergencies, surgeons and midwives were distracted by donors (USAID team included) and other activities.

There were numerous missed opportunities for health education in the health centers and hospitals. By and large, there were no posters, no flipcharts, and little evidence that group health education is a part of regular services. One ANC register had a column to note where women intended to deliver. On spot check, entries for all patients noted woman's intent to deliver in the facility — a highly unlikely possibility thus calling into question the type of health education (that we did not have the opportunity to observe) or the recording.

Registers are routinely kept in outpatient clinics and for hospitalizations, including birth. There was no evidence of use of the data in the registers to assess service utilization, provision of key interventions, or birth outcomes. Summary services statistics were not available in any site we visited and there was no evidence of any formalized quality improvement system, or making use of them to increase attention to the special MRH needs of young women.

CULTURAL BELIEFS AND PRACTICES

The team was only able to scratch the surface of the deep and varying cultural practices on use of services and health outcomes. Use of TBAs and involvement of Spear Masters, as noted in the MRH Policy, influence use of services. In group discussions women interviewed stated that they would be more likely to come to modern services for birth if they were allowed privacy and ability to choose desired squatting position for birth. Health care providers told of families' desires to use magical practices and give "blessings."

Inhibiting use of services and undermining supportive care is a consistent theme that if a woman has trouble in her labor, it is a sign that she has not been faithful to her husband. Labor is often considered a test of courage and so a woman who complains or cries is cowardly, thus making it hard to determine the onset of labor in order to identify a prolonged labor and need for timely referral.

CONCLUSIONS

Why maternal health?

This assessment was commissioned because of the recent publication of the alarmingly high maternal mortality ratio. Nevertheless, with all the other problems facing SSudan, how can focus on maternal survival, when there so many other pressing problems, be justified? Quite simply, attention to maternal health will positively affect individual women and will bring invaluable gains to families and the society, as well. Maternal health programs, as part of reproductive health, promote:

- Decrease in not only maternal, but also newborn and child mortality
- Decreased health care costs
- Decreased drain on limited resources in the environment
- Improved productivity in agricultural sector
- Job creation in the health sector
- Healthy women who can engage in civil society to promote peace

Challenges

- Post conflict, there remains a high level of uncertainty about the future.
- There has been a marked decline of services after NGOs pulled out after CPA.
- Returnees to SSudan are putting heavy demands upon the social sector and overall infrastructure.
- SSudan reports the highest MMR in the world in comparison with other nations.
- Without salaries, significant health development work has weakened and will continue to decrease precipitously.
- Service delivery is fragmented.
- Strategic planning and budgeting is weak and need strengthening at the central, state and county levels.
- There is an irregular and insufficient supply of drugs.
- Roads, transport, communications are very poor.
- Good, but limited, training capacity appears sabotaged by a career ladder that promotes “nomadic” movement for more education and higher earning capacity.
- Low level of education, especially for girls, makes it hard to find women with adequate entry level skills to undertake training as nurses and midwives.
- Extremely low awareness of risk and obstetric complications, as well as blame for suspected infidelity if labor and birth are complicated, keep women away from life-saving services.
- Absence of plans for systematic approach to village health workers leaves a fundamental gap in provision of community education and services.

Opportunities

- Strong leadership from GOSS/MOH has highlighted maternal and reproductive health as a priory.
- Excellent MRH policy provides a vision and framework for tackling the key problems.
- Dedicated NGOs are providing good assistance under very challenging circumstances.
- Neighboring countries (particularly Kenya and Uganda) are providing skilled expertise/human resources.
- Good curricula and training materials are available.

Health systems

- There are tremendous opportunities to support GOSS decentralization policy for health through mobilization activities at the lower levels. In particular, GOSS can encourage State and County Officials to resuscitate Village Health Committees, engage indigenous NGOs, CBOs, FBOs and other civil society organizations that exist in developing and implementing services at the Payam level.

Human resources

- Until the critical human resource issues are solved, a significant impact on maternal mortality will remain elusive. Because of the dearth of skilled providers, even with year-round training, it will take many years to graduate enough skilled midwives to have significant impact on maternal health services in rural areas. Consequently, TBAs and women family members will continue to deliver the majority of births in the country for some years to come.
- Due to the lack of access to facility-based services, a community outreach worker cadre is needed in rural areas (outlined as a village health promoter in the "Basic Package of Services"). This level of worker could provide high-impact services to households, including education, and other preventive and limited curative services - family planning; mobilization/follow-up for delivery services, immunization, dissemination of bed nets, malaria and diarrheal education and treatment.

Service delivery

- Emphasis on child spacing is needed. Strong family planning skills and services at every level of the health care system will save women/children's lives. Because the uptake of contraceptives is almost nil due to cultural, religious, political and access issues, working with the MOH and NGOs to ensure that child spacing is front and center will prove critical in future training and services.
- To improve use of life saving services and improve birth outcomes, in the short term it is essential to improve service delivery through technical assistance directly to service sites. Improved services can draw in clients and are essential to model care for health provider trainees.

Beliefs and practices

- In the community, there is a huge gap in knowledge around maternal health and primary health practices and care, in general. Along with other influential groups in the community (church, women, farmers), village health committees can help to change harmful cultural or behavioral practices and promote positive health

- Much more needs to be learned about women's and communities beliefs and practices with respect to sexuality, fertility and childbearing in order to inform appropriate health education.

RECOMMENDATIONS

Principles

The team's recommendations are offered based on the following principles: honoring commitment to GOSS and its newly developed MRH Policy; minimizing "sprinkling" of USAID funds to improve public health impact; making hard choices based upon best evidence available; phasing in interventions, approaches, and geographic areas; and seeking the best balance between saving lives in the short term and developing health systems capacity as soon as possible.

What should not be done now

Because an effective USAID approach to deliver life-saving services at scale necessarily involves making strategic choices, the team recommends that the following not be done by USAID, at least for now:

- Delay early marriage – early marriage is so imbedded in the culture that attempted change at the present time will divert from other approaches with greater chance of success, such as child spacing for healthy babies.
- Train TBAs to recognize and treat obstetric complications in the home – there is no evidence that TBA programs can reduce maternal mortality and scarce resources should be saved to improve the substandard care in the health facilities.
- Train community midwives – while it appears that there is a good GOSS curriculum and large need, the current situation for trainees is in flux with many having no intention of actually practicing these skills. For the time being USAID should focus on on-the-job training through technical assistance and revisit this decision later.
- Start maternity waiting homes – the hospitals we visited need to be upgraded to improve quality of care before the considerable investment of starting waiting homes, especially since risking systems have not been good predictors of actual complications.
- Implement prevention of postpartum hemorrhage with misoprostol – while PPH is likely the biggest maternal killer in SSudan and misoprostol, an oral uterotonic that needs no cold chain, is a promising technology for use at the community level, there is no clear platform that reaches a large number of childbearing women at the present time. When ANC coverage increases or there is a community health worker within an established program who can take this on, this possibility should be reconsidered.

What can be done now

To start

- Set impact goals for the USAID program that are ambitious and set clear direction for implementation of life-saving health interventions.
- Galvanize action with partners in a 200 day program that can be implemented with current resources and partners. (see Annex C.)

Health systems

- Demonstrate a model county system for strategic planning, including budgeting, human resources, pharmaceuticals, health information, and supervision, in selected county systems (linking community, country, state and nation) essential for capacity building for development.
- Offer to GOSS technical assistance to encourage solutions to deployment and remuneration policies.
- Where possible and with technical assistance support as needed, work with OFDA to ensure OFDA-supported facilities conduct joint planning, joint supervision, county-wide training, county-coordinated logistics management, and implementation of harmonized health information systems

Human resources

- Work closely with GOSS and NGOs to determine the appropriate role for community health workers and promote standardization and dissemination of the most effective community-base cadre model for eventual nation-wide coverage.
- Include TBAs in MCH preventive health service training to deter harmful traditional practices and ensure household receive effective high impact interventions, but do not build a program around training them to provide skilled care.
- Support GOSS and AMREF to coordinate the development and use of a standard manual to select and train village health committee members to develop a strong consistent force to change birth, maternal nutrition, child spacing and other key practices and norms in SSudan.
- Ensure that all training for each cadre is consistent with the GOSS national Human resources plan.

