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# Helpdesk Report: Health in Tanzania

Date: 20th July 2011

**Query:** Background on health in Tanzania including what key donors and foundations are doing, health MDG performance (trends, constraints, and opportunities), health status, private sector and health, voice and accountability and service delivery, use of innovative technologies in particular mobile phones

**Enquirer:** DFID Tanzania

## Content



## 1. Overview and Progress Towards MDGs

### Health in Tanzania

In December 2006, Tanzania launched its Joint Assistance Strategy (JAST), as a successor to the Tanzanian Assistance Strategy (TAS – 2002-2006). JAST (2007-2011) is a medium-term framework aimed at bringing together all Development Partners under a single strategic framework that guides their development assistance in line with the MKUKUTA and the MKUZA (documents are available at http://hdptz.esealtd.com/index.php?id=8)

The Joint External Evaluation of the Health Sector in Tanzania concluded that the Health SWAp has contributed to improvements in health outcomes and to improvements in the quality of health services at community level, which could be linked to progress towards the MDGs. The devolution of responsibilities for health facilities and health planning to Local Government Authorities has contributed to improving health sector delivery. While significant progress has been made in reducing child mortality since the year 2000, maternal mortality remains one of the key challenges within the health sector, with a ratio of c. 578 deaths per 100,000 live births according to Tanzania's latest available data dating from 2004.

Tanzania uses a 'cost-sharing' model of health financing which means that people pay fees when they access public health services. Access for pregnant women, the elderly and the disabled should be free. Access to primary healthcare services, specifically for marginalised populations in rural areas, is still limited but community based insurance aims to increase access to care. Tanzania has introduced a cost-sharing strategy for operating hospitals, to increase their resources and to improve the quality of services they deliver.

Tanzania spends less on health, in total and per capita expenditures, than its sub-Saharan African peers and other low-income countries. In 2003, the country's total health expenditure was 4.3% of GDP as compared with 4.9% in sub-Saharan Africa and 5.2% in other low income countries.

**Key Issues**

Poor road infrastructure, long travel distances to the hospitals, significant shortages in skilled health personnel, gender inequality issues, high absenteeism, ineffective referral systems and health facilities struggle with scarce resources. The Government is allocating resources to the districts according to catchment areas, rather than taking into account annual user rates per health facility.

**Tanzania Key Health Documents**

- Health Sector Strategic Plan (HSSPIII) 2009-15
  http://hdptz.esealtd.com/fileadmin/documents/Other_Health_Meetings/HSSP_III_FINAL.pdf

- Health Sector Strategic Plan (HSSPII) 2003-08
  http://hdptz.esealtd.com/fileadmin/documents/Key_Sector_Documents/Tanzania_Key_Health_Documents/Health_Sector_Strategic_Plan_2003_-_2008.pdf

- Code of Conduct
  http://hdptz.esealtd.com/fileadmin/documents/Key_Sector_Documents/Tanzania_Key_Health_Documents/Code_of_Conduct_March_2007.pdf

- National Health Policy (Swahili version)
  http://hdptz.esealtd.com/fileadmin/documents/HomePage/FINAL_-SERA_YA_AFYA_NA_USTAWI_WA_JAMII_National_Health_Policy.pdf

- Tanzania National Health Accounts
  http://hdptz.esealtd.com/fileadmin/documents/Key_Sector_Documents/Tanzania_Key_Health_Documents/Tanzania_NHA_2008.pdf

- Primary Health Services Development Programme (MMAM)
  http://hdptz.esealtd.com/fileadmin/documents/Key_Sector_Documents/Tanzania_Key_Health_Documents/MMAM_FINAL__2007-2017_.pdf

- Health Sector Performance Report (July 06-June 07)
  http://hdptz.esealtd.com/fileadmin/documents/Key_Sector_Documents/Tanzania_Key_Health_Documents/Health_Sector_Performance_Profile_Report_20-5-08.pdf

- Health Sector Performance Report (July 07-June 08)
  http://hdptz.esealtd.com/fileadmin/documents/Key_Sector_Documents/Tanzania_Key_Health_Documents/Health_Sector_Performance_Profile_Report_07-08.pdf

- Draft Health Sector Performance Report (July 08-June 09)
  http://hdptz.esealtd.com/fileadmin/documents/Other_Health_Meetings/Health_Sector_Performance_Profile_Report_2009_4_Nov_FINAL_DRAFT.pdf

- **Key development, finance, monitoring and review documents available at:**
  http://hdptz.esealtd.com/index.php?id=8

- **2010 Demographic and Health Survey** is also very useful: http://www.measuredhs.com/pubs/pdf/FR243/FR243%5B24June2011%5D.pdf

**Progress Towards the Health MDGs**

**MDG 4 – Child Survival**

**Mainland Tanzania:** According to Demographic Health Survey (DHS) 2009/2010, under five mortality for mainland Tanzania is 81/1,000 live births, infant mortality is 51/1,000 live births and newborn mortality is 26/1,000 live births, Newborn deaths are a major contributor and represent more than one third of under five mortality. There have been investments in mass distribution and voucher schemes for insecticide treated nets to prevent malaria. The 2009/2010 DHS findings show that the percentage of children under five who slept under an insecticide treated net has more than doubled in the last two years from 26% (THMIS 2007/2008) to 64% (DHS 2009/2010). In mainland Tanzania, Vitamin A supplementation coverage has increased to over 90%, more than 92% of children were immunised against measles in 2010, 91% received 3 doses of pentavalent and 94% received 3 doses of polio vaccine. A commitment to this focused, co-ordinated and flexible approach will ensure MDG 4 targets are met.

**Zanzibar:** Zanzibar is on track to meet the country specific targets of MDG 4 and each of the sub goals. In a survey of child mortality conducted in 1998, UNICEF, reported an Under Five Mortality Rate of 202 per 1,000 live births while the Demographic Health Survey 2010 reported 73 per 1,000.

**Goal 5 – Improve Maternal Health**

Total fertility rate (TFR) in Tanzania is 5.4 children per woman (DHS). Zanzibar has the lowest rate of teenage motherhood in Tanzania, 9% compared to 27% on the mainland. The overall unmet need for family planning is estimated at 25% (TDHS 2010).

**Mainland Tanzania:** There has been minimal change in maternal mortality since 1990. The current level is estimated at 454 per 100,000 live births (DHS 2009/2010) from 529 per 100,000 live births in 1996.

**Zanzibar:** The available data indicates a fall in the maternal mortality ratio in Zanzibar since 1998 and a dramatic decline between 2008 and 2009 from 422 to 279.