Service delivery

- Initiate a culturally sensitive, yet robust, child spacing/family planning program integrated within the maternal child health system oriented to helping families improve health of mothers and children
- Strengthen quantity and quality of child spacing in the postnatal period, antenatal care, and birth services, including newborn care, in an integrated program through on the job training and technical assistance with emphasis on measurement of provision of high impact interventions in selected counties for immediate and visible results.

Beliefs and practices

- Use the HBLSS planned activities and commission a review of completed qualitative research including ethnographic and program MRH studies among selected tribes in SSudan to inform development of a formal but rapid research approach to identify harmful, neutral and helpful beliefs and practices related to family planning, pregnancy and birth in key tribal contexts in SSudan.
- Conduct community death audits in targeted communities to sensitize them and others to the role that communities can take in averting maternal death and disability.
- Fill the MRH "literacy gap" by designing and implementing a focused mobilization and BCC strategy for Southern Sudan, building on CPA principles for decentralization and collective participation of disadvantaged groups. Use a two pronged approach:
    - at the policy level – help shape a supportive multi-sectoral policy environment for promoting maternal health at GOSS central, state and county level to advocate for increased attention and funding for maternal health at the decentralized level; and
    - at the community level -- target different groups with messages that are culturally appropriate and impact on changes in behavior that can be measured.

In addition

- Support an MRH Advisor in the MOH to implement the new MRH protocols.
- Participate in the Inter-Agency Reproductive Health Working Group through active involvement of USAID and partners by bringing data and issues to each meeting and offering to carry out selected activities.
- Strategically link USAID health programs, including OFDA, with education, economic growth, and democracy programs through promotion of girls' education and empowerment activities to engage women in active participation in civil society.

When the model county system is functioning and quality services are being provided in the initial counties

- Phase in expansion of quantity and quality of child spacing, birth, antenatal care services and model health systems program in additional counties to demonstrate an approach to provision of quality services at scale.

ANNEX A
STAKEHOLDERS INTERVIEWED

Juba

Dr. Samson Paul Baba	Director General for Primary Health Care and Medical Services, Ministry of Health
Dr. Margaret Itto	Sudan Coordinator, AMREF
Katherine Solomon	AMREF
Dr. Alex Pimiti	UNFPA
Ms. Mary Mali	National Project Officer for RH, UNFPA
Dr. Festo Jambo	Juba Teaching Hospital
Dr. Darshana Vyas	Chief of party, SHTP
Dr. Kirogo Mwangi	SHTP
Mr. Isaac Kenyi	SHTP
Mr. Chip Oliver	Health Officer, USAID
Dr. Martin Swach	Health Officer, USAID
Mr. Patrick Fleuret	Mission Director, USAID

Tonj South

Gabriel Machot	Word Vision International Official
Mr. Thomas	In charge, Tonj PHCC
Mr. Philip	SRRC officer

Lakes State MOH

John Mabeny Achiek	Acting Director of Primary Health Care
Gordon Mayen	Surveillance Officer
Martin Teler Connong	Director Human Resource Development
Manoah Lep	Deputy Director Environment and sanitation
Agrey Manyiel	Senior Medical Assistant

Rumbek County

Makol Bor Kodi	County Commissioner, Rumbek County
Mr. Paul	Mayor Rumbek Town
Mr. Peter	Clinical Officer, Malteser Int'/ Diocese of Rumbek Clinic
Mr. Mamel Adel	CHW, Pacong PHCU
Mr. Duti Make	Area Chief Pacong Payam

Wulu County

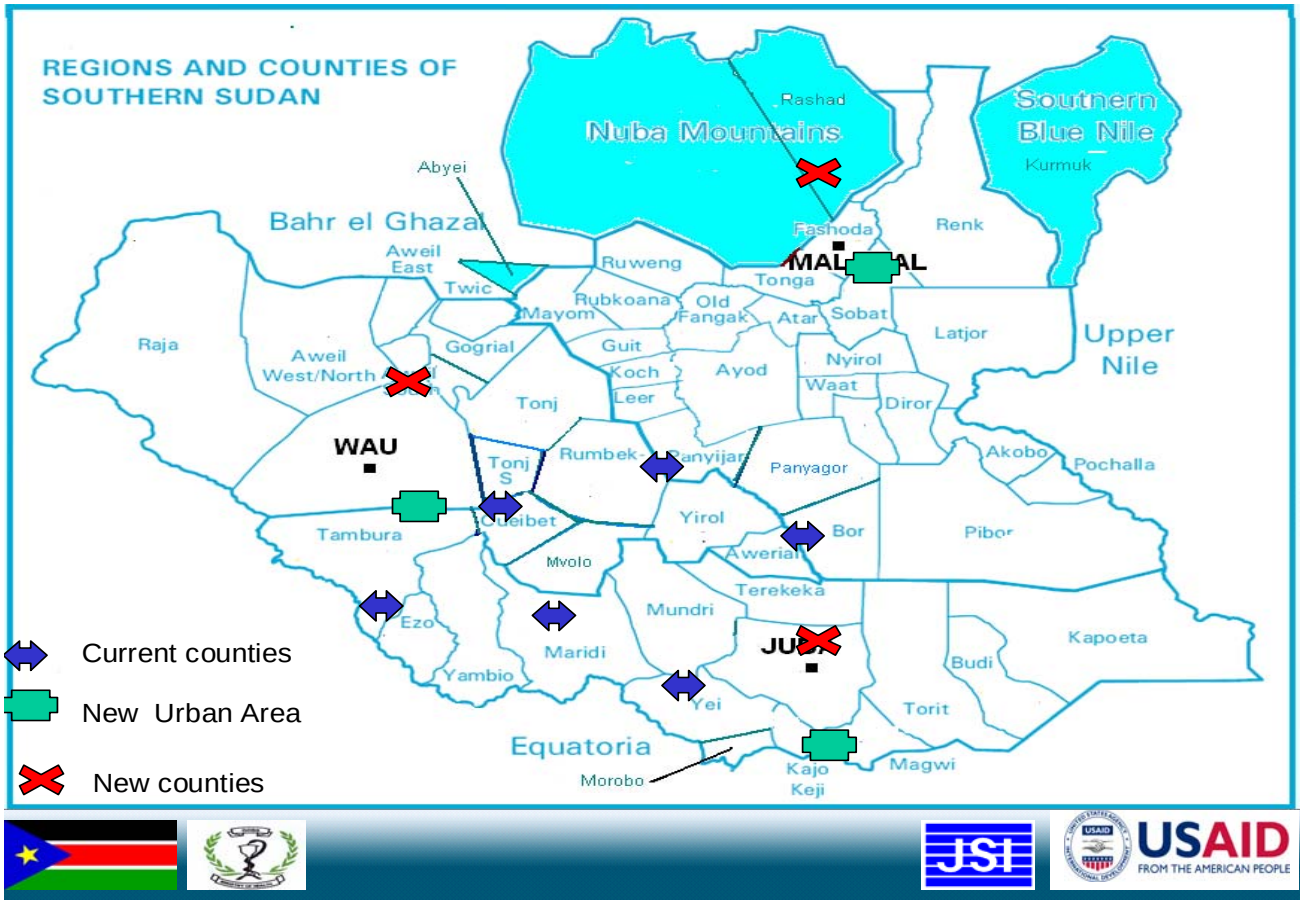
Gordon Mbele	County Commissioner, Wulu County
Grace Michel	Clinical Officer, Wulu PHCC

Maridi County

Mr. John Kamingara	County Commissioner, Maridi County
Mr. Samuel Aniga	Hospital Administrator, Maridi County Hospital
Mr. George Abus	Principal, Maridi Nursing School

Dr. Ratip	Senior Medical Officer, AAH, Maridi Health Project
Ms. Grace Merekaje	Laboratory Officer, AAH Maridi Hospital
Mr. Marium Peter	Nurse-midwife, Maridi Hospital MCH
Ms. Olive Bisi	Nurse-midwife, Maternity, AAH Maridi Health Project
Ms. Olive Chepkurui	Human Resource Officer, AAH Maridi Health Project
Mr. Ezekiel Justin	Administrator, AAH Maridi Health Project
Mr. Mwanza	Project Manager, Malteser International
Mr. John	Administrator, Maridi CHWs Training School
Mr. Charles Olupot	Academics Master, AMREF training school, Maridi
Mr. Mr. J. Ofwono	Acting Principal, AMREF training school, Maridi

ANNEX B
USAID INVESTMENT/SITE MAP



ANNEX C
RECOMMENDATIONS FOR 200 DAY, 2 YEAR MRH PROGRAM

Following 50 years of war, with absent or crumbling infrastructure, flight of trained personnel, poor roads, transport and communications systems, and very low community awareness about healthful pregnancy and birth practices, Southern Sudan currently has the highest national maternal mortality ratio in the world. The lifetime risk of a woman dying in child birth is more than 150 times the chance of a woman dying in the US. To reduce maternal and newborn mortality, and its devastating social and economic consequences, USAID proposes a program to support implementation of the GOSS MOH Draft Maternal and Reproductive Health Policy for Southern Sudan. This program is designed to promote self reliance in delivering health services, emphasizing high-impact interventions to produce rapid results in order to bolster confidence in public institutions within the Comprehensive Peace Agreement.

The program will focus on spacing pregnancy to reduce obstetric and newborn risk and, once a woman is pregnant, to address the biggest killer, postpartum hemorrhage. Since most of the births are in the home, the program will put substantial emphasis on educating and assisting communities in healthy behaviors and accessing life-saving care.

The program will be carried out in partnership with GOSS/MOH and with other key partners including UNFPA, UNICEF and WHO, GOSS designated “lead NGOs,” as well as other partners and NGOs. The program will coordinate with USAID education and civil society programs.

The maternal and reproductive health program will complement the current USAID child health program which includes immunization and prevention and treatment of malaria, respiratory infection and diarrheal disease. In addition to maternal and reproductive health targets, the program will set and monitor 200-day targets for child survival.

5 Year Goals for Southern Sudan Maternal and Reproductive Health Program

- Decrease maternal mortality by 25%
- Decrease Newborn Mortality by 25%
- Increase use of modern child spacing methods by 50%

Short Term Priority – 200 days

Strengthen **<u>quantity and quality of child spacing, antenatal care, and birth services</u>** in an integrated program with emphasis on high impact interventions in three counties for immediate and visible results

200 Day Targets – to be measured jointly with country officials
Enhance MCH Services: In three counties (500,000 population)

- Double antenatal care (ANC) coverage
  - 65% ANC clients receive 90 iron tablets

- 65% ANC clients receive 2 TT immunizations
- 65% ANC clients receive intermittent preventive treatment of malaria (IPT) x 2
- 90% ANC clients receive long lasting insecticide treated nets (LLITNs)
- 90% ANC clients receive a simple birth kit for home or facility birth
- 90% ANC clients attend at least one health class

- Double births attended at PHCC and hospital level
  - 95% clean delivery according infection prevention protocol
  - 90% provision of active management of the third stage of labor
  - 90% use of partogram
- Double provision of child spacing services
  - 50,000 people receive culturally sensitive child spacing for health messages
  - 75% availability condoms and oral contraceptives in PHCCs and PHCUs
- 75% of PHCCs and PHUs have functioning village health committees

Longer Term Priorities – 2 years, starting immediately, and monitored at 200 days

Demonstrate **model county system for strategic planning**, including budgeting, human resources, pharmaceuticals, health information, and supervision, in three country systems (community, country, state and national) essential for capacity building for development

2 year benchmarks and targets – to be measured jointly with county officials
Strengthen the health system: In three counties (500,000 population)

- County budgets established
- County-level comprehensive human resources development plan for health workers that accounts for in-service training through NGOs developed
- Common template and supervisory checklist for supervision planning developed
- County level system to coordinate pharmaceutical and commodity logistics plans of all NGOs developed
- Common information system, drawing on experiences and practices of NGOs developed
- 100% of NGOs provide annual reports of basic package of services offered and used
- 90% of PHCCs and PHUs have essential drug needs forecasted and supplied
- 90% of PHCCs and PHUs regular supervisory visits by county health officers
- 90% of PHCCs and PHUs have functioning village health committees

Initiate a **culturally sensitive, yet robust child spacing/family planning program** integrated within the maternal child health system oriented to helping families improve health of mothers and children

2 year benchmarks

- Formative research completed
- Multimedia communications behavior change strategy to reinforce effective traditional birth spacing practices and introduce selected modern methods developed and implemented
- Multimedia communications materials and approaches developed, distributed and utilized
- Effective services and additional methods provided through selected institutions and community
- Population-based baseline of contraceptive prevalence and knowledge and practice behaviors through a DHS completed, when that becomes possible

Funding

With an additional $5m per year for each of 2 years in FY 08 and FY 09 to expand the current health program, USAID can expect to achieve high coverage of maternal, reproductive and child health high impact interventions in a total of 9 counties and 3 cities (approximately 2m population or approximately 20% of estimated Southern Sudan population). At the end of two years the program will be on the way to contributing to measurable substantial reduction in maternal and child mortality and improvement in use of modern child spacing methods within five years.

ANNEX D
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ANNEX E
Statement of Work for the Sudan Maternal Health and Reproductive Health Rapid Assessment

I. Background:

Since independence in 1956, Southern Sudan has suffered from civil war with only a decade of troubled peace from 1972 to 1983. The civil war period, characterized by devastation of the health system, has left the health status of the Southern Sudanese people among the poorest globally. Since the mid-90s, non-governmental organizations (NGO), faith-based organizations (FBO), and multilateral/bilateral agencies offering humanitarian relief, became the prime providers of health services. NGOs and FBOs continue to play the lead role in health service delivery; of the 30% of the population covered by health services 68% are provided by NGOs or FBOs.

With the signing of the comprehensive peace agreement (CPA) on January 9th 2005, the political climate in South Sudan is changing to enable the transformation of health services delivery from a humanitarian relief to a more developmental approach - focusing on development of systems, putting in place infrastructures, strategies and policies that are sustainable while at the same time ensuring that basic health services are initiated and provided to the people of Southern Sudan.

The onset of peace has also created expectations for a return to normality, including the provision of health services. The Government of Southern Sudan (GOSS) is under significant pressure to improve health status and make rapid and visible progress towards establishing their legitimacy with the people of Southern Sudan. Since the maternal death rate is extremely high, the GOSS believes that good maternal and reproductive health services could radically reduce maternal and infant mortality as a result of complications from pregnancy and childbirth. This includes women having the ability to make informed, voluntary choices about the number and timing of children. Therefore the GOSS is strongly supportive of a USAID Maternal and Reproductive Health Assessment and follow-on activities to reduce the death of mothers and infants.

Overview of Southern Sudan's Health Status and Sector

Health services in Southern Sudan remained extremely weak during and after the war, plummeting the health status of the population to among the poorest globally: maternal health ratio estimated at 2,037/100,000, infant mortality rate at 150/1,000, child mortality rate at 250/1,000 and a fertility rate ranging from 5.9 – 6.7. Diseases that are controlled elsewhere in the world and malnutrition are endemic in Southern Sudan. Health service coverage is estimated at 30%, with routine immunization coverage at 12%; vitamin A distribution at 5%; family planning use at 1%; and births assisted by a skilled attendant reported at 6 %.

Both UNICEF and WHO classify malaria as the number one cause of under-five mortality. Several studies suggest that resistance in Southern Sudan is emerging to

both chloroquine and sulphadoxine-pyrimethamine (SP). Use of insecticide treated bed nets and intermittent presumptive treatment for pregnant women is very low. The Ministry of Health reports that "[t]he prevalence of diarrhea in under-fives is 45%, [the] …acute respiratory infection figure is 30% and for fever is 61%."

The nutritional status of children and adults is extremely poor. Low birth weight is reported at 30 – 40% of babies born and exclusive breastfeeding rates are low. Sub-clinical vitamin A deficiency affects one of seven children and goiter is common. Only about 30% of the population use water from a protected source and only about 20% reported having received any hygiene/sanitation information.