The vast majority of women in Tanzania (over 95%) received antenatal care at least once during their pregnancy (DHS 2010) although those receiving four visits during each pregnancy is lower. The proportion of births attended by skilled health personnel (including clinical officers, nurses and MCH Aides) is 51%. The majority of women who deliver outside a health clinic (83%) do not receive postnatal check-up within 24 hours of delivery.

**Goal 6 – Combat HIV/AIDS, malaria and other diseases**

**HIV/AIDs**

As of December 2010 PMTCT services were being provided in 93% of all health facilities on the mainland that provide reproductive and child health services. HIV testing services are universally accessible for pregnant women and 85% and 74% of pregnant women were tested for HIV in 2010 in Tanzania Mainland and Zanzibar respectively. 67% of positive women delivered in hospital, of whom 188 (97%) received ARV prophylaxis to prevent HIV transmission to their infants.

**Malaria**

Malaria is a major public health concern for all Tanzanians, especially for pregnant women and children under age 5. The disease is a leading cause of morbidity and mortality among outpatient and inpatient admissions. It accounts for up to 40 percent of all outpatient attendance. Many parts of the country, including the uplands, report malaria transmission throughout the year, although it occurs most frequently during and after the rainy season from April to May. 75 percent of households in Mainland Tanzania and 89 percent in Zanzibar own at least one mosquito net. These figures are much higher than in the 2004-05 Demographic and Health Survey (46 and 65 percent, respectively). In Shinyanga, Mwanza, and Mara, 90 percent or more of households have at least one mosquito net, while the proportion in Singida is less than 50 percent (47 percent). 72 percent of children under age 5 slept under a mosquito net the night before the survey, 64 percent slept under an ITN, and 24 percent slept under an LLIN. These figures are higher than those reported in the 2004-05 TDHS.

**Zanzibar:** Malaria prevalence in Zanzibar stands at less than 1% as reported in 2007/08 surveys (RBM Indicator survey 2007/08 and THMIS 2007/2008). These encouraging results are primarily due to national implementation of three key evidenced-based strategies namely:

1. Improved early case detection and management of malaria case including control of malaria in pregnancy using Intermittent Presumptive Treatment
2. Malaria surveillance and monitoring & evaluation including Malaria Early Epidemic Detection System and Response.
3. Integrated Vector control and Management (Long lasting Impregnated Nets and Indoor Residual Spraying)

MDG Information from:
**MDGs 4, 5 and 6**
By Ministries of Health, Zanzibar and Mainland, United Republic of Tanzania, 14th June 2011
http://www.un.org/en/ga/president/65/initiatives/Human%20Security%20%20Informal%20Interactive%20Debate%20-%205%20April%202011.pdf
and **Demographic and Health Survey 2010** as above.

**Key Actors**

**Civil Society Organisations**

In 2001, there were about 3,000 local and international CSOs based in Tanzania. According to the Ministry of Health, the government has undertaken a mapping of CSOs, at least for those working on HIV and malaria and service providers. The government recognises the importance of Civil Society with regard to its role for service delivery (with a share of about 40% in healthcare) and for reaching the most vulnerable in society. Ministry of Heath made a distinction between service delivery organisations and CSOs which are seen as mainly responsible for advocacy work. The most prominent organisations participating in consultation processes are TACOSODE, TACID, TANGO, Policy Forum, Christian Social Services Commission (CSSC), YAV, UMATI, the Gender Network, Oxfam, and ActionAid

**Donors**

The **Development Partners Group (DPG) (http://www.tzdpg.or.tz/dpghealth/)** was established in 2004 and works under the leadership of the government, to promote aid effectiveness and the mechanisms of managing aid, including coordination and cooperation among the various stakeholders supporting the national efforts. Membership currently comprises 21 organisations, including the UN, the EU Delegation and International Financial Institutions.

The **Development Partners Group for Health (DPG Health)** is a collection of 10+ bilateral and multi-lateral agencies supporting the health sector. The total cumulative contribution of

those Development Partners to the Health Sector in 2007/08 was USD 280 million not including HIV/AIDS funding or funding from the Global Health Initiatives. The majority of – especially non-European – donor funding to the health sector is still allocated to the two most prevalent communicable diseases, Malaria and HIV/AIDS.

**Issues for Donors:**

Strengthen linkage between such disease-specific programmes and other health initiatives, for instance, reproductive health and family planning programmes.

Long-term, sustainable financing mechanisms: Removal of user fees is a crucial step towards achieving universal access to primary healthcare, it is not a reality yet as this would require much greater financial and technical support in order for health centres to be able to support the policy and deal with the increased demand for services.

Shortage of skilled health workers in rural areas and brain drain from the public to the private sector and to donor-funded projects: WHO code of practice on the international recruitment of health personnel

**Examples of Projects:**

**Reforms needed in Community Health Insurance in Hanang district, Tanzania**
The Community Health Fund (CHF) has been in operation in the Hanang district of Tanzania since 1998. As with many such schemes in Africa, the scheme's management do not yet have the required expertise and resources to get the best out of the scheme. One severe problem is fraud, with non-members using the membership cards of genuine members in order to avoid having to pay user fees. A 2004 report by USAID found that in Hanang, CHF members accounted for just 2.4% of households, yet 45% of all outpatient visits were by CHF card-carriers. The report recommended that the CHF be assisted so that it could purchase a digital camera, allowing new photo ID cards to be issued to members. This modest investment will likely both reduce the cost of fraud and increase membership, as locals perceive that the only way to obtain CHF benefits is through genuine membership.

**The Kilombero Net Project** (http://www.hlsp.org/LinkClick.aspx?fileticket=P-fMYAJFmoc%3d&tabid=1805&mid=3498) - KINET - was a large scale social marketing programme for malaria control to increase affordable coverage of insecticide treated nets (ITNs) and insecticide treatment kits in Tanzania. The project was carried out in two rural districts in southern Tanzania, from 1996–2000, reaching all 112 villages (comprising half a million people) by 1999. The project collaborated with a wide range of stakeholders – including district health management teams and public health facilities, not for profit health providers, community development NGOs, village leaders and local private sector retail agents. A wholesaler network was also developed. The project included a pilot voucher scheme to subsidise use by vulnerable groups (pregnant women and children under five). Project experience has informed Tanzania's malaria control programme strategy for scaling up national ITN coverage.

**Public Opinion on the MDGs**

In a 2010 survey Tanzanians were asked about the degree of progress made by their country in reaching six key MDG criteria over the past 4 or 5 years. Close to 80% of respondents said that "some" or "a lot" of progress was made and urban residents were more likely to respond positively. However, according to the figures released in the Tanzania MDGs 2008 Mid-Way Assessment, actual progress made by the year 2008 falls short of the expected targets in the areas of maternal health, infant health, sanitation, hunger and poverty.