In the area of maternal and reproductive health, Antenatal Care Coverage (ACC) is at 16%, Contraceptive Prevalence Rates (CPR) is below 1% and the percentage of births attended by skilled birth attendants is below 5%. There is a near absence of family planning and child spacing information and services.

Early on FBOs supplemented poor or non-existent public health services. During the last 20 years of civil conflict, multilateral/bilateral donors and NGO joined FBOs to fill the gap in service delivery. NGOs and FBOs continue to play the lead role in health service delivery; of the 30% of the population covered by health services 68% are provided by NGOs or FBOs. At this stage, building the health care system and strengthening of existing services is fundamental for the future of Southern Sudan and to ensure economic, cultural and socio-economic development and stability.

Health service coverage is estimated at 30%, with routine immunization coverage at 12%; and vitamin A distribution at 5%. In the area of maternal and reproductive health, Antenatal Care Coverage (ACC) is at 16%, Contraceptive Prevalence Rates (CPR) is below 1% and the percentage of births attended by skilled birth attendants is below 5%. There is a near absence of family planning and child spacing information and services.

The MOH is trying to move ahead quickly in developing its health policy and strategy, and a "Basic Package of Health Services for Southern Sudan" (BPHS). As stated in the Southern Sudan National Health Policy, the objective is to reduce mortality and morbidity through strategic approaches under the overall stewardship of the Ministry of Health that ensure:

- Improving the delivery of accessible, acceptable, affordable, sustainable, cost effective maternal and child health interventions and nutrition programmers
- Enhancing and accelerating disease prevention and control programs
- Strengthening the health system at all levels through adequate and fair financing, good governance and accessible health services
- Developing a comprehensive approach to human resource development including planning, training and continuous education, and management of personnel
- Institutionalizing effective partnerships with other stakeholders through coordination and other collaborative mechanisms

The Basic Package profiles the services, infrastructure, equipment, essential drug supply and human resources at five levels in the health system – Community, Primary Health Care Unit (PHCU), Primary Health Care Center (PHCC), County Hospital and County Health Department. The development of the BPHS was guided by the values defined in the MOH Policy Paper, namely: right to health, equity, pro-poor, community ownership and good governance; and is assisting NGOs to standardize services, staffing and functions.

Currently, four main financing channels support the health sector: (1) MOH public budget for health; (2) the GOSS/Multi Donor Trust Fund (MDTF) Umbrella Program for Health; (3) multi-lateral donors; and (4) bilateral donor mechanisms.

Maternal Health Overview

Southern Sudan's maternal health statistics are alarming with 2,037 deaths for every 100,000 births – among the highest death rates in the world; and skilled staff attend less than five percent of live births.

Although globally the causes of maternal mortality are well known, progress to address the situation continues to be very slow if not elusive. Overall levels of maternal mortality are believed to remain unchanged despite 15 years of the global "Safe Motherhood Initiatives"[2]. The latest UN estimates of maternal death stands at about 530,000 a year. Of some consolation is the knowledge that with the establishment of the right policies and conditions, dramatic and rapid progress is possible. For instance, the World Bank[3] estimates that if all women had access to intervention for addressing complications of pregnancy and child birth, especially to emergency obstetric care (EmOC), 74% of maternal death would be averted. It is also a known fact that universal access to sexual and reproductive health information and services would have far reaching effects for both maternal and child health goals, and virtually every other goal, including those for HIV/AIDS, gender, education, environment, hunger and income poverty. The question that still taunts is that since we know most causes of the problem and we have the intervention to prevent or treat the causes, why have these problems been so intractable?

One serious challenge is the ability to determine immediate interim steps that can address a significant proportion of mortality *(Basic EmOC concept)*[4], while simultaneously strengthening the foundations of health systems so that ultimately the optimal level of care is provided for every woman and newborn *(Comprehensive EmOC approach)*[5]. This requires putting in place a number of interventions that can prevent

[2] UN Task Force. 2005. Child Health & Maternal Health. Who's got the power ? Transforming health systems for women and children. Achieving the Millennium Development Goals. Millennium Project.
[3] Wagstaff, A. and Claeson, M. 2004. The Millennium Development Goals for Health: Rising to the challenges. World Bank, Washington, DC, USA.
[4] UNICEF, WHO, UNFPA.1997. Guidelines for Monitoring the Availability and use of Obstetric Services. (Here, a Basic/minimum package of 'essential obstetric care' refers to a short list of services that can save the lives of the majority of women with obstetric complications).
[5] UNICEF, WHO, UNFPA.1997. Guidelines for Monitoring the Availability and use of Obstetric Services. (Here, a Comprehensive package of 'essential obstetric care' refers to Basic package + surgical and blood transfusion services that can save the lives of the majority of women with obstetric complications).

pregnancy/abortion complications, whereby having significant impacts on maternal mortality. Evidence suggest that in societies where maternal mortality is high (e.g. in South Sudan) there are usually many problems and associated root causes – poverty, illiteracy, low status of women, poor sanitation, poor nutrition, poor transportation, and inadequate medical services. Solving all these problems will significantly reduce maternal mortality[6]. Unfortunately, in many developing countries (where the bulk of maternal deaths occur), the solutions to these problems are not feasible. What program planners need, therefore, is to identify those feasible sets of activities or packages that can have quick impacts on maternal mortality, targeting the 15% widely accepted estimate for the proportion of pregnant women who develop serious complications - a working figure endorsed by WHO. For this current SOW, the potential USAID/Sudan future activities will be the focus.

II. USAID's Current Maternal and Reproductive Health Activities

USAID is currently the only U.S. government agency working on FP/RH services in Sudan. In 2006, USAID supported the Extending Service Delivery Program to develop FP/RH technical guidelines for service delivery based on GOSS national maternal and reproductive health policy. USAID is also supporting the Sudan Health Transformation Program to provide technical support to Ministry of Health on policy development and build the capacity of FP/RH health workers. USAID participates in the Reproductive Health Working Group, which supports and coordinates an ongoing process to develop national maternal and reproductive health policy and implementation guidelines and protocols.

With FY 2007 resources, USAID plans to focus on maternal health and a number of potential activities are outlined in the FY 07 Operation Plan, including safe antenatal care and delivery, treatment of serious complications of pregnancy and childbirth, stronger family planning programming, training of health care workers/managers, policy work, treatment of sexually transmitted infections, nutrition improvement, improving systems of referral, quality assurance and community behaviors. The Maternal and Reproductive Health Rapid Assessment will assist the Mission to determine which activities are the most rational for USAID's health portfolio to implement.

III. Donor/Partner Maternal and Reproductive Health Activity

Through the Multi-Donor Trust Fund (MDTF), the GOSS is contracting with lead NGOs to improve primary health care, referral hospitals, water, and sanitation in Sudan's ten states. These funds, matched by a two-thirds contribution from the Ministry of Health, are intended to increase access to primary and secondary health care, including maternal and child health.

Emergency obstetrics is the main medical focus of the UN Population Fund, but the program is limited, with less than 20 percent of referral facilities capable of providing

[6] Center for population and Family Health. 1997. The Design and Evaluation of Maternal Mortality Programs. School of Health. Columbia University.

services. The Ministry of Health has sub-contracted nongovernmental organizations to provide and manage primary and secondary health services.

The UN Population Fund provides most of the contraceptives to the public sector (although the GOSS has included FP commodities in their annual budget), and also supports population advocacy and emergency obstetric care at three state hospitals. The United Kingdom provides commodities and assistance to the social marketing program.

IV. Objectives

The objectives of this scope of work are the following:

1. To assess the maternal and reproductive health (M&RH) situation and current efforts to improve M&RH in Southern Sudan. Special attention will be given reviewing SHTP M&RH components and activities; and

2. To develop recommendations for potential USAID/Sudan investments in maternal and reproductive health.

To meet these objectives, the Team will seek to answer the following questions:

- What information do we have qualitatively? What are the knowledge, attitudes and current practices which promote safe motherhood?
- What are the current knowledge, attitudes and practices which present a threat to safe motherhood?
- What quantitative information do we have (and what are the sources) on fertility, nutrition, infection, use of services, human resources (qualifications and deployment), quality of services, morbidity, mortality, and cause of death?
- Who are the key informants that needed to be targeted to reinforce behavior which protect women's health?
- Who are the key informants who need to be provided with new information and training to protect women's health?
- What is currently being done? By whom? With what results?

Questions related to GOSS Ministry of Health:

- What policies are in place related to maternal health: standards of care; pharmaceuticals; fees; human resources?
- What information systems are in place to measure use of service and outcomes?
- What quality improvement systems are in use?
- What key policy, technical, human resource, and financing/fee issues should be addressed within the area of maternal/reproductive health?
- What areas of maternal health are the MOH, donors or NGOs already undertaking?
- Where are the gaps within the maternal/reproductive area?
- Is it more important to focus on the Central, State, County or Community levels?

- In what aspects of maternal health would you see USAID providing the most appropriate assistance? Other donors?
- Are there geographic priorities for maternal health for MOH? Are there gaps in the current MOH portfolio for maternal health?

Questions related to USAID/Sudan:

- What are the mission's vision and short and long term objectives for addressing maternal health in the current strategy:?
- What are the parameters for options/recommendations requested: geographic, budget, partners, and length of time, cultural, other?
- What quantitative information is currently available within the mission?
- What quantitative information or service statistics is available on maternal services through the bilateral? Are there differences in maternal health indicators in USAID zones? How does it compare with indicators nationwide?
- What quantitative information or service statistics on maternal services through OFDA?
- What quantitative information or service statistics from other NGOs?
- What quantitative information/surveys are available among other donors?
- What is the mission's comparative advantage? What are the technical and financial implications for targeted interventions?
- Are there geographic priorities for maternal health in USAID portfolio? Are their gaps in maternal health in the current USAID portfolio?
- What current investments needed to be realigned to improved maternal health in USAID focused areas?

V. Methodology

1. **Review background material**. The team will review all relevant background materials including Mission, SHTP GOSS, donor and NGO documents: assessments, policy/strategy/planning, technical (e.g., epidemiology)
2. **Interview stakeholders:** The team will interview GOSS/MOH, USAID/Sudan, donors, NGOs and other partners.
3. **Visit Sites**: The Team will visit representative service delivery facilities and environments. It is proposed that the team will visit at least 2 of the three counties as proposed by the mission in the attached itinerary – hospitals, PHCCs, and PHCUs. The Team will be accompanied by mission staff and representatives of the MOH and staff from SHTP. Particular attention will be given to observing activities and performance in USAID funded sites implemented through the health bilateral with JSI.
4. **Strategy Discussions:** The team will hold strategy discussions with the Mission, GOSS, donors, and NGOs.

The Team will consist of the following members: Willa Pressman, GH; Mary Ellen Stanton, GH; Khadijat Mojidi, AFR/SD; Yogesh Rajkotia, GH; and participation from USAID/Sudan and the MOH/Sudan. The Team will review relevant materials produced by USAID implementing partners, GOSS and other donors and implementing partners.

VI. Deliverables

The Team shall provide the following deliverables:

External Deliverables:

- **Rapid Assessment Report:** The team will draft the rapid assessment report (not to exceed 20 pages—excluding attachments) which will outline the maternal/reproductive health situation; current MH/RH GOSS/donor/NGO activities; and recommend options for USAID/Sudan investment. Once finalized, the assessment report will be shared with MOH, donors and implementing partners.

Internal Deliverables:

- **Next Steps for USAID.** Based upon the findings of the assessment, and dialogue with USAID, the Team will outline next steps for future directions of USAID's MH/RH assistance in Sudan. The plan will lay out key next steps in the short term (next six months) and long term (next 12-24 months). These concrete steps will include investments through SHTP as well as proposed future procurements.
- **Observations of SHTP Activities.** From observations made during the assessment visit, the team will submit a brief document commenting on SHTP's current activities. Since the assessment is not a systematic review of the SHTP project, this brief document will only provide the Team's view on activities observed during the assessment.

VII. Debrief

The team will debrief with USAID/Sudan and the GOSS/MOH before departure to provide highlights of assessment, and debrief USAID/Sudan on the "Next Steps" and SHTP observations.

VIII. <u>Period of performance/Work Schedule:</u>

The Team will arrive in Juba on/about September 8, 2007 for approximately 2 weeks. The team will participate in meetings with mission staff, GOSS, implementing partners, and other donors. Field visits in Southern Sudan will occur for about 5 days between September 12-19, 2007. USAID/Sudan will be briefed with initial findings before the Team's departure on September 21, 2007 and receive the initial draft report within 2 to 3 weeks of the Team's departure from Sudan. USAID/Sudan will receive the final report within one week of receiving the Mission's feedback on the initial draft report. At the submission of the final report, the Team will submit the Next Steps and observations of JSI's activities documents.

USAID
FROM THE AMERICAN PEOPLE

September 2007
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Southern Sudan

This brief describes the severity of the problems facing the health sector in Southern Sudan. Southern Sudan consistently ranks at or near the bottom in terms of health outcomes and related health system areas in comparison to its peers in sub-Saharan Africa and other fragile states such as the Democratic Republic of Congo (DRC), Liberia, and Afghanistan. Highlighted below are some of the principal challenges facing the Southern Sudanese health system, namely: poor health outcomes; poor health service delivery; and severe shortages in human resources for health.

Maternal mortality in Southern Sudan, at 2,037 per 100,000 live births, is the highest in the world.

Sudan is the largest country in sub-Saharan Africa by land area and one of the most geographically diverse. Currently, it is recovering from more than two decades of war between the predominantly Muslim North and the Christian South. This conflict ended recently with the Comprehensive Peace Agreement of January 2005, which gave Southern Sudan (population 8-12 million)[1] a large degree of autonomy. Since then, the Government of Southern Sudan (GoSS) has consistently increased its efforts to rebuild the war-torn health system and to provide health services to its citizens.

[1] *This range is an indicator of how poor the data quality is in Southern Sudan. A census is planned for 2008.*

Health Systems Country Briefs *assess a country's health system to identify "best buys" for health systems strengthening – limited investments in health systems activities that are certain to realize important gains. Information in this Brief comes from review of secondary data sources, country reports, and communication with country experts. Data for comparisons with peer countries come from internationally comparable datasets of the World Bank, World Health Organization, and others; where more recent data are available from the country, those data are used.*

Country Brief

HEALTH SYSTEMS 2020

Donors have taken great interest in the reconstruction efforts of Southern Sudan and are working with the GoSS to rapidly develop the health system, investing in both physical and human capital. A Multi-Donor Trust Fund[2] has been established to facilitate donor coordination and harmonization with national policies. Yet, Southern Sudan's most recent health outcomes indicators, some of which are highlighted below, suggest an urgent need for further efforts.

For example, only 5% of births are attended by skilled health personnel, as compared to the average of 50% for other sub-Saharan African countries (Figure 1). Maternal mortality, which is often used as an indicator of how well a health system is functioning, is higher in Southern Sudan than any other of its comparators (Figure 2). Infant and under-five mortality are significantly higher than in other sub-Saharan African countries (Figure 3). Based on the available information, HIV prevalence, at 2.6%, while similar to other fragile states, is lower than the average for sub-Saharan Africa (8.6%). This prevalence estimate is likely an underestimate, however, given the paucity and poor quality of data and the lengthy history of conflict in the country.

These health status indicators provide the context for the strengths and weaknesses of Southern Sudan's health system. Five health systems functional areas (governance and management, health service delivery, human resources, health financing, and health information systems) are discussed in greater detail on the following pages.