## 2. Private Sector and Health

**Public Private Partnership Technical Working Group - Information from 11th Joint Annual Health Sector Review (2010)**
http://hdptz.esealtd.com/fileadmin/documents/DPGH_Meeting_Documents_2011/2010_JAHSR_Main_Meeting_Report_101030_FINAL.pdf

Currently the PPP TWG has three strategic objectives. Strategic objective 1 is to ensure a policy and legal environment to facilitate PPPs. To this end PPP is finalizing a draft Health Sector PPP Strategic Plan and Service Agreement Template. PPP Policy guidelines for health sector have been drafted.

Strategic objective 2 is to ensure effective operationalisation of PPP. A National PPP Workshop for Zonal Representatives was held, also several Regional PPP Forum meetings were held in Arusha, Kagera, Kigoma, Kilimanjaro, Morogoro, Mara, Mwanza, Rukwa, Shinyanga, Tabora and Tanga. Private Sector Health Providers meetings were held in Dar es Salaam and Arusha in June and August 2010. In addition nine monthly national level PPP TWG meetings and a PPP Stakeholder Workshop were held in Bagamoyo. The PPP also undertook a study tour to Ghana to learn firsthand from another country.

Strategic objective number 3 is to enhance PPP in the provision of health and nutrition/social welfare services. The PPP TWG participated in the revision of CCHP Guidelines. Councils/Regions were sensitized on the importance of Service Agreements and performance based financing and 12 Councils signed service agreements with private facilities to provide public health services.

Other accomplishments cited at the implementation level include that some Government staff salaries were paid through Designated District Hospitals and Voluntary Agency facilities, placement of public health workers within FBO facilities, CSSC Costing Analysis were introduced in 25 Hospitals, 9 Health Centres and 8 Dispensaries, Government provision of grant to training institutions and private facilities provision of preventives services. Challenges for PPP include the lack of a proper understanding of PPP at LGA level. Representation of stakeholders in the PPP TWG remains limited and more participation of PMO-RALG, Private for Profit Providers, Not for Profit Providers and Civil Society Providers are sought. Finally the standardisation and regularisation of the costing tool for service agreement remains a challenge.

To improve its future performance the PPP TWG intends to align the draft Health Sector PPP Policy Guidelines to other relevant documents and advocate for operationalisation of PPP activities at zonal, regional, district level with full involvement of private sector on Service Agreements. The TWG will also seek to develop an appropriate PPP tracking framework, undertake an assessment of the private sector and advocate for standardized costing tool and promote Regional/District PPP forms.

**The private sector role in HIV/AIDS in the context of an expanded global response: expenditure trends in five sub-Saharan African countries.**
Sulzbach S, De S, Wang W. *Health Policy Plan*. 2011 Jul; 26 Suppl 1: i72-i84.
http://heapol.oxfordjournals.org/content/26/suppl_1/i72.long

This paper examines trends in private sector financing, management and resource consumption related to HIV/AIDS in five sub-Saharan African countries, with a particular emphasis on the effects of recently scaled-up donor funding on private sector contributions. National Health Accounts HIV/AIDS subaccount data were analysed for Tanzania, Kenya, Malawi, Rwanda and Zambia between 2002 and 2006. HIV subaccounts provide comparable data on the flow of HIV/AIDS funding from source to use. Findings indicate that private sector contributions decreased in all countries **except Tanzania.**

In Tanzania, NHA data from 2006 detected the contributions of a few multinational companies that had recently expanded their efforts to offer HIV workplace programmes, care for opportunistic infections and ART in private hospitals and employer clinics. Before the donor influx, spending on traditional healers represented a considerable amount (in absolute terms) of expended HIV/AIDS resources (but a smaller relative share). Since the influx, data for four of the five countries (except Malawi) showed a drop in expenditures for traditional healers (whose principal source of payment is household out of pocket spending). Zambia saw a 67% reduction in HIV/AIDS expenditures on traditional healers while Tanzania experienced a 12% reduction. The findings also show reduced spending at private pharmacies in Tanzania, likely reflecting less reliance on self-medication and the fact that ART is typically provided at health centres and hospitals. For example, spending in private pharmacies in Tanzania decreased by 12% following the donor influx.

Several factors support the need for an increased role for the private sector in the HIV response: the changing nature of the epidemic and increased access to ARVs, which translates into the need for long-term chronic care for PLHIV; the global economic crisis and the uncertainty of donor funding it brings; and increased political will on the part of global HIV initiatives to seriously consider the private sector as a partner in achieving universal access goals. Better integration of the private sector into the overall health system could reduce duplication, ensure greater sustainability of service provision and ultimately lead to improved health outcomes.

**Public and private donor financing for health in developing countries**
Howard LM, *Infectious Disease Clinics of North America,*1991 Jun;5(2):221-34.
http://www.ncbi.nlm.nih.gov/pubmed/1869807

This article was written 20 years ago but is a useful review of 148 developing countries. Among the many variables that influence the outcome of national health status in both developed and developing countries, the availability and efficiency of financing is critical. Developing countries as a whole are dependent on the efficient use of their own resources because external financing remains a small fraction of total domestic financing.

**Health insurance systems in five Sub-Saharan African countries: medicine benefits and data for decision making.**
Carapinha JL, Ross-Degnan D, Desta AT, Wagner AK, *Health Policy*. 2011 Mar; 99(3):193-202. Epub 2010 Dec 16.
http://www.sciencedirect.com/science/article/pii/S0168851010003416

Health insurance is intended to reduce the financial burden of purchasing health care by pooling funds and sharing the risk of unexpected health events. Most programmes surveyed were private, for profit schemes covering voluntary enrollees, mostly in urban areas. Almost all provide both inpatient and outpatient medicine benefits, with members sharing the cost of medicines in all programmes. Some insurance programmes covered non-prescription medicines but only one programme in Tanzania covered traditional, complementary and alternative medicines. Challenges exist in the ability of these programmes to provide effective and efficient benefits.

Concerns about fraud pose a serious problem in medicine benefit design, threatening the efficiency of health insurance systems and the sustainability of medicines supply. To reduce fraud, health insurance programmes may strengthen transparency through improved record management systems, provider and member education, mechanisms to integrate local population ownership and joint decision-making, and expanded risk pooling that could mitigate the effects of adverse selection. Data to answer basic questions about the performance of medicine to benefit policies exist in most programmes, but further developments in data systems are needed to increase efficiency and accountability.