FIGURE 1: PERCENT BIRTHS BY SKILLED ATTENDANTS

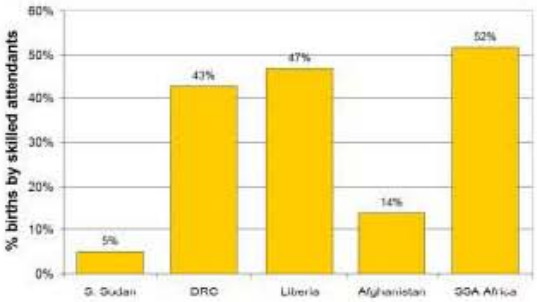


FIGURE 2: MATERNAL MORTALITY RATIOS

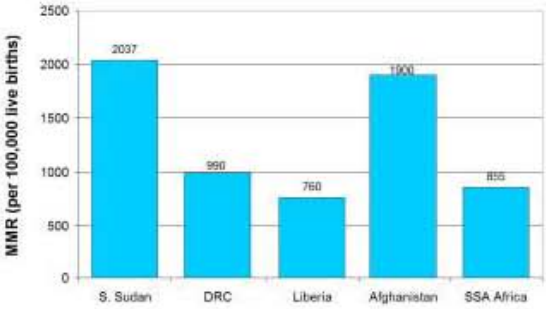
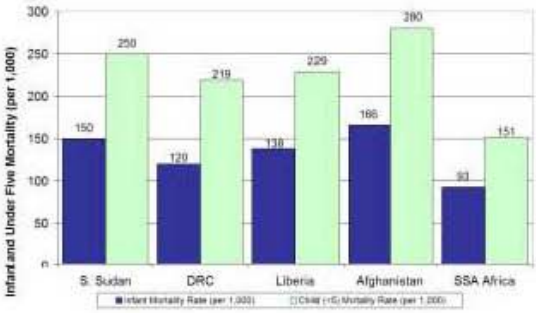


FIGURE 3: INFANT AND UNDER FIVE MORTALITY RATIOS



[2] The donors to the Southern Sudan Multi-Donor Trust Fund include: Canada, Denmark, the European Community, Egypt, Finland, France, Germany, Greece, Iceland, Italy, the Netherlands, Norway, Sweden, the United Kingdom, and the World Bank (which is also the administrator). In April 2005, donors pledged US$508 million. As of August 31, 2007, US$275 million was available for disbursement.

HEALTH SYSTEMS STRENGTHS AND WEAKNESSES

1. GOVERNANCE AND MANAGEMENT

The Southern Sudanese health sector is decentralized, operating at the central, state, county, and community levels. Southern Sudan's National Health Policy (2006) clearly defines the roles and responsibilities of each of these four levels. The central Ministry of Health (MoH) is broadly responsible for sector-wide stewardship, regulation, and national priority setting, while each State is responsible for overseeing county operations in delivering or managing health services. Village health committees exist at the facility level, and provide community oversight of health services.

Below the central level, capacity of the health sector is weak. This is due mainly to lack of staff, transport, and communication infrastructure, as well as limited financing at each level.

2. SERVICE DELIVERY

The delivery of health services in Southern Sudan is highly decentralized, with authority delegated to the State health systems. The nongovernmental sector is the main provider of health services, providing 68% of the health services. Only 30% of the population is covered by health services. The remaining 70% of the population has limited or no access to any type of health care facility, services, or information. In Southern Sudan, DPT3 coverage is only 12%, as compared to 71% in other sub-Saharan African countries (Figure 4). Additionally, only 12 % of one-year-old children have received measles immunizations (Figure 5). Furthermore, antenatal care coverage is only 16%.

Both UNICEF and the World Health Organization (WHO) consider malaria as the top cause of under-five mortality. However, there also is concern about resistance to anti-malarial treatment as more than a third of children who present with fever are treated with anti-malarials, even though malaria may not be the cause of the fever. The use of insecticide-treated nets and intermittent preventative treatment for pregnant women is low.

FIGURE 4: DPT3 COVERAGE

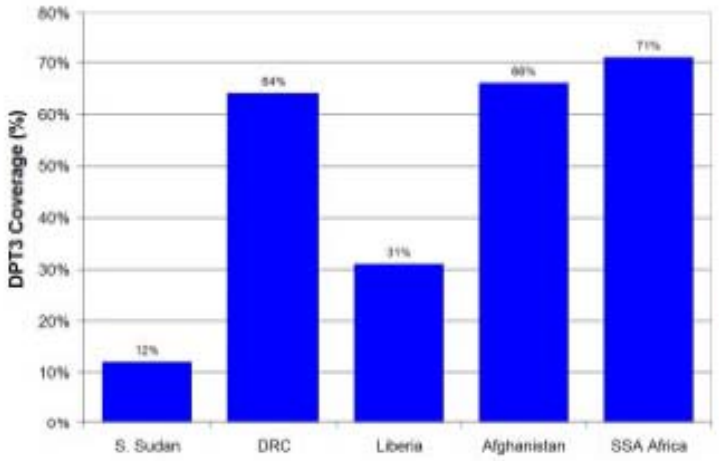
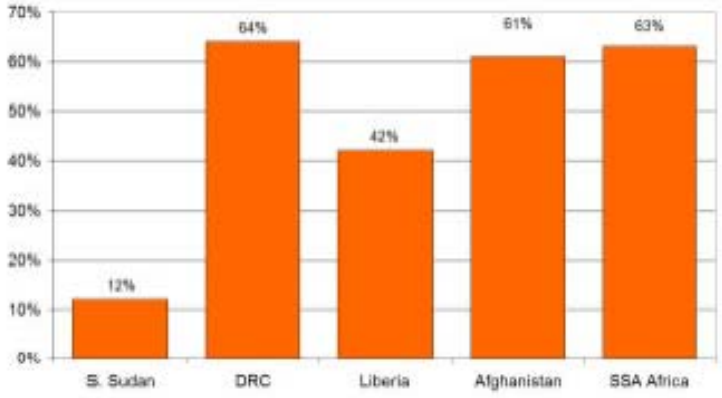


FIGURE 5: ONE YEAR OLDS IMMUNIZED AGAINST MEASLES

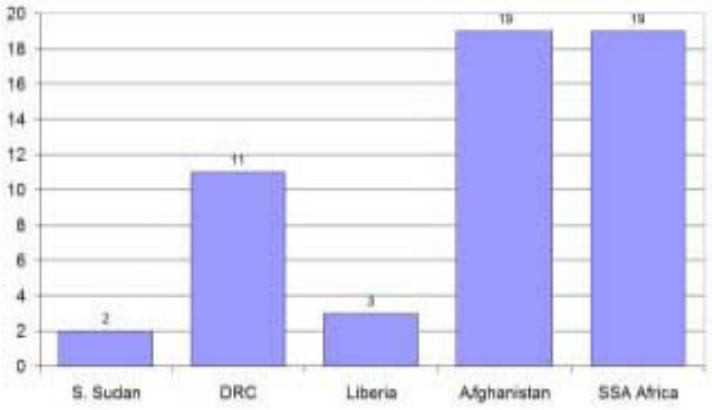


3. HUMAN RESOURCES

In its recovery from the extended conflict it suffered, Southern Sudan is facing a severe shortage of health professionals. It has been estimated that in 2005, there were about 11,800 workers in the health sector or less than one health worker per 1,000 people. Most of the staff is concentrated in tertiary facilities in the three major cities – Juba, Malakal, and Wau. As a result, primary health care centers are severely understaffed.

Southern Sudan has approximately 1,355 nurses and 255 doctors. Based on a population of 12 million, the physician density of a little over 2 per 100,000 is significantly below the WHO recommendation of 20 per 100,000, as well as below the average for other sub-Saharan Africa countries (19 per 100,000) (Figure 6).

FIGURE 6: PHYSICIAN DENSITY



4. HEALTH FINANCING

According to the latest available estimates, Southern Sudan's total health expenditure was $130 million in 2006; approximately $60 million came from relief and development partners, $62 million from the MoH, and $8 million from the Multi-Donor Trust Fund. Government expenditures on health are low, at less than 5% of the total GoSS budget, as compared with 9% in sub-Saharan Africa, and with less than 3% for the three fragile states mentioned above. Southern Sudan is spending approximately $7 per person on health, far lower than the $21 in sub-Saharan Africa as a whole, and in Liberia ($9) and Afghanistan ($14).

According to the GoSS, basic health and emergency services are to be provided free of charge to its citizens. However, reports indicate that out-of-pocket expenditures and informal payments are highly prevalent.

5. HEALTH INFORMATION SYSTEMS

Health information systems are crucial for policymakers to make evidence-based decisions and set priorities. Southern Sudan's National Health Policy emphasizes the MoH's commitment to collect and utilize data for decision-making. However, Southern Sudan lacks an integrated health information system and the necessary physical infrastructure, human resources, and policies to sustain a functioning health system. Presently, data collection is carried out through nongovernmental organizations, implementing partners, UNICEF, and the WHO. These data are not collected in a uniform way, and are not aggregated at county, state, or central levels for effective monitoring or planning of the health sector.

TABLE 1: SOUTHERN SUDAN'S HEALTH SYSTEM – STRENGTHS AND WEAKNESSES

Health System Function	Data/Evidence	Strengths and Weaknesses
Governance and Management	• Decentralized system, with states and counties responsible for implementation and central-level responsible for regulation	**Strengths** • Decentralized system allows for better catering to local needs of diverse populations **Weaknesses** • Limited staff, budget, organizational structure at state and county level • Low capacity at state and county level to plan, manage, and supervise health services
Service Delivery	• Health services primarily provided by nongovernmental organizations (NGOs) (68%) • Implementation of service delivery is decentralized, with authority delegated to the State health systems	**Strengths** • Many NGO providers are well respected by local populations **Weaknesses** • Southern Sudan has among the worst health outcomes in the world: maternal mortality is 2,037 per 100,000 live births, under 5 mortality is 250 per 1,000 • Limited use of health facilities, for example, only 5% of mothers deliver with skilled attendant • Service delivery fragmented - each NGO has own system, services, and policies • Geographic barriers preclude utilization by many (30% coverage)
Human Resources	• Civil conflict resulted in flight of skilled health professionals • In 2005, Southern Sudan had an estimated 11,800 health workers, including 225 doctors, for a population of 8-12 million	**Strengths** • GoSS Human Resources (HR) Directorate established with goal of improving overall HR crisis **Weaknesses** • 40% of health workforce has 0-1 year of training • Only 14% of institutions have adequate training capacity
Health Financing	• Government expenditures low (5% of total budget compared to 9% in sub-Saharan Africa) • More than 50% health sector is donor financed	**Strengths** • Official GoSS policy prohibits health service fees **Weaknesses** • Limited budget flows to states, zero budget flows to counties
Health Information System (HIS)	• Weak HIS system due to fragmentation of providers (NGOs, faith-based organizations, private voluntary organizations, etc.) • GoSS in the process of developing national HIS strategy	**Strengths** • Range of partners, including USAID, focused on improving HIS **Weaknesses** • Lack of HIS limits State and GoSS ability to plan, budget, and manage health services

ANNEX 1: KEY HEALTH SYSTEMS INDICATORS FOR SOUTHERN SUDAN, SUB-SAHARAN AFRICA, AND LOW-INCOME COUNTRIES

Health systems data		Country level data		Average value for regional comparator[1]		Average value for income group comparator[1, 2]		
				SubSaharan Africa		Low-income countries		
		South Sudan	Year of data	SSA	Year of data	LICs	Year of data	Source of data
Core Module								
Indicator 1	Population, total	approx. 12,000,000	2004	14,785,627.1	2004	39,904,245.5	2004	The World Bank. 2006. World Development Indicators.
Indicator 2	Population growth (annual %)	NA	2004	2.2	2004	2.2	2004	The World Bank. 2006. World Development Indicators.
Indicator 3	Rural population (% of total)	NA	2004	63.0	2004	67.4	2004	The World Bank. 2006. World Development Indicators.
	Urban population (% of total)	NA	2004	37.0	2004	32.6	2004	The World Bank. 2006. World Development Indicators.
Indicator 4	Contraceptive prevalence (% of women ages 15-49)	<1%*	2000	23.4	-	26.3	-	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators.
Indicator 5	Fertility rate, total (births per woman)	NA	2004	5.2	2004	4.9	2004	WHO. 2006. The World Health Report.
Indicator 6	Pregnant women who received 1+ antenatal care visits (%)	NA	NA	79.7	-	74.3	-	WHO. 2006. The World Health Report.
	Pregnant women who received 4+ antenatal care visits (%)	NA	2001	51.4	-	46.5	-	WHO. 2006. The World Health Report.
Indicator 7	Prevalence of HIV, total (% of population aged 15-49)[3]	2.6%*	2003	6.6	2003	4.9	2003	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators.
Indicator 8	Life expectancy at birth, total (years)	NA	2004	49.1	-	53.3	-	The World Bank. 2006. World Development Indicators.
Indicator 9	Mortality rate, infant (per 1,000 live births)	150*	2004	93.1	2004	84.2	2004	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators.
Indicator 10	Mortality rate, under-5 (per 1,000)	250*	2004	150.8	2004	131.3	2004	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators.
Indicator 11	Maternal mortality ratio (per 100,000 live births)[3]	2,037*	2000	855.3	2000	737.5	2000	*Sudan Household Survey WHO. 2006. The World Health Report.
Indicator 12	GDP per capita (constant 2000 US$)	NA	NA	878.8	2004	372.8	2004	The World Bank. 2006. World Development Indicators.
Indicator 13	GDP growth (annual %)	NA	NA	5.1	-	5.5	-	The World Bank. 2006. World Development Indicators.
Indicator 14	Per capita total expenditure on health at international dollar rate	7*	2003	103.6	2003	72.7	2003	*USAID/Sudan WHO. 2006. The World Health Report.
Indicator 15	Private expenditure on health as % of total expenditure on health	NA	NA	50.0	2003	53.8	2003	WHO. 2006. The World Health Report.
Indicator 16	Out-of-pocket expenditure as % of private expenditure on health	NA	NA	81.1	2003	84.7	2003	WHO. 2006. The World Health Report.
Indicator 17	Gini index	NA	NA	40.2	-	38.2	-	The World Bank. 2006. World Development Indicators.
Governance Module								
Indicator 1	Voice and accountability							
	Point estimate[4]	NA	NA	-0.6	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004
	Percentile rank[5]	NA	NA	31.8	2004	27.5	2004	The World Bank. Governance Indicators: 1996-2004
Indicator 2	Political stability							
	Point estimate[4]	NA	NA	-0.6	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004
	Percentile rank[5]	NA	NA	32.7	2004	25.9	2004	The World Bank. Governance Indicators: 1996-2004
Indicator 3	Government effectiveness							
	Point estimate[4]	NA	NA	-0.8	2004	-0.9	2004	The World Bank. Governance Indicators: 1996-2004
	Percentile rank[5]	NA	NA	26.5	2004	22.0	2004	The World Bank. Governance Indicators: 1996-2004
Indicator 4	Rule of law							
	Point estimate[4]	NA	NA	-0.8	2004	-0.9	2004	The World Bank. Governance Indicators: 1996-2004
	Percentile rank[5]	NA	NA	26.8	2004	22.6	2004	The World Bank. Governance Indicators: 1996-2004
Indicator 5	Regulatory quality							
	Point estimate[4]	NA	NA	-0.7	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004
	Percentile rank[5]	NA	NA	28.7	2004	24.6	2004	The World Bank. Governance Indicators: 1996-2004
Indicator 6	Control of corruption							
	Point estimate[4]	NA	NA	-0.7	2004	-0.8	2004	The World Bank. Governance Indicators: 1996-2004
	Percentile rank[5]	NA	NA	29.2	2004	24.1	2004	The World Bank. Governance Indicators: 1996-2004