Health insurance systems in Sub-Saharan Africa would benefit from concerted efforts to answer questions about best policy structures in a given environment. Strong government commitment and international donor support will be needed to expand medicines coverage through health insurance systems, regardless of their structure, to the poor and most vulnerable groups

**Case studies in public-private-partnership in health with the focus of enhancing the accessibility of health interventions.**
Njau RJ, Mosha FW, De Savigny D, *Tanzania Journal of Health Research*. 2009 Oct;11(4):235-49.
World Health Organization Country Office, P.O. Box 9292, Dar-es-Salaam, Tanzania., njaur@tz.afro.who.int
http://www.ncbi.nlm.nih.gov/pubmed/20734704

The study used qualitative research methods including case studies, a literature review and interviews with key informants. The research undertook an extensive literature review of various PPP models in health in scale and in scope which are aimed at advancing public health goals in developing countries.

This background is used to analyse in-depth two case studies which are both health oriented; the first one is a national level NGO consortium with a focus on malaria and the second one is an international advocacy group with an overarching goal of protecting children against malaria through an innovative mechanism. The case study approach is used to analyse why the PPP approach was used to address malaria control and how it was implemented.

Both PPPs demonstrated that relationships between the public and private sector may begin from very humble and loose beginnings. However, with perseverance from committed individuals, a vision and trustworthiness may become powerful advocates for meeting prescribed health agendas. In conclusion, three key themes (trust, sacrifice and championship) run vividly through the case studies and are significant for developing countries to emulate.

**Innovative Pro-Poor Healthcare Financing and Delivery Models: Pro-poor strategies for financing and delivering health services in mixed health systems**
Dimovska, Donika, Stephanie Sealy, Sofi Bergkvist, and Hanna Pernefeldt. 2009.
Washington, DC: Results for Development Institute.
http://www.rockefellerfoundation.org/uploads/files/344c1bbb-3487-4ad8-9813-674183a4f2b0-innovative.pdf

In their efforts to improve health systems, developing countries face the challenge of integrating traditional government health resources with a large and growing private health sector, where many poor people seek care. In these “mixed health systems” centrally planned systems operated by government entities exist side-by-side with private markets for similar or complementary products and services. However, most developing country ministries of health and the donors and technical experts that support them have not fully engaged the private health sector in harnessing innovation or mitigating market failures.

The companion to this report (*Public Stewardship of Private Providers in Mixed Health Systems*) provides an overview of the Rockefeller Foundation’s broader initiative on the private sector. It focuses on how governments can better steward the large private health markets in developing countries. One key recommendation is that governments should support innovative models that can be implemented in the face of capacity constraints and serve as stepping stones to broader reforms.

**Private sector participation in health: Improved government capacity needed for effective public-private partnerships**
HLSP Institute, HLSP Institute, UK, 2004
http://www.hlsp.org/LinkClick.aspx?fileticket=PfMYAJFmoc%3D&tabid=1805&mid=3498

This resource provides an overview of a range of approaches to strengthening the public-private sector interface in order to scale up coverage with affordable and quality-assured health services and commodities by poor people. Private expenditure in Tanzania has increased as a % of total expenditure from 44.6% in 1995 to 53.3% in 2001. However, total expenditure on health as % of GDP has reduced from 5.3% to 4.4% in the same period.

The resource is in five parts:
1. An overview of the current situation
2. The context for looking at this issue
3. A review of mechanisms for working with the private sector.
4. Four case studies illustrating in more detail some of the mechanisms reviewed.
5. A list of references.

**Project Examples**

**Accrediting Private Drug Dispensing Outlets**

A regulated system of independent accredited retail drug dispensing outlets that provide affordable, quality drugs and services in rural and periurban areas where few or no registered pharmacies exist. It was launched in 2003 and piloted in the Ruvuma region, with scale-up now complete in three additional regions—Morogoro, Mtwara, and Rukwa. Scale-up in another six regions is underway, with plans for coverage by 2011. The initiative was established by the Tanzania Food and Drug Authority and regional and local government authorities in collaboration with Management Sciences for Health through its Strategies for Enhancing Access to Medicines programme.

In rural and periurban areas, where almost 70% of Tanzanians live, access to health services through public health facilities is often limited because of poor infrastructure, long travel distance, and frequent stock out of basic medicines at public health facilities, among other factors. An estimated 35%–40% or more of the population use small community based drug shops, known as *Duka la dawa baridi (*DLDBs) which faced operational problems.

The initiative uses a participatory approach and had broad-based stakeholder support, a provider accreditation programme, provider training and consumer awareness and included monitoring and evaluation. This improved rural and periurban communities' access to quality, safe, effective, and affordable medicines.

**Comprehensive Community Based Rehabilitation Tanzania (CCBRT)**
www.ccbrt.or.tz

CCBRT is a rehabilitation programme based on a public-private partnership with the government. The government provides the land and pays the salaries. CCBRT manages the hospital and attracts international partners. Currently, 90% of patients are from very poor backgrounds.

**Vouchers and social marketing: insecticide treated nets (ITN) in Tanzania**

The pilot voucher scheme linked the public and private sectors at local level. By involving the public sector in education and voucher distribution, it helped to strengthen the social marketing programme, contributing to the creation of informed and generic demand for ITNs. It is now to be scaled up as part of the national ITN programme, with finance from the Global

Fund. As an alternative to public sector free distribution, the voucher-based subsidy did not undermine efforts to develop a competitive commercial market. The ITN voucher scheme ensures that demand and coverage among poor rural and urban women and children can be sustained.

## 3. Voice and Accountability

**Health Spending in Tanzania: The Impact of Current Aid Structures and Aid Effectiveness**
By EU Health ODA and Aid Effectiveness, Country Briefing 2, October 2010
http://www.euroresources.org/fileadmin/user_upload/AfGH_Policy_Briefs/PolicyBriefing2_Final1_LoRes.pdf

Donor priorities still have a disproportionately significant role in governmental policymaking and funding decisions. The government distinguishes between service delivery providers and civil society organisations. Service delivery organisations are more accepted whereas the CSOs are said to be ill-prepared for governmental consultation processes and there is some resistance from within the government against increased CSO involvement in policymaking processes as they lack transparency with regard to their funding sources. Only well known and umbrella organisations are consulted. They are increasingly choosing not to support CSOs/FBOs but rather to channel money through the local level government, which is weakening civil society. Most of the other organisations claimed that they had had little or no opportunity to get involved in policy-making processes. Key development partners in Tanzania point out that sustained policy dialogue between all stakeholders will be essential if the country's currently negative trend of reducing the proportion of Government budget devoted to health is to be reversed.