Health Financing Module								
Indicator 1	Total expenditure on health as % of GDP	NA	2003	4.9	2003	5.2	2003	WHO. 2006. The World Health Report.
Indicator 2	Per capita total health expenditure, at average exchange rate (US$)[8]	7*	2003	48.5	2003	26.1	2003	*World Bank 2007. Health Finances and Financing in Southern Sudan, Annex 6. WHO. 2006. The World Health Report.
Indicator 3	Government expenditure on health as % of total government expenditure	<5*	2003	9.1	2003	8.7	2003	*World Bank 2007. Health Finances and Financing in Southern Sudan, Annex 6. WHO. 2006. The World Health Report.
Indicator 4	Public (government) spending on health as % of total health expenditure	<5*	2003	50.0	2003	46.2	2003	*World Bank 2007. Health Finances and Financing in Southern Sudan, Annex 6. WHO. 2006. The World Health Report.
Indicator 5	Donor spending on health as % of total health spending	45*	NA	15.9	2003	18.3	2003	*World Bank 2007. GoSS-MDTF. South Sudan Umbrella Program for Health Systems Development. Aide Memoire. WHO. 2006. The World Health Report.
Indicator 6	Out-of-pocket expenditure as % of private expenditure on health	NA	NA	81.1	2003	84.7	2003	WHO. 2006. The World Health Report.
Service Delivery Module								
Indicator 1	Number of hospital beds (per 10 000 population)	NA	NA	5.7	-	26.3	-	WHO. 2006. The World Health Report.
Indicator 2	Percentage of births attended by skilled health personnel per year	0.05*	2000	51.7	-	47.6	-	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators.
Indicator 3	DTP3 immunization coverage: one-year-olds immunized with three doses of diphtheria, tetanus toxoid (DTP3) and pertussis (%)	12*	2004	71.5	2004	73.4	2004	*Sudan Health Sector Transition Report WHO. 2006. The World Health Report.
Indicator 4	Contraceptive prevalence (% of women ages 15-49)	<1%*	2000	23.4	-	26.3	-	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators
Indicator 5	Pregnant women who received 1+ antenatal care visits (%)	NA	NA	79.7	-	74.3	-	WHO. 2006. The World Health Report.
Indicator 6	Life expectancy at birth, total (years)	NA	NA	49.1	-	53.3	-	The World Bank. 2006. World Development Indicators.
Indicator 7	Mortality rate, infant (per 1,000 live births)	150*	2004	93.1	2004	84.2	2004	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators.
Indicator 8	Maternal mortality ratio (per 100,000 live births)[9]	2,037*	2000	855.3	2000	737.5	2000	*Sudan Health Sector Transition Report WHO. 2006. The World Health Report.
Indicator 9	Prevalence of HIV, total (% of population aged 15-49)[9]	2.6%*	2003	5.6	2003	4.9	2003	*Sudan Health Sector Transition Report The World Bank. 2006. World Development Indicators
Human Resources Module								
Indicator 1	Physicians (density per 100,000 population)	2*	2004	18.6	-	41.9	-	*Sudan Health Sector Transition Report WHO. 2006. The World Health Report.
Indicator 2	Nurses (density per 1,000 population)	NA	2004	1.2	-	1.1	-	WHO. 2006. The World Health Report.
Indicator 3	Midwives (density per 1,000 population)	NA	NA	0.1	-	0.2	-	WHO. 2006. The World Health Report.
Indicator 4	Pharmacists (density per 1,000 population)	NA	NA	0.1	-	0.1	-	WHO. 2006. The World Health Report.
Indicator 5	Lab technicians (density per 1,000 population)	NA	NA	0.1	-	0.1	-	WHO. 2006. The World Health Report.
Pharmaceutical Management Module								
Indicator 1	Total expenditure on pharmaceuticals (% total expenditure on health)	NA	NA	27.5	2000	27.0	2000	WHO. 2004. The World Medicines Situation.
Indicator 2	Total expenditure on pharmaceuticals (per capita at average exchange rate) in US$	NA	NA	9.3	2000	4.7	2000	WHO. 2004. The World Medicines Situation.
Indicator 3	Government expenditure on pharmaceuticals (per capita at average exchange rate) in US$	NA	NA	6.0	2000	2.1	2000	WHO. 2004. The World Medicines Situation.
Indicator 4	Private expenditure on pharmaceuticals per capita at average exchange rate) in US$	NA	NA	5.9	2000	3.9	2000	WHO. 2004. The World Medicines Situation.
Health Information System (HIS) Module								
Indicator 1	Maternal mortality ratio reported by national authorities[9]	NA	NA	559.9	2001	517.5	2001	UNICEF. 2006. The State of the World's Children 2006.
Indicator 2	Mortality rate, under-5 (per 1,000)	NA	NA	150.8	2004	131.3	2004	The World Bank. 2006. World Development Indicators.
Indicator 3	HIV prevalence among pregnant women aged 15-24	NA	NA	12.0	-	9.6	-	UNICEF. 2006. The State of the World's Children 2006.
Indicator 4	Proportion of children under 5 years who are underweight for age	NA	NA	25.2	-	28.6	-	WHO. 2006. The World Health Report.
Indicator 5	Number of hospital beds (per 10,000 population)	NA	NA	5.7	-	26.3	-	WHO. 2006. The World Health Report.
Indicator 6	Contraceptive prevalence (% of women ages 15-49)	NA	NA	23.4	-	26.3	-	The World Bank. 2006. World Development Indicators.
Indicator 7	Percentage of surveillance reports received at the national level from districts compared to number of reports expected	NA	NA	91.9	2005	92.3	2005	WHO. 2005. Annual WHO/UNICEF Joint Reporting Form.

NOTES:

NC: Not Calculated because the regional comparator includes both high income countries as well as some countries that have a population of less than 30,000, which are not classified by the World Bank.

NA: Data Not Available

- : No specific year is noted here since the average is calculated across different countries, where the data is reported in different years

1- The geographic classifications used by the World Bank are for low-income and middle-income economies only. Low-income and middle-income economies are sometimes referred to as developing economies. The use of the term is convenient; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. The countries are divided into 6 regions: East Asia and Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MENA), South Asia (SA), Sub-Saharan Africa (SSA). Countries noted with * in the spreadsheets indicate high-income countries (with the exception of South Africa classified as an Upper-middle income country) which are not part of the World Bank geographic classification.

2- The classification of countries by income group is based on the World Bank classification which classifies member economies, and all other economies with populations of more than 30,000. The countries which are not in a category have a population of less than 30,000.

3- Economies are divided according to 2004 GNI per capita, calculated using the World Bank Atlas method. The groups are: LI (low income), $825 or less; LMI (lower middle income), $826 - $3,255; UMI (upper middle income), $3,256 - $10,065; and (HI) high income, $10,066 or more (the HI countries are further divided between OECD and non-OECD, noted n-OECD).

4- The following countries report "<0.1" : Azerbaijan, Bosnia and Herzegovina, Brunei Darussalam , Bulgaria, Croatia, Egypt, Iraq, Japan,, Jordan, Mongolia, Philippines, Republic of Korea , Romania, Slovakia, Slovenia, Sri Lanka, Syrian Arab Republic, Tajikistan, The former Yugoslav Republic of Macedonia, Tunisia, Turkmenistan

5- Estimates derived by regression and similar estimation methods for the following countries: Afghanistan, Albania, Algeria, Angola, Armenia, Bhutan, Bolivia, Botswana, Burundi, Cape Verde, Comoros, Congo, Cote d'Ivoire, Democratic Republic of Korea, Democratic Republic of Congo, Djibouti, Dominican Republic, El Salvador, Equatorial Guinea, Fiji, Gambia, Georgia, Ghana, Guinea Bissau, Indonesia, Iraq, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Lesotho, Liberia, Libyan Arab Jamahiriya, Maldives, Mozambique, Myanmar, Namibia, Nicaragua, Niger, Nigeria, Oman, Pakistan, Papua New Guinea, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, Sudan, Swaziland, Syrian Arab Republic, Tajikistan, Timor-Leste, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Viet Nam.

6- Ranges from -2.5 to 2.5. Higher values indicate better governance ratings.

7- Percentile rank indicates the percentage of countries worldwide that rate below the selected country (subject to margin of error)

8- Democratic People's Republic of Korea reports "<1080" for the per capita total expenditure on health at average exchange rate (US$)

9- Data refer to the most recent year available during the period 1990-2004. Several countries either have data that refer to years or periods other than 1990-2004, differ from the standard definition, or refer to only part of a country. These countries are Dominican Republic, Ghana, Lebanon, Papau New Guinea, Solomon Islands, Syrian Arab Republic, Turkey.

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Health Systems 20/20

Health Systems 20/20, a five-year (2006-2011) cooperative agreement funded by the U.S. Agency for International Development (USAID), offers USAID-supported countries help in solving problems in health governance, finance, operations, and capacity building. By working on these dimensions of strengthening health systems, the project will help people in developing countries gain access to and use priority population, health, and nutrition (PHN) services. Health Systems 20/20 integrates health financing with governance and operations initiatives. This integrated approach focuses on building capacity for long-term sustainability of system strengthening efforts. The project acts through global leadership, technical assistance, brokering and grant making, research, professional networking, and information dissemination.

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