**Recommendations**

CSOs consider the Global Fund and its Tanzanian national coordinating mechanism (TNCM) to be a best practice example in terms of CSO involvement.

- **Improve Government and donor outreach to CSOs:** Efforts should be made to diversify the spectrum of CSOs involved in these consultations, specific funding should be provided by donors to enable smaller organisations to participate in such processes.
- **Increased focus from CSOs on advocacy:** proposals to international donors who are willing to support them.
- **Strengthen and diversify partnerships:** in order to increase the chances for receiving funding for such activities.
- **Increased support for links between CSOs and the parliament:** promoting truly participatory processes and establishing or strengthening the partnership and links between those working on health could help achieving country ownership. MPs indicated that many stakeholders came together as part of planning for Tanzania's 'one action plan' in response to HIV and AIDS.
- **Information-sharing and capacity transfer**
- **Access to funding for CSOs:** USAID through PEPFAR; the SIDA fund for local CSOs; NORAD and the Presidential Fund were considered to be the most accessible sources. It would be recommendable for donors to reflect upon the reasons behind this evaluation and use this analysis as a basis for reviewing their own funding mechanisms. In general, CSOs urge donors to make their selection processes more transparent, to simplify application, procurement and disbursement procedures, as well as to make funding available for long-term, institutional strengthening and capacity-building of CSOs and CBOs.

- **Co-funding requirements:** For community-based organisations, the **co-financing** rule is often a key factor hampering their participation in calls for proposals.
- A need for the Government to establish a specific **CSO desk** not only for managing the existing NGO register, but also **for managing funds**

**Synthesis Report: Review of impact and effectiveness of transparency and accountability initiatives**,
Rosemary McGee & John Gaventa, Institute of Development Studies, 2011
http://www.transparency-initiative.org/wp-content/uploads/2011/05/synthesis_report_final.pdf

Transparency and accountability are seen as essential to address 'developmental failures' and 'democratic deficits'. The belief is that by tackling corruption and inefficiency; and encouraging new forms of democratic accountability, aid can be more effective and can achieve results. Citizen-led approaches have therefore become important. This new report reviews the literature and experiences in this field, with a focus on five sectors: public service delivery, budget process, freedom of information, natural resource governance and aid transparency.

The report finds some evidence that the initiatives have led to state/institutional responsiveness, lowering corruption, creating opportunities for citizen engagement, strengthening local voices, better budget use and better services. Evidence shows an understanding of the formal mechanisms and structures, relationships and power dynamics between the state and civil society; and attitudes and behaviours of actors, is important.

'Citizen voice' is influenced by:
- the capability to access and use information that is available for accountability
- the extent to which it is linked to wider action
- the degree to which they are a part of the 'policy cycle'.

The state's relationship with citizens is influenced by:
- how democratic it is
- the political will and support for accountability within it
- the wider political economy

**Impact and Effectiveness of Transparency and Accountability and Initiatives: A review of the evidence to date – (Service Delivery)**
A Background paper to the Report above
Anuradha Joshi, Institute of Development Studies, 2010
http://www.ids.ac.uk/download.cfm?downloadfile=64180D7B-C209-4F4A-74E3AD9FFD63C194&typename=dmFile&fieldname=filename&ei=h5r0Ta7cLsO5hAesuOzKBg&usg=AFQjCNFceWxKvtBPauRuFS4041cmAQglpA

This document is a background paper to the report above and is a review of the literature specifically on the experiences and impact of 'voice and accountability' initiatives in health and education. A large amount of the evidence on service delivery initiatives is around the impact of the tools that have been used. The paper therefore reviews various initiatives including public expenditure tracking, citizen score cards, information dissemination, community monitoring, etc. which highlight citizen voices and aim for accountability. The paper concludes that:
- Context matters: political economy factors, political strength of service providers, legal institutions, media, etc. – have an influence on the degree of success.
- Impact depends on how willing the public sector is to support accountability initiatives
- Accountability initiatives that can trigger sanctions (investigations, audits, etc.) can be more effective in improving responsiveness.

- Availability of information is not sufficient to bring action; other factors influence whether citizens can and will use such information.
- 'Constructive dialogue' between service providers and users, about the reforms needed, is important for the success of an initiative.

**Strengthening Voice and Accountability in the Health Sector**
PATHS, 2008
http://www.healthpartners-int.co.uk/our_expertise/documents/Voiceandaccountability.pdf

This technical brief looks at seven different initiatives in Nigeria which strengthened citizen voices and improved accountability. These include:

- Patient Focused Quality Assurance
- Peer Participatory Rapid Health Appraisal for Action
- Integrated Supportive Supervision
- Facility Health Committees
- Standards of care and Patient Charters
- Safe Motherhood Demand-side Initiative
- Community Action Cycle

A review of these initiatives found that:

- Involving clients and local representatives in the assessment and monitoring of service delivery improved provider responsiveness.
- Including community members in Facility Health Committees helped citizens to challenge failures.
- Although accountability of providers improved, it was more difficult to improve accountability of policymakers.
- Formal mechanisms such as the health appraisal or supervision were more likely to make policymakers accountable as they not only put an obligation but also included incentives to respond.

**Project Example**

**Community aspects of Peer Participatory Rapid Health Appraisal for Action (PPRHAA) - Ghana, Nigeria and Tanzania**
http://www.healthpartners-int.co.uk/misc/misc1.html
http://www.healthpartners-int.co.uk/our_expertise/voice_and_accountability.pdf

In **Tanzania, Ghana** and **Nigeria** Health Partners International have used an innovative appraisal process, Peer Participatory Rapid Health Appraisal for Action (PPRHAA), to assess how well health facilities and health departments are functioning. PPRHAA has proved to be an effective tool for managing change, even in contexts where health systems are widely perceived to be dysfunctional. PPRHAA provides a formal mechanism through which client and community views of services, and their preferred solutions to identified problems, can feed into the appraisal process. Clients and communities are routinely consulted during the annual appraisal process, and community representatives are invited by regional or local governments to attend 'appraisal summits', where action plans for improving service delivery are agreed. In contexts where few opportunities previously existed for communities to have a say about the quality of health services, PPRHAA has established a formal and practical mechanism through which health managers, providers and communities can engage in dialogue on how to address priority health challenges.

## 4. Service Delivery

**Designing health and population programmes to reach the poor**

Ashford, L.S., Gwatkin, D. R., Yazbeck A.S., *Population Reference Bureau*, 2006
http://www.phishare.org/files/4458_DesigningPrograms.pdf

This document notes the following types of intervention and approaches to benefit the poor:

- Directing programme benefits towards the poor
- Promoting universal coverage of basic healthcare
- Increasing the availability and quality of health services
- Developing public-private partnerships
- Creating incentives for health providers and clients
- Increasing community participation
- Health financing approaches

In the document, discussions of the categories are followed by some useful case study descriptions including:

- Poverty mapping: identifying where the poor live
- Using social marketing to increase equity in access in Tanzania
- Delivering services through a development-oriented women's union in India
- Participatory approaches to improve adolescent reproductive health in Nepal

**Improving health services and strengthening health systems: adopting and implementing innovative strategies - an exploratory review in twelve countries: Reviewing health service implementation**
J. Janovsky; D. Peters, World Health Organization, 2006
http://www.who.int/management/working_paper_5_en_opt.pdf

This report looks at contracting with a focus on service delivery, delegation of authority to local levels, user fee exemptions, subsidies for the poor, performance related pay and incentives, reorganising outreach workers, social marketing to influence health behaviour and community engagement.

Many low income countries are pursuing new ways of delivering health services but often without plans for taking small scale projects to a national level. Viet Nam has demonstrated consistent improvements across a range of health services. Social marketing is most likely to be done on a national level. This may be because it is relatively simple and focused. Community engagement projects often do not reach the national level as there is often reluctance to relinquish control to communities. Exemptions of user fees are common and controversial and these strategies seem particularly difficult to implement. There is an indication that countries that are more innovative also have better performance in heath service outputs.

**Human resources for obstetric care in northern Tanzania: distribution of quantity or quality? Delivering quality obstetric care in Tanzania: the problem of human resources distribution**
Ø. Olsen; S. Ndeki; O. Norheim, Human Resources for Health, 2005
http://www.human-resources-health.com/content/3/1/5

This article assesses the availability and distribution of healthcare professionals delivering emergency obstetric care in Northern Tanzania. The research found that there are adequate numbers of suitably trained healthcare workers in Tanzania to meet the national standards for healthcare delivery. However, the majority are concentrated in a few centralised locations and the remainder are inefficiently and inequitably distributed in rural areas. Rural areas have restricted access to government-run healthcare because of understaffing, and facilities run by Non-Governmental Organisations (NGOs) have better staffing levels. The health workers in government-run facilities also face significantly higher workloads due to understaffing.

The authors conclude that the availability of trained staff does not translate into the availability of quality emergency obstetrics services due to problems of human resource distribution. The authors recommend that countries like Tanzania should revise their national standards for healthcare delivery and staffing. The focus of these revised standards should be quality of service and not coverage alone. The longer term priority needs to be increasing the numbers of qualified healthcare workers. In the shorter term the focus should be on reducing the number of facilities in rural areas, focusing human resources in a smaller number of significantly upgraded facilities and increasing access to these, by improving transport and communication facilities.

**Implementation of Integrated Management of Childhood Illness in Tanzania: success and challenges: IMCI in Tanzania needs greater visibility and better resources to be a success**
H. Prosper; J. Macha; J. Borghi, Consortium for Research on Equitable Health Systems, 2009
http://www.crehs.lshtm.ac.uk/downloads/publications/Implementation_of_IMCI_in_Tanzania.pdf

Tanzania is one of the countries implementing the Integrated Management of Childhood Illness (IMCI). IMCI was developed by the World Health Organization (WHO) and the United Nations International Children's Fund (UNICEF) to improve the management of child health at the primary care level in order to reduce the number of children dying in low and middle income countries.

Health workers are trained; the programme also advocates the strengthening of the health system to facilitate practice of the skills acquired by health workers and calls for improvement of household and community practices related to child health. Results from intervention sites in Tanzania demonstrated that IMCI improved the quality of care provided by health workers, lowered under-five mortality by 13%, and is cost-effective. IMCI has been named a national child health policy since 1995.

**Project examples**

**Kilombero and Ulanga Insecticide-Treated Net Project (KINET)**
www.mimcom.org.uk/ifakara/KINET.Htm

KINET is a social marketing scheme to promote the use of a sexually transmitted infection self-treatment kit (Clear Seven). The distribution system relies on the use of small retail outlets that are normally licensed to sell over the counter drugs but not antibiotics.

**Riders for Health**
www.riders.org

Riders for Health is a non-governmental organisation providing healthcare to rural villages using motor vehicles. It employs 200 people in Africa and runs more than 1,000 vehicles, enabling health workers to reach more than 10 million people in rural areas. It runs in Gambia, Kenya, Lesotho, Nigeria, Tanzania, and Zimbabwe.

## 5. Innovative Technologies

**Enhancing the routine health information system in rural southern Tanzania: successes, challenges and lessons learned**

Maokola W, Willey BA, Shirima K, Chemba M, Armstrong Schellenberg JR, Mshinda H, Alonso P, Tanner M, Schellenberg D, Trop Med Int Health. 2011 Jun; 16(6):721-30. http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3156.2011.02751.x/full

This article describes and evaluates the use of handheld computers for the management of Health Management Information System data. Electronic data capture took place in 11 sentinel health centres in rural southern Tanzania. Information from children attending the outpatient department and the Expanded Programme on Immunization vaccination clinic was captured by trained local school-leavers, supported by monthly supervision visits. The system took 5 months to implement, and few staffing or logistical problems were encountered. Electronic capture of HMIS data was rapidly and successfully implemented in this resource-poor setting. Electronic capture alone did not resolve issues of data completeness, accuracy and reliability, which are essential for management, monitoring and evaluation; suggestions to monitor and improve data quality are made.

**Working with mHealth Applications in the Developing World. A Comparison of Three African Countries**
By Coleman, J., International Institute for Communication and Development (IICD), 2009
http://bit.ly/dpaJr4

This article reports on lessons learnt from the use of mHealth in the three sub-Saharan countries of Tanzania, Zambia and South Africa. More specifically, it details what mobile phones are being used for and factors to be dealt with in implementing projects. It finds Tanzania has established a telemedicine consultation network which operates throughout 43 health facilities, of which 40 are remote hospitals. It uses a system from the Tanzania Telemedicine Network.

There is enormous potential for mHealth and preliminary results are positive. More capacity development is needed, especially in Tanzania and Zambia. Third Generation mobile phone networks offer even more potential, but are severely limited in Africa at this time. There is also a top tips guide for setting up mHealth projects in the appendix.

**Tanzania**

Not one respondent in Tanzania complained about not being able to get service or the cost of airtime being too high. Also, the Centres for Disease Control and Prevention (CDC-more information in the examples section below) hired a local company to develop their data collection software and maintain the database. Another interesting finding was that NGOs in Tanzania that were looking at implementing mHealth applications held a meeting with each other in 2008, to discuss the state of the art and look at how mHealth might help them. Such a meeting is a very helpful way for information to be shared and for new and locally relevant ideas to be generated. Tanzania did not have any examples of data collection done by individual researchers physically moving around, despite having other mHealth projects including the CDC's clinic-side data collection. Further expansion on mHealth related data collection is therefore very feasible, possibly working with the OpenROSA consortium. mHealth awareness by those in the medical field is quite limited. Only 9 of the 46 clinics and hospitals interviewed in Tanzania and Zambia had previously heard of mHealth. Finally, it is interesting to note that no respondents discussed failed mHealth projects. Previous studies on the effectiveness of mHealth have also shown positive results and feedback from patients who have used the services. mHealth uptake is still in the early stages, and there is enormous potential to replicate and expand on what has already been done.

**Recommendations**

- mHealth activities can be started small and yield quick wins, which can then expanded on if successful.

- It is good practice to conduct a thorough 'before' and 'after' financial analysis of any mHealth implementation. Projecting costs is a beneficial exercise to obtain an overview of how mHealth might contribute to saving money and time.
- Local telecom providers can give information about services they already provide or discuss which role they will take on to advance mHealth. Since mHealth encourages use of the services which telecom providers offer, they should be willing to invest.
- Creating a lobby group of health care service providers from the public, private and civil society sector, and engaging in discussions with telecom providers together, may help in negotiations.

**Sector/Policy Level**

- Creating an arena which is conducive for uptake of mHealth projects is essential. One possibility is to initiate a learning event where high-level health sector policy makers visit three currently implementing mHealth projects. Hearing about how mHealth works on the ground will highlight what is and is not needed by practitioners.
- A well functioning mobile phone network with reliable and broad coverage at the lowest price for users is essential. Talking to service providers to discuss potential support for mHealth programmes can make the difference between an idea and a successful project.
- Linking educational facilities, government, health care providers and mobile service providers through workshops on mHealth can be beneficial for all involved.

**Tanzania**

- Working with local solutions providers allows for better interaction during the design phase, and better available support services during implementation.
- The Tanzanian health sector could focus on hospitals and clinics to promote mHealth, since many NGOs appear aware of mHealth's capabilities already. To help this promotion, those that already have self-initiated projects up and running should be encouraged to continue and share their knowledge.
- It is also recommended that information is gathered from organisations such as the Tanzanian Commission for Science and Technology (COSTECH) to find out what they do and don't know about mHealth.
- Additionally, places of learning, such as the Dar es Salaam Institute of Technology (DIT) are recommended as places that can contribute to enhancing national capacity to design, develop and implement mHealth solutions. DIT has a department of Telecommunications, but does not have classes which relate to the development of mHealth solutions in their programme. Changing the curriculum to include mHealth related material is suggested.

**SMS for Life: a pilot project to improve anti-malarial drug supply management in rural Tanzania using standard technology.**

Barrington J, Wereko-Brobby O, Ward P, Mwafongo W, Kungulwe S, Malar J. 2010 Oct 27;9:298.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2978233/?tool=pubmed

Maintaining adequate supplies of anti-malarial medicines at the health facility level in rural sub-Saharan Africa is a major barrier to effective management of the disease. Lack of visibility of anti-malarial stock levels at the health facility level is an important contributor to this problem.

The SMS for Life pilot provided visibility of anti-malarial stock levels to support more efficient stock management using simple and widely available SMS technology, via a public-private partnership model that worked highly effectively. The SMS for Life system has the potential to alleviate restricted availability of anti-malarial drugs or other medicines in rural or under-resourced areas.

**mHealth for Development. The Opportunity of Mobile Technology for Healthcare in the Developing World**
By Vital Wave Consulting for The United Nations Foundations and Vodafone Foundation Technology Partnership, 2008
http://bit.ly/QV9lm

This gives a good overview of mHealth – the provision of health-related services via mobile communications. It covers:

- meeting health needs through a broad array of applications
- examining the impacts of mHealth projects
- assessing mHealth and future health needs in developing countries
- identifying the building blocks for sustainable and scalable mHealth programs
- a compendium of 51 mHealth projects

**Experience implementing electronic health records in three East African countries.**
Tierney WM, Achieng M, Baker E, Bell A, Biondich P, Braitstein P, Kayiwa D, Kimaiyo S, Mamlin B, McKown B, Musinguzi N, Nyandiko W, Rotich J, Sidle J, Siika A, Were M, Wolfe B, Wools-Kaloustian K, Yeung A, Yiannoutsos C; Tanzania-Uganda Openmrs Consortium, *Studies in Health Technology and Informatics*. 2010;160(Pt 1):371-5.
http://booksonline.iospress.nl/Content/View.aspx?piid=17391

Efficient use of health care resources in low-income countries by providers and local and national managers requires timely access to patient data. This study aimed to implement electronic health records (EHRs) in HIV clinics in Tanzania, Kenya and Uganda. The team initially developed and implemented an EHR in Kenya through a mature academic partnership. The EHR was then implemented in six HIV clinics in Tanzania and Uganda in collaboration with their National AIDS Control Programmes. All implementations were successful, but the system's use and sustainability varied depending on who controlled clinic funding. The EHR use was successful and sustainability was enhanced by local control of funds, academic partnerships (mainly by leveraging research funds), and in-country technology support.

**Towards the development of an mHealth strategy: a literature review**
by Mechael, P.N. for WHO and the Millennium Villages Project, 2008
http://mobileactive.org/files/file_uploads/WHOHealthReviewUpdatedAug222008_TEXT.pdf

This is a comprehensive review of technologies, applications and partnerships within mHealth. It comments on the benefits of technologies for health worker access to information and for training. The main recommendation is that key mHealth stakeholders consider focusing their next steps on catalysing the testing and scale up of interventions that show promise in achieving key health outcomes.

**Examples of Innovative Projects**

**Tanzania Telemedicine Network**
http://telemed.ipath.ch/tanzania/index.php?q=

The goal of this project is to improve co-operation between hospitals in Tanzania, where hospitals have few specialists and few options for consultation. Thirty-three hospitals have been connected to the internet, most of them rural hospitals with satellite connection.

**Mennonite Economic Development Associates (MEDA)-Mosquito Net/Voucher Distribution**
http://www.meda.org

MEDA is in charge of distribution of mosquito nets as part of the Tanzania National Voucher Scheme. This scheme provides subsidised mosquito nets to poor new and expectant mothers. MEDA is working on changing this system by removing the paper voucher system and replacing it with a virtual voucher using mobile phones. Other than making the system easier, the two reasons for the changes are fraud reduction and that the voucher will have no written value. In the new system the vouchers will be listed in a computer database. This way the doctor of an expectant or new mother will send an SMS to a specific number with the woman's details. A message will come back a few seconds later with a code to give to the retailer, they will then SMS it and get a response which will allow them to verify the identity of the woman and be told how much the voucher is worth.

**PSI Tanzania – Distribution and Logistics**
http://www.psi.or.tz

Describing itself as a 'Social Marketing & Communications for Health' organisation, PSI Tanzania conducts health-related work; including distributing and promoting the use of condoms and other health care items. PSI Tanzania is working on a system to distribute some of its items in much the same way as MEDA. In addition to this, they will be getting retailers of their products to SMS a code that is found inside the product box. The code will enter a PSI database which tracks the stock levels of each retailer, and which is expected to ensure that retailers never run out of stock of PSI products.

**Centres for Disease Control and Prevention – Malaria Research on Zanzibar**
http://www.cdc.gov/malaria/cdcactivities/tanzania.htm

The American Centres for Disease Control and Prevention (CDC) works within Tanzania and in 2009 had a Malaria tracking programme on the island of Zanzibar. The CDC enlisted the services of a local company to create a computer database which could handle input from specifically formatted SMS messages, which can then be seen through a computer screen on the Internet.

In addition, ten clinics around Zanzibar collect information on a daily basis on the number of adults and children which are tested for malaria and have both positive and negative results. Weekly totals are then sent by SMS through a piece of mobile phone software to the central database. When this programme was researched by Coleman (article is mentioned above) in late 2008 it had been on-going for over forty weeks.

In the 21st week of the pilot study it was found that one clinic was reporting especially high positive results for both adults and children. As soon as the spike in positive cases was noticed the CDC was able to implement an action plan near the clinic which included spraying for mosquitoes, distributing mosquito nets and creating public awareness about the outbreak. Over the following couple of weeks the positive cases at the clinic fell and within three weeks from the initial outbreak, levels of malaria were close to where they have been before the outbreak started.

**D-HMIS Mwanza & HMIS-ELCT – Hospital Management Information System & iPath**
iPath website available at: http://telemed.ipath.ch/ipath/

The District Health Management Information System (D-HMIS) Mwanza and Health Management Information System for the Evangelical Lutheran Church Tanzania (HMIS-ELCT) projects are health management information systems designed to integrate data collection, processing, and reporting. The ICT-supported data collection and reporting contributes to the improvement of patient health services, effectiveness and efficiency through better management of patient data at all levels of implementation.

Using the internationally available iPath system15, Tanzania has established a telemedicine consultation network which operates throughout 43 health facilities, of which 40 are remote hospitals. The management information system works well, but they are hoping to expand it so that the hospital can send out reminders to patients about upcoming appointments. The expanded system will also be able to receive SMS messages from local dispensaries notifying the HMIS system of their stock of medicines and asking for a refill, if necessary. With this information, hospital staff can direct patients to a dispensary with appropriate stock.

Currently doctors in various places around the world can connect to the iPath system and ask for a second opinion from other doctors about specific cases they are dealing with. When a message is posted through email or to the web-based system, there is also the option to attach one or more images to the message to give a visual representation of the problem at hand. At the same time, these doctors can read about other cases around the world and give their feedback/opinion or diagnosis of the case.

The hospitals in Tanzania are planning to extend the system to allow for the use of mobile phones to submit cases for review and access the results, so that in the future it will be possible for doctors in remote areas, which do not have computer or internet access, to send and receive messages. They plan to also be able to attach images for certain cases. Although this is possible now through WAP internet connections, the team is working to find ways to make it easier and less expensive for rural doctors.

Another mHealth idea they have in the pipeline is a community-based health worker triage application. This would allow people who are not medical experts to go into rural clinics or elsewhere to assist in triaging various maladies that patients have. The system itself would be a step-by-step symptom checker application installed on a mobile phone. The application would give a list of possible outcomes given the symptoms that are displayed by the patient.

**D-Tree International – Community Care**
http://www.d-tree.org/
http://www.pathfind.org/site/PageServer?pagename=Programs_Tanzania_Projects_COMMCARE

D-Tree International, an NGO in Tanzania specialising in supporting frontline health workers, is currently using CommCare in their work, which is a modified OpenROSA application used as a mobile data collection tool. CommCare is used by home based care providers in rural Tanzania to record visits and collect data about households they visit. CommCare also assists in conveying health information, promoting preventative care relevant to specific target populations, and providing step-by-step health protocols, record keeping, day planning, as well as data exploration such as following trends in activity and comparing data over various locations. All of this is done using mobile phone technology and is conducted by non-technical community-based health workers (CBHWs).

The project has seen early successes including an increase in patient confidentiality, an increase in numbers of completed referrals, better use of relevant data, an improvement in project planning, more consistent adherence to health protocols and an improvement in record keeping. The project has also encountered some early challenges, including the variance in literacy level among community home-based providers, security threats as mobile phones can be targets for robbery and the cultural acceptability of using mobile phones to manage health related issues.

**Aga-Khan Hospitals – Internal Paging and Research Tool**

The Aga-Khan Hospitals in Dar es Salaam have given each of their staff doctors an advanced smart phone with internet services. The hospital has distributed these phones in order to be used as part of an internal paging system within the hospital, and to allow doctors

to conduct research and consultations using the internet any time and place they like. Smart phones and data connection services are not inexpensive, and it is probably due to Aga-Khan Hospitals being part of an international group of private hospitals that they are able to provide this equipment and accompanying service to their doctors.

**APOPO- Second line screening by rats**
http://www.apopo.org/cms.php?cmsid=22&lang=en

Rats can quickly and accurately sniff out TB in human sputum samples. In Tanzania, APOPO offers second-line screening by rats to our partner hospitals, which has increased new case detection rates by over 40 percent. The rats can evaluate 40 sputum samples in just seven minutes, equal to what a skilled lab technician will do in a full day's work.

**AMREF Telemedicine Project**
http://usa.amref.org/printindex.asp?PageID=32&ProjectID=39

The African Medical and Research Foundation (AMREF) began a telemedicine project in 2004 in Kenya and Tanzania that seeks to provide second opinions to clinicians and will integrate teleconsultation and continued medical education.

**mHealth Alliance**
http://www.mhealthalliance.org/

Working with diverse partners, the mHealth Alliance (mHA) advances mHealth through research, advocacy, and support for the development of interoperable solutions and sustainable deployment models. The mHA, hosted by the United Nations Foundation, sponsors events and conferences, leads cross-sector mHealth initiatives, and hosts HUB (HealthUnBound), a global online community for resource sharing and collaborative solution generation.

## 6. Additional information

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